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Dear Commissioners Briggs, Goldberg and Carter

### RO36/15 - Drayton South Coal Mine Proposal

Thank you for the opportunity to present to the PAC on 10 and 11 September 2015.

The attached submission presents sound and appropriate reasons, supported by industry and expert evidence, why Anglo American's second application for a new open cut mine at the Drayton South site should be recommended for refusal.

#### Terms of Reference

We note that Minister Stokes' Terms of Reference specifically require an assessment of:

*"the merits of the project as a whole having regard to all relevant NSW Government policies and paying particular attention to the potential impacts on the operations of Coolmore and Woodlands hose studs".*

These Terms of Reference put your focus on how this mine will affect our established business.

#### Impacts on Darley

We submit that:

- Open cut coal mining and international scale thoroughbred breeding are fundamentally incompatible land uses that cannot coexist in close proximity.
- This proposal is another attempt (through the use of conditions and "promises") to mask the plain fact that some land uses should never be approved next to each other.
- As this State's *principal independent non-judicial* planning body the PAC can properly take guidance from the State's *principal independent judicial* planning body. In similar circumstances, the Land and Environment Court considered that it was its *"responsibility to ensure that development unsuited to a particular location is prevented wherever that is preferable. This is such a case. In principle the Court should not be a party to the creation of a situation in which basically incompatible land uses are juxtaposed, thereby avoiding the prospect of future conflict."*<sup>1</sup>
- Our business relies on a pristine environment clearly visible to our clients. A "buffer" of less than 1km from our operations is unacceptable because open cut coal mining is so highly visually, physically and environmentally intrusive. The presence of a mine of this scale so close to us is completely contrary to every message we send to our clients.

<sup>1</sup> McIntyre and Ors v Pittwater Council [2000] NSWLEC 160 (21 July 2000) per Talbot J at 54

- This proposed mine will **not** result in an economic benefit to the State. This proposed mine is uneconomic. The clear prospect on a proper analysis of a net economic loss to the state of NSW is an unacceptable risk which should not be contemplated.
- The assessment of the impacts of Anglo American's Drayton South proposed open cut coal mine on the reputation, operation and viability of Darley's Hunter Valley horse stud reveals that an open cut coal mine less than 1 km from our stud will:
  - permanently tarnish our reputation, our brand and our business model;
  - jeopardise the health, safety and wellbeing of our staff, their families and our equine athletes;
  - devalue our assets and investments in the Hunter Valley (exceeding \$1 billion to date);
  - prejudice our ability to recruit and retain high quality staff and gifted horsemen and women;
  - impair our domestic and international competitiveness as an Australian thoroughbred breeding and racing market leader.
- Once the damage is done it will be irreparable and it will precipitate the fragmentation and ultimate demise of the acknowledged and well defined Hunter Valley Equine Critical Industry Cluster (the "CIC").
- The flow on impacts to the regional, NSW and Australian economies and to Australia's reputation as a premier thoroughbred breeding and racing nation will be significant and irreversible.

#### Supporting Evidence

The attached submission, along with 15 expert scientific reports on the economic, environmental, and equine health impacts of this mine, demonstrates once more why this mine should not be allowed to proceed.

These expert reports complement over 30 expert reports submitted by Darley, Coolmore and the HTBA as part of the assessment process for Anglo American's previous Drayton South application. The analysis of Anglo American's proposal for an open cut mine at Drayton South conducted by scientific experts reveals that the environmental impact statement and its evaluations are incorrect, incomplete, and in some aspects entirely absent. Many elements lack transparency, do not conform with Government guidelines, cannot be simulated or cannot be independently verified.

Those elements that can be independently and expertly assessed disclose a proposed mine operation that poses significant long term environmental risks, that will be far more expensive to operate than any nearby competing mines, that will be dangerously dusty and which will be of no economic benefit to this State.

What is revealed is a proposed mine plan that will destroy productive agricultural land and which will increase salinity in our already stressed river systems. The modeling and management proposed for the final void remains unclear. The current information provided by Anglo American depicts a "physical impossibility". The proposed mine will also irreparably destroy the cultural heritage (both Indigenous and Non-Indigenous) of the region, and will result in direct and indirect visual impacts of mining that will be visible from the studs and approaches to them including the Golden Highway. These impacts cannot be mitigated.

Importantly this single new mine will:

- result in a net economic loss to the NSW and Australian economies due to a mis-estimation of the cost of the project benefits and/or costs of some \$1.5 billion;
- make the regional economy \$120m poorer every year;
- put at risk at least 640 jobs in the equine industry, and thousands more jobs if the impacts of this mine on viticulture and tourism were included;
- destroy the operations of Australia's largest thoroughbred breeders;

- unravel and ultimately fragment the Hunter Valley's equine Critical Industry Cluster, and Australia's reputation as a premier breeding and racing nation; and
- jeopardise the future of NSW's multi-billion dollar thoroughbred breeding and racing industry, an industry which contributes over \$2.6b annually to the NSW economy, \$5 billion to the Australian economy and supports up to 250,000 jobs across the nation.

#### Proponent's EIS and Department's Preliminary Assessment Report

The proponent's environmental assessment in its EIS is both incomplete and misleading and cannot be safely relied upon by a reviewing authority. Even on the data that Anglo itself presents which can be tested, this mine will clearly generate long term irreversible socio-economic and environmental impacts which cannot be overcome through "conditions".

Previous statements made by Anglo's CEO Seamus French - *that any delay, any retraction or any further change to the mine plan (including retractions recommended by the Review PAC (2013)) would render the project economically unviable and would not proceed* – further diminish the credibility of this proposal.

The expert evidence we have assembled and presented suggests that to date the Proponent's claims seem to have been uncritically taken on face value by the Department of Planning and no attempt appears to have been made to check and verify the data or review the computational accuracy of the base information used in the economic and other modeling.

As outlined in Darley's previous submission to the Department (jointly authored with the HTBA and Coolmore Australia) – a submission which we understand has been forwarded to the Commission - we expect the Department to act as an independent arbiter and to apply the highest level of rigor, scientific and socio-economic scrutiny to these projects.

#### Conclusions

Anglo American's Drayton South proposal:

- is not based on a credible or suitable assessment;
- proposes a mine plan which will intensify land use conflict in this region;
- so fundamentally misconceives our business that it suggests a "buffer" of less than 1km is an adequate separation distance from one of the most sensitive agricultural land uses in Australia;
- will jeopardise the viability, operations and reputation of Darley and Coolmore;
- will result in unacceptable environmental and health impacts;
- outlines purported benefits which do not outweigh the significant socio-economic risks to the community and the NSW economy;
- fails on any proper precautionary approach; and
- is patently not in the public interest.

As stated in my concluding comments to the Commission at the hearing on 10 September we consider it is important for the Commission to study objectively the information presented by Anglo American and the thoroughbred industry. It is equally important that the Commission understands the wider implications of this mine.

The signal that a recommendation to approve this open cut mining operation would send to our industry is that we are expendable and that economic diversity is not important. It will send a message of planning for the short term and not for the future, not of concern about the next generation or the need to transition to viable and sustainable alternative industries.

The PAC does not have before it sufficient, or sufficiently credible information to make an informed assessment of the project's merits or to be satisfied that it can, on what is currently before it, pay *particular attention* to the potential impacts of this mine on these two Studs.

Experts called by Darley and Coolmore, and other stakeholders who presented at the PAC hearing in Denman, have raised serious questions as to the economic benefit of the mine and the adequacy of the assessment of its potential impacts.

**Given the scale and irreversible nature of the potential impacts and the significant uncertainty as to their extent a precautionary approach must be taken and this mine should not be recommended for any form of approval.**

We thank you for the opportunity of making this submission. Our future and the future of the equine Critical Industry Cluster is in your hands. We trust that you will seek to preserve and protect it and recommend against this mine.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Henry Plumptre', with a stylized flourish at the end.

Henry Plumptre  
Managing Director

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- A2 Beatty Legal Advice, October 2015 (and the attached PAC Report Extract)
- A3 Marsden Jacob Associates, Independent Review of the Economic Assessment, October 2015
- A4 M White, Mine Review, Drayton South EIS 2015, September 2015
- A5 Stephenson Environmental Management Australia, Review of Air Quality Impacts, October 2015
- A6 Arup Acoustics, Review of Noise and Blasting, October 2015
- A7 Drs Hazleton and Bacon Soil Report, Drayton South Coal Project, September 2015
- A8 OD Hydrology, Review of Drayton South Coal Project, September 2015
- A9 M Wright, RLA, Drayton South Coal Project, Review of Scenic and Visual Impacts, September 2015
- A10 Dr Lance Bell, Impact of Drayton South Coal Mine on Commercial Viability, September 2015
- A11 GML Heritage, Drayton South Coal Project – Non-Aboriginal Heritage Report, September 2015
- A12 GML Heritage, Drayton South Coal Project – Aboriginal Heritage Report, September 2015
- A13 Drs Tennent-Brown and van Eps, Analysis of Equine Health Impact Statement for Drayton South Coal Project, September 2015
- A14 Dr McLean, Expert Equine Report, September 2015
- A15 Dr Hogson, Virigina Maryland College of Veterinary Medicine, Report on Drayton South Coal Project, 2015

## Executive Summary

### Darley Australia

Darley is one of the two largest thoroughbred breeding and racing operators in the world and in Australia. It employs over 1800 people across all its operations worldwide with some 400 employed in its Australian breeding training and racing operations across 5 facilities in NSW and Victoria. In the Hunter Valley Darley stands 15 stallions, has over 250 mares, produces in the order of 180 foals a year and has throughout NSW and Victoria over 450 horses in racing, and around 1000 horses in total. Darley's sires will service over 2000 mares, which as a result will produce approximately 1,500 foals. Together with Coolmore Australia, Darley sired progeny represent approximately 50% of the Australian premium breeding, racing and yearling markets.

Darley has two integrated operations in the Hunter Valley – Darley Woodlands, and Darley Kelvinside. Befitting its world leading status, all Darley's operations are world scale and operated at international best practice standards. Both farms are open to clients and attract over 4,000 visitors and clients every year to the Upper Hunter – boosting tourism and tourism related expenditure in the region. It is a significant regional investor (investing over \$1 billion in its integrated operations) and a significant regional employer.

In the Hunter Valley, Darley and Coolmore are recognised as the “*epicenter*” the “*most important of all central actors*” in the equine CIC. Given their significance previous PAC's have recommended they be afforded “*total protection from the impacts of mining*” (Review PAC p ii). Together they support over 150 broodmare farms and the sophisticated network of equine support industries based in the Hunter Valley and the thousands of jobs they generate throughout NSW.

The Hunter Valley equine industry is recognised by the NSW state Government as being state and nationally significant. It is 1 of only 3 centres of thoroughbred breeding excellence in the world along side Kentucky in the USA and Newmarket in the UK. It is the only centre of thoroughbred breeding excellence in the world that remains unprotected. In this respect it is noteworthy that two previous PACs recognised this fact and recommended the Hunter Valley's equine Critical Industry Cluster be similarly protected to enable the industry to grow and prosper.

### PAC Review

In assessing Anglo American's second application for an open cut coal mine at Drayton South, the PAC has been requested by Minister Stokes to “*pay particular attention to the potential impacts [of this mine] on the operations of Coolmore and Woodlands horse studs.*”

We note that the previous PAC process was similarly required by the former Planning Minister to specifically “*assess the potential impacts of the project on the operations of the Coolmore and Woodlands horse studs.*”

Legal, expert economic and environmental advice provided as part of this submission reveals that the PAC does not have before it sufficient credible information to make an informed assessment of the merits of this project, nor has it sufficient information to demonstrate that **particular attention** has been paid to the **potential impacts** of this mine on the operations of the Coolmore and Darley Woodlands studs.

Given the:

- very real impacts of this mine on the reputation, operation and viability of the studs;
- serious errors, omissions and deficiencies in the Proponent's Environmental Impact Assessment;
- scale and irreversible nature of the impacts of this mine on the studs, the equine Critical Industry Cluster, the environment, agricultural productivity, the landscape and cultural heritage of the area;



we are of the view that the Commission should adopt a precautionary approach and recommend against this mine.

### Impacts on Darley

The operation of an open cut coal mine less than 1km from Darley will without a doubt immediately and irreversibly harm our reputation. It will make our stud farm at Woodlands unworkable, undermine the foundation of our business, and will have flow-on effects on our integrated operations in the Hunter Valley. In turn it will have further flow-on effects on the hundreds of broodmare farms and other businesses we support throughout the Hunter and the thousands of jobs they create.

It will in short place Darley at a severe competitive disadvantage and devalue the enormous investments (over \$1 billion) we have made in the Hunter Valley.

In order to protect our international and domestic reputation and our assets, an approval of a mine in this location will force us to consider our future in NSW.

In this respect the Commission should be aware that we have established breeding, racing and training operations at Seymour and Flemington in Victoria and in our view a State Government there that appreciates the importance of keeping and growing its thoroughbred breeding and racing industry.

### Deficiencies in Anglo American's EIS

Scientific and other expert scrutiny of Anglo American's Environmental Impact Statement (EIS) and its Response to Submissions (RTS) reveals that:

- Fundamental aspects, assumptions, and modeling used for the EIS are either entirely absent, incorrect, incomplete, do not comply with Government guidelines, lack transparency or do not allow appropriate scrutiny by stakeholders or the PAC.
- The economic analysis is fundamentally flawed. In addition to basic calculation errors it understates the costs and overstates the potential benefits of the project. A review of the Gillespie analysis reveals that it potentially mis-estimates the benefits and/or costs by approximately \$1.5 billion
- When errors are corrected and more reasonable assumptions are used, the economic analysis demonstrates that this project has over estimated the social benefits by \$538m, will deliver a **net economic loss**, very conservatively estimated at \$80m – a loss that will increase if the impact on the studs was included (\$338m) and other costs (such as missing capital costs of over \$100m, and possible production tonne overestimation (close to \$1 billion)). **On top of this, those losses are** significantly more if environmental, rehabilitation and other externality costs are then included.
- Anglo American has completely failed to assess certain aspects of this proposal (including an environmental analysis of the extension to the current Drayton mine and the assessment of Indigenous heritage impacts of the proposal in accordance with the relevant guidelines).
- The mine plan contains significant errors and omissions and is at risk of not being able to be delivered due to high operating costs (compared to other mines in the Valley), key equipment assumptions, underestimation of capital costs, and inaccuracy (significant underestimation) of mine closure costs. The Drayton mine's past performance provides no confidence that the predicted output can or will be achieved at the new mine at Drayton South.
- The analysis provided by Anglo American of environmental impacts on the Hunter's sensitive water systems; air quality (including cumulative air quality); soil capability, productivity and rehabilitation; noise and blasting is flawed, based on incorrect or inappropriate modeling, cannot be independently assessed or verified, and the data that is provided demonstrates that this mine will exceed acceptable noise and dust limits for human comfort.



- Important BSAL land has been inappropriately withdrawn which further diminishes the credibility of the EIS process and assessment.
- The presence of unstable sub-soils and the mining methods proposed will result in permanent loss of productive agricultural land which will not be remediated and will increase salinity in the stressed Hunter River.
- Coupled with the ground and surface water impacts of the mine on an already stressed Hunter river system and a final void management strategy that is considered to be “a physical impossibility” these are unacceptable legacy issues for future NSW generations and taxpayers.
- Exposure to coal mining related dust causes a range of respiratory diseases in humans such as Coal Mine Dust Disease and Coal Workers’ Pneumoconiosis. Both remain important human health concerns in first world countries where there is evidence that respiratory disease associated with coal mining activities is increasing in prevalence and severity.
- On equine health, the information presented by the Proponent is deficient, irrelevant, inadequate and inapplicable to horse management practices on our studs and more generally in the Hunter Valley.
- It misunderstands and misrepresents the very serious risks to equine health posed by coal mining related dust, and the serious risks associated with blasting (including behavioural responses, chronic stress, deterioration of learning abilities, miscarriages and reproductive disorders) to equine health – impacts and responses which cannot be habituated.
- The highly credentialed Doctors Tennent-Brown, van-Eps, Hogson and McLean all identified that there is insufficient information to establish that there will be no significant adverse impact and strongly recommend the application of the precautionary principle. Dr Andrew McLean concludes that it is of the utmost importance that the precautionary principle is applied to avoid Darley and Coolmore becoming an experiment on the effects of coal mine explosions on thoroughbred racehorses, and that an application of that principle ought lead to a rejection of the project application.
- Further the equine health impact statement/literature review contains no directly relevant information to the possible effects of dust derived from coal mining on the health of horses.
- It is disappointing that despite previous reviews Anglo American continues to display no real understanding of the sensitivity of the studs to the threats and impacts of mining.
- It is disappointing that the Department in its Preliminary Assessment Report has adopted an identical position to the one it held last time around (in relation to the previous proposal), a position that was diametrically opposed to that expressed by the Review PAC and comprehensively rejected by the Determination PAC.
- The approval of the Drayton South Coal mine will result in a contiguous open cut mining corridor from our boundary up to the Upper Hunter.
- This is not “co-existence” nor does it demonstrate the “highest protection for the studs from the impacts of mining.”
- This is not an “inevitable consequence of co-existence” nor is it consistent with the Government’s Strategic Regional Land Use Policies.
- The impacts of this mine cannot be conditioned. Once any or more of the potentially high risk events is detected – whether environmental or to equine health – they will be irreversible and the damage will have been done.

**Given the scale and irreversible nature of the potential impacts, the significant uncertainty as to their extent, the serious questions raised as to the economic benefit of the mine and the inadequacy of the assessment of its potential impacts, a precautionary approach must be taken and this mine should not be recommended for any form of approval.**

## **1. Darley**

### **1.1 Largest Global Thoroughbred Breeding and Racing Operation**

Darley Australia is part of the global Darley thoroughbred breeding and racing empire owned by HH Sheikh Mohammed bin Rashid Al Maktoum with operations in the UK, America, Ireland, France, the Middle East, Japan and Australia.

Darley is the largest thoroughbred breeder in the world and one of the two largest in Australia sharing that position with one other global and Australian leader, Coolmore.

Darley's global operations are headquartered in Newmarket. Darley stands 53 stallions world wide, 9 of which shuttle between the northern and southern hemispheres. In addition to Australia, Darley stands stallions in the UK, France, Ireland, Japan and America.

Darley (and its racing arm Godolphin) have approximately 5,000 horses across the world and directly employ 1800 people.

### **1.2 Largest Australian Breeding and Racing Operation**

Darley is the largest integrated breeding and racing operation in Australia. Darley's Australian operations are extensive and include commercial breeding operations in the NSW Hunter Valley and in Northwood Park in Victoria. It has training operations in the Hunter Valley, Agnes Banks NSW and Flemington Victoria and racing stables at Warwick Farm, Agnes Banks NSW and Flemington Victoria.

Darley's business model is to "breed to race and race to breed". All of its progeny are bred from the finest thoroughbred bloodlines, building their reputation and credentials on the race track and retirement to stud to produce future elite athletes and champion athletes of the turf.

Darley is a national thoroughbred breeding and racing leader. The company directly employs up to 400 people in Australia and represents (with Coolmore) over 50 per cent of Australia's premier breeding and racing industry and progeny at the largest premier thoroughbred sales.

Darley stands 22 stallions in Australia - 15 in the Hunter Valley and 7 at its stud farm in Victoria. Coolmore and Eliza Park are the next largest stallion farms in Australia standing 12 stallions each.

Darley (and its racing arm Godolphin) has in excess of 1000 horses in Australia (one fifth of its global reach) and will breed from approximately 250 mares in Australia this year.

Darley (along with Coolmore) is the recognized epi-centre of Australia's thoroughbred breeding and racing industry - an industry which contributes over \$5 billion annually to the national economy, \$2.6 billion to the NSW economy and supports over 250,000 thoroughbred breeding, racing and related jobs across Australia (IER 2014 and 2010).

### **1.3 Woodlands – Historic Continuous Operation Since 1800s**

Woodlands has a proud uninterrupted history of thoroughbred breeding dating back to the 1800's. Woodlands was first settled in 1824 and it is believed that the Woodlands homestead was built in 1833.

Woodlands' first recorded association with thoroughbreds dates back to the 1870's under the ownership of HC White who bred and raced thoroughbreds, the most prominent of which was dual Caulfield Cup winner Paris in 1892 and 1893.

The tradition of operating a thoroughbred stud at Woodlands was continued by notable industry participants such as George Ryder (founder of the world's richest 2 year old race the Golden Slipper), Lord Derby and the Ingham Brothers.

This historic and continuous land use on the Woodlands' property for almost 200 years significantly pre-dates any open cut coal mining in the region – a fact that has not been recognized or acknowledged by the Proponent.

Champion Sires that have resided at Woodlands include:

- Canny Lad – 6 times Group 1 winner, including 1990 Golden Slipper; sire of 10 Group 1 winners and 54 stakes winners;
- Octagonal – Australian Champion 2 year old, 3 year old autumn triple crown winner, winner of the two riches weight for age races and 1996 Australian Champion Three Year Old and Australian Horse of the Year;
- Exceed and Excel – Australian Champion Sire 2012/13, world's leading sire of two year old stakes winners; first mate of Australia's Black Caviar; prolific and valuable sire with over 100 stakes winners, with 122 of his yearlings earning more than \$122,000 at sale;
- Lonhro – 11 times Group 1 winner; Son of Octagonal; Champion three year old; Champion miler; Horse of the Year and Champion sire. Sire of 6 Group 1 winners and 52 stakes winners so far. Set new Australian record of 160 individual winners in a season 2013/14.

These are only a few examples of the many elite athletes that have been bred, raised and/or trained at Darley Woodlands. They represent a small snapshot of the proud and passionate horsemanship that epitomises Australia's thoroughbred breeding and racing industry – one of Australia's oldest sports and the second most popular sport today (second only to Aussie Rules).

#### 1.4 Darley – Significant Investor

Darley established its commercial breeding operation in the Hunter Valley in 2001 in recognition of Australia's growing reputation as an international thoroughbred breeding and racing location.

In 2003 Darley purchased the 1,700 acre Kelvinside Stud in Aberdeen in the Hunter Valley – one half of Darley's integrated thoroughbred breeding and training operations in the Hunter Valley. In 2008 Darley purchased Australia's largest integrated breeding and racing operation, Ingham Bloodstock, which included the 6,500 acre Woodlands Stud at Denman.

These operations are pivotal to the equine Critical Industry Cluster in the NSW Hunter Valley and complement Darley's other breeding, racing and training operations in Western Sydney, NSW and Seymour and Flemington, Victoria.

In the past decade Darley has invested over \$1 billion in developing its Australian operations into world class thoroughbred breeding and racing facilities – comparable to the best, international scale thoroughbred breeding and racing operations in the world. In the past year alone, Darley and Coolmore have invested in excess of \$100 million in the purchase of stallion prospects for their Hunter Valley breeding operations.

#### 1.5 Darley – Significant Employer

Darley employs up to 400 people in Australia including up to 150 in the Hunter Valley.

People working for Darley include the finest horsemen and women, horse handlers, bloodstock experts, agronomists, mechanics, corporate and administration, finance, human resources, IT, marketing and sales staff.

These people are part of an integrated and interconnected industry which includes saddlers, farriers, feed producers, equine transport companies. It has facilitated the development in the Hunter Valley

of the largest equine hospital in the Southern Hemisphere and one of the most respected equine health and research facilities in the world.

Darley also facilitates in excess of 3,000 tourist tours per year and over 1,000 client visitors to their farms (the latter on just one day during the industry open days in August of every year). In doing so it proudly supports and generates important business and employment opportunities for the Hunter tourism and wine industries.

Many of Darley's employees, particularly in the Hunter Valley, live onsite at the farms with their families. Darley's Hunter Valley operations could more accurately be compared to small villages providing community housing, client and guest accommodation, recreational facilities and daily canteen services.

## 1.6 Darley – Epicentre of Australian Breeding and Racing Industry

*"Coolmore and Woodlands are central actors in the core business of the CIC. More than that they are likely **the most important of all central actors**, as most of Australia's leading thoroughbred sires are standing at either Coolmore or Kelvinside (Darley)." (La Tierra Report to, and commissioned by PAC p33)*

Darley owns and races in excess of 450 horses from its two training bases in Western Sydney and its third training base at Flemington Victoria.

It is estimated that Darley's ownership of elite thoroughbred racehorses in Australia is approximately 10% of all racehorses training in metropolitan Sydney. Darley sired progeny won 25% of Group races run in Australia throughout 2014/15.

It is notable that all four Group 1 races run in Australia so far this season have all be won by Darley-sired horses. As an example of the strength and importance of Darley on the race track, there were 11 stakes races in Sydney and Melbourne on Saturday 16 September 2015. Seven (7) or 64% of these races were won by Darley-sired horses.

Darley stallions service mares which are housed at Woodlands and at some 150 broodmare farms throughout the Valley. Darley's operations underpin the entire critical industry cluster and the thousands of equine related businesses and people employed by them in the Hunter and throughout NSW – including the largest, internationally respected equine hospital in the Southern Hemisphere. These equine support operations would not be located in the Hunter Valley but for the presence of world leading stud farms, like Darley, offering world leading stallions.

Two previous Planning Assessment Commissions and the NSW Government's independent Gateway Panel recognised and affirmed that Darley and Coolmore are "central actors" in the core business of the Hunter Valley's equine critical industry cluster. Darley and Coolmore were recognized as the "epi-centre" and "pivotal" to the sustainability of the Upper Hunter Equine Critical Industry Cluster.

These conclusions reached by 12 Independent Government experts are based on the fact that Darley and Coolmore are the national and international market leaders in breeding and racing and the fact that in Australia, the two companies together command over 40 per cent of the Australian stallion market, over 50% of the racing industry and their progeny represent over 50% of national sales of thoroughbreds every year.

## 1.7. Potential Impacts Darley Woodlands Stud

In his terms of reference the Minister specifically direct the PAC to assess the merits of the project "paying **particular attention** to the **potential impacts** on the operations of the Coolmore and Woodlands horse studs"

### 1.7.1 Impacts on Darley's Integrated Hunter Valley Operations

Darley operates two integrated stud properties in the Hunter Valley – “Kevinside” in Aberdeen and “Woodlands” at Denman. Employing up to 150 people at these locations, standing 15 stallions, with over 250 broodmares and 170 yearlings and many other nursing, retired and convalescing horses.

Stallions are based at both properties (primarily at Kevinside) and broodmares are based at Woodlands (and travel to and back from Kevinside during the breeding season, along with other clients' mares, to be serviced by the Darley stallions).

It is important to remember that Darley's integrated operations in the Hunter Valley directly support:

- over 150 broodmare farms in the Upper Hunter that care for the broodmares that are serviced by Darley stallions; and
- a sophisticated network of equine support industries in the Upper Hunter, including the largest equine veterinary hospital in the Southern hemisphere, that would not be located there but for the presence of Darley and Coolmore.

At present the closest operating mine to Darley's operations is Mt Arthur which is some 8-10km away. While this proximity is tolerable, it is not ideal.

The only “buffer” remaining between Darley's current operations and a continuous open cut mining corridor in the Upper Hunter is the land over which Drayton holds an exploration licence. The closest mine to Darley Woodland's operation is the Mt Arthur coal mine, some 8-10km to the north. While this is not ideal it is tolerable. The only “buffer” therefore between Darley's Woodlands stud operations and mining is the site of the proposed Drayton South open cut coal mine. If Drayton South proceeds, any buffer between international scale studs and mining will be extinguished. Darley and the equine CIC will then confront a contiguous open cut mining corridor from Jerrys Plains to the Upper Hunter. This is not “co-existence”. The Premier made it clear when he came to the Hunter in April this year that “mining cannot go everywhere” and “co-existence is not co-existence without boundaries”. We submit that a coal mine this close to our boundary is not “co-existence”. It will remove any “buffer” between two international scale studs and an incompatible land use, open cut coal mining.

Darley maintains that an open cut coal mine within 1km of our operations is unacceptable – for the day-to-day management of our business, our national and international reputation, and for the highly skilled and committed people who work, live and raise their families on the farm.

Should the Drayton South project be approved:

- the only remaining “buffer” between international scale thoroughbred breeding and open cut coal mining will be removed – effectively providing no buffer between these two incompatible land uses;
- there will be no protection afforded to Australia's two largest thoroughbred operators (contrary to the Government's publicly stated intentions to provide the highest protection to the industry) and by extension to the Hunter Valley's equine CIC;
- it will result in massive and immediate reputational and brand damage to Australia's leading studs, the Hunter Valley's equine critical industry cluster and Australia's reputation as a world leading thoroughbred breeding and racing nation;
- it will signal that this Government is prepared to sacrifice an entire industry for the sake of one mine (contrary to the intentions of the Government's Strategic Regional Land Use Policy and the advice and decisions of previous PACs);
- it will result in the loss of investment and clients for Darley, Coolmore and the remainder of Australia's premier thoroughbred breeding industry as;

- perception is reality in this industry;
- reputation is paramount;
- investors will vote with their feet and will not take the risk of investing in a region where coal is king and all other industries are collateral damage; and
- leading stud operations will be forced to relocate and investors and broodmares will follow.
- it will precipitate the demise of the Hunter Valley's equine Critical Industry Cluster - NSW's and Australia's premier breeding areas; and
- it will diminish and destroy viable alternative sustainable industries which provide important economic diversity for the region's economy.

For Darley in particular, a mine less than 1km from our boundary will have significant and insurmountable impacts on our operations and viability including:

- reputational and brand damage;
- jeopardising the viability of our international scale farm due to continual and unpredictable interruptions and adverse impacts caused by mine blasts, industrial noise emissions, vibration, light spillage and dust and other airborne emissions;
- inability to attract and retain skilled staff to live, work and raise their families on a farm less than 1km from an operating coal mine blasting up to 5 days per week;
- jeopardising the health and safety of valuable livestock and their handlers:
  - particularly pregnant mares and valuable foals during the intensive breeding and servicing period of August to December every year;
  - valuable yearlings at the formative and most sensitive stage of their development;
- imposing a competitively disadvantage to our revenue and fee prospects vis-a-vis our competitors by damaging our reputation;
- transport delays affecting the health and safety of our people and livestock – adding risks, costs and liabilities to our operations, exacerbated at times of emergency and particularly when urgent care and surgery is needed to valuable livestock and their progeny throughout the foaling season, August to December every year; and
- adversely affecting our competitiveness and competitive advantage as the leading national and international thoroughbred breeder.

These are all unacceptable consequences of allowing a mine in such close proximity to international scale thoroughbred breeding operations.

With respect these are not "inevitable consequences of co-existence" as the Department has suggested in its previous reports and again in its current Preliminary Assessment Report.

If this mine is approved these impacts will be the by-product of a failed planning regime that has ignored its own policies and all the warning signs – including warnings from 15 Independent Government Advisors who recognize the incompatibility of open cut coal mines with our industry and have strongly recommended against, then refused, an open cut coal mine in proximity to international scale thoroughbred breeding operations which are the envy of the world.

No amount of conditioning can avoid or mitigate the very real, adverse, competitively destructive impacts this one mine will have on the reputations and operations of two of the world's largest thoroughbred breeding operators and the entire equine Critical Industry Cluster concentrated in the Hunter Valley.

No amount of conditioning can repair the damage to our reputation and Australia's reputation as a premier breeding and racing destination.



No amount of conditioning can guard against the destruction of the environment and cultural heritage (both Indigenous and non-Indigenous) in this area. As many experts have submitted, once the damage is done it cannot be repaired.

### 1.7.2 Impacts on Darley: Significant and Unchanged

We note that the former Minister for Planning also directed the previous PAC to specifically:

*“assess the potential impacts of the project on the operations of the Coolmore and Woodlands horse studs”* (Drayton South Coal Project, Terms of Reference (b), The Hon Brad Hazzard MP, Minister for Planning and Infrastructure, 27 August 2013).

The concerns, based on scientific evidence, we and our advisers have put before the PAC are not new. In order to assess the potential impacts on the operations of the studs, the previous PAC set out to understand the two studs, the properties they occupy, their operations, their relevance to the broader equine industry cluster and the broader industry at a state and national level.

Based on its site visits, advice presented as part of the review hearing and independent information it commissioned from its own experts, the Review and Determination PACs made significant and considered findings including on:

- the importance of Darley and Coolmore;
- the need to afford them total protection from the impacts of mining;
- co-existence – which dictates that two incompatible land uses cannot coexist in close proximity;
- the significance of, and risks to, the cultural landscape values of this area;
- the importance of visual presentation, reputation and brandscape to the operation and viability of the studs; and
- other (including environmental) threats to the studs posed by mining.

A number of the findings of the Review and Determination PACs and the Gateway Panel are provided in the table below.

What is demonstrably clear is that the reasons why two previous PACs recommended against, and refused this mine, are fundamentally the same reasons why this application should also be refused.

Extracts from Drayton South Review and Determination PACs	
Importance of Darley and Coolmore	<i>“The studs’ significance to the broader Critical Industry Cluster meant <b>that they should be afforded total protection from the impacts of mining</b>”</i> (Review PAC, pii)
	<i>“Coolmore and Woodlands are central actors in the core business of the CIC. More than that they are likely <b>the most important of all central actors</b>, as most of Australia’s leading thoroughbred sires are standing at either Coolmore or Kelvinside (Darley).”</i> (La Tierra Report p33)
	<i>“If Coolmore Australia and Darley Australia were to exit and cause probable decline and possible death to the CIC, revival of the CIC should be considered unlikely because:</i> <ul style="list-style-type: none"> <li>• <i>The perceived and real issues that caused the decline will remain, deterring others from assuming the vacant lead roles within the CIC; and</i></li> <li>• <i>Cluster critical mass is lost”</i> (La Tierra Report, p 34)</li> </ul>
	<i>“On the evidence, the Commission agrees that Coolmore and Darley studs are at the ‘epicentre’ of the thoroughbred breeding industry in NSW and Australia. They are ‘pivotal’ to the sustainability of the Upper Hunter equine CIV because of their size and market share. They are the largest international scale thoroughbred studs in Australia and have economic and reputational significance to the region, NSW and Australia. The Commission supports the recommendation in the PAC Review Report and the Gateway Panel report that both studs should be afforded the highest level of protection.”</i> (Determination PAC, 2014, p11)
Co-existence	<i>“A previous review undertaken by the Planning Assessment Commission</i>

	indicated that "available evidence supports the view that open-cut coal mining and a viable international-scale thoroughbred breeding enterprise are incompatible land-uses" (PAC 2010). Mr Short also found that "Thoroughbred horse studs of the nature and scale of Coolmore and Woodlands, and open cut coal mining as proposed by the Project are incompatible land uses. These land uses cannot co-exist in close proximity to one another." (Review PAC, p27)
	"The Commission agrees with the SKURP that co-existence should be taken to mean that both industries should be able to remain in the Hunter Valley and flourish. The evidence supports the view that the mining industry will continue in the Hunter Valley regardless of whether Drayton South is approved or not given the recent approval of the expansion of the Mt Arthur Coal Project and other existing mining operations and exploration works in the region. However, if Coolmore and Darley decide to relocate, the equine industry in this region would decline as it would be extremely unlikely those studs would be replaced by others with similar international reputation. (Determination PAC, 2014, p10)
Cultural Landscape Values	The properties have a unique combination of scenic, historic and agricultural qualities which lend themselves to the equine and tourism industries but could also be argued to have a significance heritage value of their own. ... <b>this combination of attributes is extremely difficult, if not impossible, to find elsewhere.</b> (Review PAC, p12)
	The Commission considers that <b>the landscape of the studs and their surrounds warrants conservation and protection.</b> Open cut mining in this location threatens the significance of the surrounding landscape. (Review PAC, p 27)
	"The project's indirect and residual impacts will affect the high scenic quality and cultural heritage of the area. ... These impacts are inconsistent with the object of protection of the environment." (Determination PAC 2014, p19)
Viability	There are <b>real risks to the future viability of the Coolmore and Woodlands studs</b> from the mine as currently proposed in this location (Review PAC, p ii)
	The Commission is <b>not satisfied</b> the <b>impacts</b> of the proposed mine plan on the horse studs <b>can be satisfactorily managed.</b> (Review PAC, p ii)
Equine Health, Viability & Economic Welfare	"It has not been conclusively demonstrated that mining in close proximity to the studs... would not negatively impact on equine health or the operations of the two most important equine industry players in Australia, Coolmore and Darley. The risk of losing these two studs and the likely demise of the equine industry does not promote the social and economic welfare of the community. (Determination PAC, 2014, p 19)
	"The project has not demonstrated that it will not adversely impact on equine health and the operations of Coolmore and Darley studs" (Determination PAC, 2014, p 20)
	"The approach to monitoring the responses of thoroughbred horses to the mine's operation to address uncertainty is not acceptable because once the damage to the operations of the studs occurs, it is irreversible" (Determination PAC, 2014, p 20)
	"The economic benefits of the project do not outweigh the risk of losing Coolmore and Darley and the potential demise of the equine industry in the area with flow-on impacts on the viticultural and tourism industries" (Determination PAC, 2014, p 20)
	"The project is not in the public interest." (Determination PAC 2014, p20)
Reputation and Brandscape	The Commission found the proposed mine would threaten the studs' <b>reputation and brand and potentially their onsite operations as well.</b> (Review PAC, p ii)
	The Commission agrees that as proposed the mine would have significant impacts on the visual amenity, landscape and image associated with Coolmore and Woodlands studs and their surrounds. (Review PAC p17)
	"The landscapes of the studs are of <b>special intrinsic scenic quality and character, historically significant</b> and of importance to the story of development of the Upper Hunter Valley, the theme of agriculture and rural industry and the thoroughbred racing industry. They are of <b>special and possibly unique sensitivity</b> to impacts on the scenic values of their settings

	and are <b>highly vulnerable to direct and indirect visual impacts.</b> " (Review PAC p 17)
Environmental Impacts	<b>The Panel finds the potential impacts of the proposed mine on the Critical Industry Clusters are significant.</b> These potential impacts include those from dust, noise, vibration and blast overpressure, and most importantly, loss of landscape values through diminished visual amenity. (Gateway Panel Review, December 2013, Executive Summary)
	<b>The air quality impacts of the project are not considered acceptable due to the combined concerns about the additional amenity and health impacts to residents living on the studs ... and the reputational damage that may be caused with the deterioration of the industry.</b> (Review PAC, p 21)
	"...noise, blasting, lighting and maybe even air emissions could have the potential to disrupt or impact on the breeding operations of the studs. <b>The Commission is not confident there would not be significant impacts on the thoroughbred studs from the proposed mine.</b> (Review PAC, pii)
Precautionary Principle	"When there is a risk in losing a significant industry, the adoption of the precautionary approach is consistent with the objectives of the Act, the intent of the SRLUP and the principles of ESD" (Determination PAC, 2014, p 19).



## 2. Planning Assessment Commission and Gateway Panel Reports

Anglo American's application for an open cut coal mine on the Drayton South site has been reviewed by 2 independent PAC's and the Government's independent Gateway Panel.

12 independent NSW Government experts assessing the Drayton South project have concluded that:

- international scale thoroughbred breeding operations and open cut coal mines are incompatible land uses (a conclusion also reached by 3 further independent PAC experts assessing the Bickham Coal Project in 2010);
- thoroughbred studs of the nature and scale of Darley and Coolmore and open cut coal mining proposed by Anglo American at Drayton South "cannot coexist in close proximity to one another";
- Darley and Coolmore studs are "central actors" the "epi-centre" of the Hunter Valley's equine critical industry cluster; and
- Darley and Coolmore should be afforded the "total protection", the "highest level of protection" from the threats of mining.

Expert advisers commissioned by the PAC concluded that:

- there is ample evidence indicating that the protection of these core businesses is required to prevent the decline of the CIC; and
- If Darley and Coolmore were to exit and cause the decline and possible death of the CIC, revival of the CIC is unlikely because the perceived and real issues that caused the decline will remain, deterring others from assuming the vacant lead roles within the CIC and hence cluster critical mass will be irrevocably lost.

### 2.1 Planning Assessment Commission Determination 2014 ("Determination PAC")

In rejecting the application for an open cut coal mine at Drayton South in October 2014 the Determination PAC determined that:

- The project does not provide sufficient buffer to protect Coolmore and Darley from the impacts of mining (also recommended in the PAC Review and the Gateway Panel Reports).
- The project has not demonstrated that it will not adversely impact on equine health and the operations of the Coolmore and Darley horse studs.
- The approach of monitoring the response of thoroughbred horses to the mine's operation to address uncertainty is not acceptable because once the damage to the operations of the studs occurs, it is irreversible.
- The economic benefits of the project do not outweigh the risks of losing Coolmore and Darley and the potential demise of the equine industry in the area with flow-on impacts on the viticultural and tourism industries.
- The project is not in the public interest.

### 2.2 Recommendations of the Review PAC 2013

Despite their previous rejection of the Review PAC's recommendations, the Proponent's second Drayton South application is based on a selective quotation of the Review PAC's recommendations and complete disregard of the findings of the Determination PAC.

It should be remembered that the Review PAC in December 2013 recommended that:

- *The Coolmore and Woodlands horse studs should be recognized as essential to the broader Equine Critical Industry Cluster **and given the highest level of protection from the impacts of mining.***

- Any open cut mining contemplated on the site should be required to demonstrate that its impacts **will not affect the viability of the Coolmore and Woodlands horse studs.**
- If mining on any portion of the site is to proceed, a new mine would need to be developed to plan for extraction from a considerably reduced mining area, constrained by physical restrictions which were put forward as **minimum setbacks** and importantly be **subjected to rigorous assessment to ensure compliance with recommendation 3 above.**
- Further any new mine plan for the site would need to be further assessed to ensure the visual, blasting, noise and dust impacts could be managed to an acceptable level at the neighbouring stud properties and should take into account worst case scenarios. Other impacts would also need to be carefully considered both in relation to any impacts to the horse studs and more broadly, particularly in relation to the long term water impacts and the final landform.

None of these issues have been addressed to any reasonable level of detail or confidence by Anglo American in its EIS and Response to Submissions. It is disappointing that the Department of Planning and Environment has again appeared to take the Proponent's claims on face value and has failed to critically and independently analyse these matters.

### 2.3 Recommendations of the Gateway Panel 2013

The Gateway Panel in its December 2013 report recognised the significant impacts of the proposed Drayton South coal mine.

The Panel determined (p24):

- The potential impacts of the proposed mine on the CICs are significant because the potential impacts on Coolmore and Woodlands horse studs and Arrowfield Estate vineyard and winery are significant and these are core businesses within each CIC.
- Open-cut coal mining as proposed at Drayton South and thoroughbred horse studs of the nature and scale of Coolmore and Woodlands (Darley), and importance to the sustainability of the Upper Hunter Equine CIC, **are incompatible land uses that cannot co-exist in close proximity to each other.**
- Mitigation measures proposed by the proponent are unlikely to be adequately effective in controlling potential impacts on the CICs.
- ... the consequences to the CICs of these **potential impacts are so great that, in the Panel's opinion, these risk to the Upper Hunter Equine and Viticulture CICs should be avoided.**

On the matter of appropriate buffers, the Panel recommended that:

*"the 'buffer' land should be **sufficiently sized to negate all potential impacts of the proposed mine on the continued viability of Coolmore and Woodlands (Darley) studs and Arrowfield Estate vineyard and winery.**"*

*"This will include recognition of the importance of visual amenity and landscape values to both CICs..."*

*"It is likely that an adequate buffer **will be measured in kilometres**, and be influenced by natural topography" ... (p24)*

Despite the very detailed research and findings of previous PACs, their expert advisers and the Gateway Panel, at no time has the Proponent or the Department sought to recognize or acknowledge the sensitivity of our operations, their vulnerability to the threat of mining or shown an understanding of the clear reputational and operational impacts of an open cut coal mine less than 1km from our operations.

### 3. PAC Terms of Reference & Regulatory Context

#### 3.1 PAC Terms of Reference

Darley notes that the PAC's Terms of Reference, issued by the Minister for Planning on 13 August 2015 are to:

- 1) Carry out a review of the Drayton South Coal Project and:
  - a) Consider the EIS for the project, the issues raised in submissions, the formal response to submissions, and any other information provided on the project during the course of the review;
  - b) Assess the merits of the project as a whole having regard to all relevant NSW Government policies, and **paying particular attention to the potential impacts on the operations of the Coolmore and Woodlands horse studs**; and if necessary,
  - c) Recommend further measures to avoid, minimize and/or manage the potential impacts of the project.
- 2) Conduct public hearings during the review as soon as practicable after the Department of Planning and Environment provides its preliminary assessment report to the Commission.
- 3) Submit its final report on the review to the Department of Planning and Environment, within 9 weeks of receiving the Department's preliminary assessment report, unless the Secretary of the Department agrees otherwise.

Advice provided to the HTBA, and as presented by Mr Andrew Beatty (Director of Beatty Legal) to the PAC at its hearing confirms our view that the PAC does not have before it sufficient credible information to make an informed assessment of the project's merits, or to be satisfied that it has before it sufficient information to demonstrate that *particular attention* has been paid to the potential impacts of this mine on the two Studs. A copy of Mr Beatty's PAC presentation and supplementary advice is appended in full to this submission.

#### 3.2 Regulatory Context

The regulatory environment for this project has changed in two important respects since the earlier assessments of the proposal by the PAC:

Firstly the project is subject to a stricter statutory assessment regime as it must now to be assessed as "State Significant Development" under Part 4 of the *Environmental Planning and Assessment Act 1979 (EP&A Act)*.

- Previously, the project was assessed as a "Part 3A Project" under now repealed provisions of the EP&A Act. A consequence of this change to the regulatory framework is that the consent authority is required to take into consideration the provisions of any relevant planning instruments in its assessment.
- In addition, there is a greater responsibility on the consent authority under Part 4 to ensure that all impacts of the project are fully understood so that matters essential to the consideration of the project are not inappropriately deferred and the terms of any approval do not allow for a significantly different development (with significantly different environmental impacts).

Secondly, the weight to be given to the significance of the coal resource is to be afforded less prominence when considered against other factors following the recent repeal of clause 12AA from the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 (Mining SEPP).

Relevantly, this amendment was made to address '**community and stakeholder concern that the social and environmental impacts of a proposal are not being adequately considered or given appropriate weighting**' by the consent authority.



### 3.3 The Department's Preliminary Assessment Report

The Secretary's Preliminary Assessment Report (PAR) is before the Review PAC. We note that this detailed report was published just 8 days after the Commission's Terms of Reference were issued.

The Review PAC would be aware that the earlier iterations of this proposal for a new mine, comprehensively rejected by two earlier PACs, were supported by the Department. The Department has already reached the same conclusion again here. The Review PAC is directed, under its terms of reference, to "*assess the merits of the project as a whole having regard to all relevant NSW Government policies*".

The Secretary's Preliminary Assessment Report recognizes that the Hunter's "*thoroughbred industry is one of the largest and most important thoroughbred breeding clusters in the world, along with Newmarket in the United Kingdom and Kentucky in the USA*" (p 24). It also recognizes that the industry is a significant regional employer and significant contributor to the regional economy with over 85% of operating costs spent in the region (p24).

However, the Department makes inaccurate assessments on the potential impacts of the Drayton South open cut coal mine on the studs, the significance of these impacts to our business, viability and reputation. In doing so it demonstrates a complete lack of understanding of our industry, commercial and competitive drivers and the importance of Darley and Coolmore as the industry's epicenter.

The Department makes misinformed comments on "co-existence" and disappointingly accepts many of the Proponent's claims uncritically and on face value.

### 3.4 Flawed Assessments

Key assumptions, base data and modeling used by the mining company to predict and assess noise, dust, visual water, land capability, equine health and other impacts are flawed.

Despite earlier, detailed reviews of their work, the Proponent's experts have still failed to display any real understanding of the sensitivity of the Studs to these impacts. Their work lacks proper, targeted assessments that this PAC must have for this review.

At this stage:

- a) some impacts of the proposal have not been assessed at all by the Proponent;
- b) for those impacts that have been assessed, many of the assessments are incomplete and/or have not been undertaken in compliance with the requirements of the SEARs and other, relevant Government guidelines; and
- c) as key aspects of the project remain undefined by the mining company, the Department's proposed consent conditions must of necessity apply an extraordinary level of "flexibility" which betrays the fundamental uncertainty surrounding key features of the proposal.

Key aspects of project have not been assessed at all by the proponent. For instance, while extraction of 1.4 Mt of ROM coal from the existing Drayton Mine is proposed as part of this project, there has been **no assessment** of the air quality and noise and other impacts of the works necessary to extract this material. Unless and until this assessment is undertaken the Commission is in no position to consider the merits of the "*project as a whole*".

The serious, long term effects of an open cut coal mine on the landscape, water resources and agricultural productivity of this region require full identification and assessment. Despite this, a number of matters required to be assessed by the SEARs remain unassessed.

Experts called by Darley and Coolmore have raised fundamental concerns about the potential impacts of the mine on water quality and supply, the loss of productive agricultural land, adverse impacts on cultural heritage values and the likelihood that the promised rehabilitation and revegetation will either fail or prove significantly more time consuming and costly than currently contemplated.

The PAC's confidence in the proponent's case is a by-product of its confidence in the currency, accuracy and adequacy of its underlying predictions. Where that confidence fails, so must the project.

### 3.5 Project Uncertainty

Key aspects of the project remain undefined.

The Proponent has proposed that many aspects remain to be determined "flexibly" once the project proceeds. This deficiency is compounded when even the attainment of the suggested "performance criteria" proposed is in doubt.

This lack of definition is manifest in the Department's proposed conditions of consent which encompass a wide range of possible outcomes, impacts and circumstances.

"Flexible" planning controls are, in this case, masking a simple lack of information about potentially serious, long term environmental outcomes.

### 3.6 The "economic credibility" of this mine

In its earlier presentations to previous PACs, and in various public statements, the proponent has consistently put at issue the financial viability of the project and how a mine of the size now proposed would not be viable.

*"Further changes to the mine plan and delays to the proposal will make the project financially unviable ..."* □ Mr Seamus French, CEO (Anglo American – Presentation to Review PAC – October 2013)

*"Based on the latest proposal from Coolmore (as stated in their submission to the PAC) suggesting that the Project "exclude the Houston mining area and further reduce the Whynot mining area to remain behind existing natural ridgelines", it is estimated that an additional reserve loss of more than 23 Mt would be incurred. This option would have material impacts on the viability of the Project and for this reason it is not considered feasible by Anglo American. This view was supported by the RPM Independent Mine Plan Review which was completed for the New South Wales (NSW) Department of Planning and Infrastructure (DP&I). In their review, RPM also investigated this option and concluded that "it would have a material impact on the project economics". (Anglo American Supplementary Information to the PAC – November 2013)*

*Anglo American reviewed the feasibility of removing a greater portion of the Redbank mining area as recommended by the PAC and found that this would make the Project unviable ... (Anglo American Consequential Environmental Impact Assessment for Retracted Mine Plan – March 2014)*

*The Redbank operation is completely screened behind the existing ridgeline and it has been confirmed that the removal of this operational area from the mine plan would render the Project unviable. (Anglo American Consequential Environmental Impact Assessment for Retracted Mine Plan – March 2014, p7)*

*The Department of Primary Industries also raised this concern following their own review stating that "the effective removal of two of the four pits also brings into question whether changes to the net present value of the deposit and the flow through effects on mine scheduling, equipment usage and the ability to still produce the required products would render this proposal uneconomic".*

*Previous independent mining engineer reviews conducted by Runge Pincock Minarco (for DP&I) and R A Jennings & Associates (for PAC) support this finding.*" (Anglo American Consequential Environmental Impact Assessment for Retracted Mine Plan – March 2014, p7)

*The Department also notes that Anglo has advised that mining the coal in the Redbank Pit is fundamental to the economic viability of the mine as a whole, and if this pit is removed it is likely that the project would not proceed.*" (Secretary's Environmental Assessment Report – July 2014, p34)

While *profitability* of a project is clearly a matter for a proponent, any decision maker balancing claims of *net economic benefit* generated by a mine needs be satisfied that such benefits are based on the project meeting a predicted continuous rate of extraction, that those predicted targets are credible and can be achieved, and that the impacts of a project, if abandoned because it lacks ongoing viability, can be mitigated.

These tests are not met here.

### 3.7 "Mine creep"

Darley and Coolmore, the equine CIC and surrounding viticulture and tourism industries are justifiably concerned about "modification creep". This has been the pattern followed historically by virtually *all open cut coal mines* in the Hunter Valley. It has only been with the greatest reluctance that this Proponent has, over time, gradually and modestly reduced its original mine plan to that which is now put forward for review.

Alive to these concerns, we understand that the Proponent has either made or proposes to make promises to the State government about abandoning certain of its mining rights.

How this would be done or enforced and how successors in title would be bound by these promises, assuming they were made lawfully, is unclear. **It would be an entirely irrelevant consideration for the PAC to take these matters into account in this review save to acknowledge that the prospect of these "promises" reveals yet another attempt to transform a flawed project into one capable of some form of conditional approval.**

## 4. Deficiencies in EIS, Response to Submission and Secretary's Preliminary Assessment Report (SPAR)

The following sections present scientific, expert evidence from economic, environmental, equine health and thoroughbred marketing experts which refutes the information presented by the Proponent and upon which the Department's Preliminary Assessment Report is based.

Based on the advice of these experts, it is clear that the EIS is not only broadly deficient, many of the assessments it should have included are entirely absent and/or incorrect. On this basis, no decision maker acting reasonably could recommend in favour of this project on any basis.

After considering the full range of relevant and current government policies, the regulatory context in which this proposal is to be assessed, and the oral and written submissions put to it before, during and after the public hearing, we submit that the Review PAC could not ascribe any real weight to the Department's latest Assessment Report for this mine.

### 4.1 Economic Analysis of Drayton South

#### 4.1.1 Economic Benefits: Not Beneficial. Not Credible.

Darley commissioned Marsden Jacob Associates to review the accuracy of Anglo American's economic analysis relating to this second application for the Drayton South coal mine.

Marsden Jacob Associates reviewed the approach, assumptions and present value calculations undertaken by Gillespie Economics on behalf of Anglo American. In conducting this analysis, Marsden Jacobs Associates found:

- The Gillespie analysis potentially mis-estimates the benefits and/or costs by approximately **\$1.5 billion**;
- Gillespie Economics overestimates the net social benefit of the proposed mine by \$538m;
- Gillespie Economics overestimates the value of coal by around **\$413m** due to an error in the assumed coal price (confusing Australian and US dollars);
- When compared to 2012, the value of coal now falls by 35%;
- If the proposed product tonnes for the mine have been over-estimated by 35% (as was the case with the existing Drayton mine) this could result in a further reduction of nearly **\$1 billion** (over \$910 million) in the value of coal;
- Costs of Greenhouse Gas emissions have been reduced by 96%, incorrectly attributed and valued. The correct calculation would attribute at least **\$81 million** to greenhouse gas emissions not \$6 million;
- Both BDA and Deloitte Economics agree that the approach taken by Gillespie Economics regarding the Greenhouse gas impact of this project is inappropriate;
- Aboriginal and transport costs (conservatively estimated at **\$50 million**) have also not been included;
- When adjusted to correct errors in the assessment of the greenhouse gas, aboriginal and transport costs the claimed net economic benefit of \$458 million results in a **net economic loss of (a very conservative) \$80 million before any additional costs and the impacts of the mine on the thoroughbred studs is included**;
- The net social economic cost of the proposed mine could increase further if:
  - the size of coal reserves decline (as has happened for the existing Drayton mine with a loss of 13.5 million tonnes),
  - capital costs increase (capital costs for this project have fallen by \$354m but no estimate has been made for repair and maintenance (conservatively estimated at least \$100m) and
  - external costs (including impacts on the studs) are properly included;
- When the impacts on the studs alone are included the net economic loss associated with this mine is further compounded by at least a **further loss of \$368m**.

Marsden Jacob Associates found that no attempt had been made by either the BDA Group (Gillespie Peer Review) or Deloitte Access Economics (Department of Planning Review) to check the data or review the computational accuracy of the Gillespie economic model. This is unacceptable. The results of the economic analysis therefore lack credibility.

It is clear that an error in the calculation of the net economic benefits has resulted in an overestimation of the benefits of this project. It appears that this error is due to Gillespie using an assumed coal price of US\$87 (equivalent to AUD \$102) in the model rather than AUD\$87. The correctness of this explanation of the model is reinforced by the fact that claimed present value of royalties is only achieved when the coal price is assumed to be AUD\$102.35/t.

This "computation" error is compounded by additional overestimation of benefits and underestimation of costs, non compliance with the SEARs, lack of transparency, disregard for Treasury Guidelines. In the opinion of Marsden Jacob there is a "failure to present a range of costs and benefits in a balanced, detailed and demonstrably unbiased manner."

#### 4.1.2 Economic Analysis of Risks of Drayton Mine

Despite a plethora of information presented by the industry, international thoroughbred industry leaders, 2 PACs and the Gateway Panel over the 4 years during the assessment of Anglo American's first application, both the Proponent and the Department continue to misunderstand and/or misrepresent the business and environmental drivers of international scale thoroughbred breeding operations.

The Department's uncritical adoption of the claims of the Proponent, that there are economic and practical barriers to the relocation of the studs, displays a comprehensive disregard and lack of understanding of the thoroughbred breeding business model. It ignores or overlooks the fact that the premium assets (stallions) drive the stud's viability and are far more valuable and mobile than fences, bricks and mortar. It also fails to recognize that broodmare farms, mare owners and equine support industries will follow premier stallions.

#### 4.1.3 Economic Analysis for Drayton South First Application – Flawed and Not Credible

Marsden Jacob and Associates reviewed Anglo American's economic assessment relating to the first application. That previous analysis found Anglo American's economic analysis conducted by Gillespie Economics:

- lacked transparency to facilitate independent verification of the results;
- failed to meet the Director General's Requirements and NSW Guidelines for economic analysis;
- overestimated the benefits and under estimated the costs;
- included either unspecified, unjustified or unrealistically high coal price assumptions (ranging from AUD \$115, AUD \$118, AUD \$120 per metric tonne);
- indicated, when appropriate coal price assumptions were used, that the project would not break even and would result in a net economic loss to the state of NSW.

Economic modeling by Marsden Jacob Associates revealed that:

- the proposed mine would never reach an economic break even point when a realistic coal price of AUD \$90 per mt was used;
- the project would result in an economic loss to the state of NSW of \$457m (when the impacts on the studs were taken into account); result in a net loss to the regional economy of \$120m per annum and risk at least 640 jobs in the equine industry;
- the project might only result in royalties to the NSW Government of less than \$15m per annum on average.

It is clear that Anglo American has in each of the proposals overstated the benefits and understated the costs of projects.

A copy of the relevant Marsden Jacob Associates analysis and presentation to the PAC and prior PACs are appended to this submission.

#### 4.1.4 – Drayton South: Not in the Public Interest and Should Not Proceed

On the basis of the evidence presented by Anglo American, and the assessment conducted by the Department, we respectfully submit the PAC can have no confidence in the economic analysis presented in support of Anglo American's second Drayton South application.

What is clear is that this proposed mine will not result in an economic benefit to the State. This proposed mine is uneconomic. The net economic loss to the state of NSW, is an unacceptable risk which should not be contemplated.

The Determination PAC's finding that the economic benefits of the mine do not outweigh the risks and that the mine is not in the public interest and, we submit, should be consistently applied to this proposal.

We also submit that the current PAC Review can also have no confidence in this economic analysis. This leads inevitably to the conclusion, as the 2014 Determination PAC found, that this mine is not in the public interest and should not proceed.

#### 4.2 Drayton South –Mining Assessment: Not Credible

Darley commissioned Resources Consultant, Mr White to review the Drayton South Coal Project EIS, Response to Submissions and the Department's Preliminary Assessment Report. Mr White has over 25 years experience in operational and technical roles in major Australian and international mining companies.

In our submission the PAC should give substantial weight to the analysis of this project by a senior, experienced and independent mining engineer.

In his analysis, Mr White found:

- Significant risks for the project's ability to deliver saleable tonnes as per the Production Schedule;
- Previous actual significant underperformance (35%);
- Questionable annual equipment production assumptions;
- Omissions and errors in the information provided including:
  - no schedule or assessment for the 1.4 ROM (Run of Mine) tonnes from the existing Drayton Mine;
  - incorrect and understated total waste production quantities; and
  - incorrect data used in air quality modeling;
- Incomplete Drayton Mine rehabilitation and closure costs both in terms of:
  - lack of certainty that the \$66m estimate for existing Drayton mine is accurate and adequate in the absence of a mine closure plan; and
  - additional, unknown and unaccounted values of additional capital needed to cover mine closure costs at Drayton South;
- A "loss" of 13.5m tonnes ROM reserves representing both a significant loss in asset value for Anglo and non-realisation of expected royalties for the state of NSW;
- Significant underestimation of capital expenditure costs, of at least \$100m, which have not been factored into Drayton South's analysis;
- Very high strip ratio costs (almost \$10/tonne higher) compared to other Hunter Valley mines which demonstrates that Drayton South faces significant cost challenges compared to its industry peers;
- Questionable accuracy of assumptions made regarding life of mine equipment output and reliability, on the basis of other assumptions made by Anglo American regarding capital expenditure

Many mine plan assumptions presented by the Proponent are highly questionable and not credible when compared to the practices of industry peers.



The lack of transparency, accuracy and detail relating to the proposed Drayton South mine plan raise significant issues any analysis of the predicted performance and economic benefits of the Drayton South proposal.

Given the omissions, past performance, deficiencies and underestimations cited above, neither we nor any review or consent authority could have confidence in the mine plan projections outlined by Anglo American in this second application for Drayton South.

#### 4.3 Air Quality– Risky. Not Credible. Dangerously Dusty

Analysis conducted by Dr Peter Stephenson, Managing Director of Stephenson Environmental Management Australia of the air quality assessment conducted by Anglo American for the Drayton South project revealed that:

- The predictions of the air dispersion modelling are unreliable because the model inputs were inadequate and/or incomplete:
  - emissions have been averaged and do not reflect peak emissions from the mine;
  - air quality impacts from the proposed extraction at Drayton mine have been omitted from the assessment;
  - there have been other inconsistencies and calculation errors which indicate potential for misrepresentation of data;
- The background ambient air quality assessment does not provide an adequate basis for a proper assessment of project impacts on the Darley and Coolmore studs;
- Potential short term air quality impacts of the project on humans, livestock and studs have not been and cannot be assessed using the model;
- Monitoring data from a dust deposit gauge located in a similar proximity to the current Drayton mine as the proposed Drayton South project is to the studs indicates the potential for significant impacts on the studs.
- Anglo American's claim that no coal dust will reach the studs" is misleading and unverified. It is evident that a very large amount of dust (15,000 kilograms of dust per day) will be generated by the project.
- The nominated level of dust suppression control is unlikely to be achieved continuously for 24 hours per day for the 15 year life of the mine and will require a very large amount of water to be delivered to the haul roads and exposed surfaces continuously throughout the operation of the mine.
- Anglo American's performance record over the last 15 years at the Drayton mine provides no confidence that the nominated level of dust suppression will be continuously achieved.
- If the nominated dust control is not achieved (a worst case scenario), dust emissions may be up to three times greater and the "project alone" impacts on air quality will exceed the relevant air quality limits from Year 4. When this project impact is added to background levels the cumulative impacts will substantially exceed the impact assessment criterion.
- The assessment does not assess worst case scenarios and does not provide a "conservative" estimate of project impacts;
- It is likely that more stringent environmental controls will apply in the near future as the applicable National Environment Protection Measure of 50uG/m<sup>3</sup> is likely to be reduced to 40uG/m<sup>3</sup>.
- Even assuming that the predicted air impacts are representative (which is disputed) and the project is able to achieve the nominated level of dust suppression (which is unlikely), the

cumulative impact of this mine will exceed the current 24 hour PM10 National Environment Protection Measure of 50µg/m<sup>3</sup>.

The cumulative impact of the project will cause dangerously dusty conditions.

#### 4.4 Acoustic and Blasting Review – Not Credible

Arup Acoustics, an international multi-discipline engineering firm was commissioned to assess the noise and blast vibration assessment of the Drayton South Coal Project. Mr Frank Butera, of Arup Acoustics, with over 20 years expertise in noise, vibration and acoustic planning and large scale environmental, industrial and transport projects conducted the review on the Proponent's EIS, RTS and the Department's Preliminary Assessment Report.

Mr Butera found:

- The noise assessment has not been undertaken in a proper and adequate manner and may not be representative of the predicted noise from the project:
  - There is a high risk that the background noise measurements obtained for the project are inappropriate. This could be used to justify higher project noise limits.
  - There is a high risk that the background noise measurements are no longer appropriate for the assessment of the project. There is no evidence to suggest that best practise calibration processes have been adopted or that the equipment used in the noise study maintained NATA Certification at the time of the noise measurement period.
  - There is no detail that defines the noise source or activity undertaken for operational noise assessment scenarios. Hence there is no evidence to verify that the key assumptions made in the model regarding mine depth, equipment selection, location of noise sources, duration or quantity of noise sources are representative or accurate. The model also assumes noise sources are stationary;
  - The noise source data and plots are incomplete and there is inadequate information to support the findings;
  - The noise model has not been calibrated for local conditions;
  - The noise predictions assume a very high efficacy of noise mitigation measures. These assumptions regarding noise mitigation are not supported by detailed information. Furthermore, the application of such noise mitigation measures may significant impact operational efficiency and reliability of equipment;
  - There is no evidence to indicate that noise associated with the proposed extraction at Drayton mine has been included in the assessment.
- The ground vibration and over-pressure assessment has been undertaken based on the criteria for "control of damage" to structures. There is no assessment that investigates the impact on human or animal comfort. There is a high risk that compliance with the adopted ANZECC is likely to adversely impact on human or equine comfort at nearby sensitive locations.
- The EIS demonstrates that the Industrial Noise Policy noise limits will be exceeded (even when "best case" noise mitigation measures are assumed):
  - This an unacceptable outcome.
- Noise modelling has been undertaken using dated software which cannot be scrutinised, validated or calibrated and is clearly not representative of local conditions;
- The noise and blast vibration modelling has not been validated and therefore is not representative of local conditions;
- Worst case events and scenarios used in the model have not been adequately defined and hence cannot have been assessed;

- The Kannegieter report fails to adequately address the impact of ground vibration or over-pressure noise on horses.
  - It relies on unreliable and unrepresentative noise predictions made by Bridges Acoustic;
  - It makes erroneous statements regarding background traffic noise and over pressure impacts from helicopters;
  - It applies an inappropriate blasting criteria (for structures rather than people or animals) to assess impact on horses;
- The EIS does not provide the confidence or transparency expected of a project of this size and in this sensitive location to assess against "best practice" methodologies and procedures.

In his presentation to the PAC, Mr Butera concluded that the Proponent's EIS does not demonstrate a true representation of current or future noise and blast vibration impacts and in his opinion the PAC cannot rely on the EIS findings.

Given:

- the importance afforded to noise and blasting impacts by the Review PAC; and
- the consideration of noise and vibration impacts on human and equine health and the viability of the studs by the Determination PAC;

no confidence can be placed in Anglo American's noise and blasting analysis which is flawed, founded on incorrect information, and will undoubtedly result in noise quality exceedences.

#### 4.5 Soils Analysis – Not Credible

Dr Pam Hazelton and Dr Peter Bacon were commissioned to undertake an assessment of the soil and land use capability issues associated with Anglo American's second application for Drayton South Coal mine proposal.

The analysis undertaken by Drs Hazelton and Bacon revealed:

- the presence of unstable sodic and saline soil in the subsoil. These soils will be exposed and disturbed by open cut mining;
- the top soil depth in the area is generally shallow (frequently 0.1m). It is impossible with mechanical excavation to precisely remove 0.1 metre layer of top soil (for stockpiling) without disturbing and including potentially unstable, sodic subsoil;
- any soil stockpiles will be dominated by sodic soils, these soils will be problematic to store and will create numerous difficulties in rehabilitating and revegetating the site;
- the stockpile management processes suggested by Anglo American are inadequate and do not comply with relevant guidelines;
- sodic soils form surface crusting and are hard setting when dry. This increases run-off and creates erosion risks. It also inhibits plant establishment. Sodic soils also facilitate the migration of contaminants in to waterways. A recognised management strategy for sodic soils is to minimise disturbance;
- Cadmium and lead are heavy metals found in the chemical analysis of soil at the site. These contaminants will adhere to the soil clay particles and can be transported as dust or by overland runoff towards the Hunter River and other waterways.
- Some of the subsurface soils are also saline (have a high level of sodium (salt)). This salinity creates an increased osmotic potential in the soil, reducing the 'availability' of the water. In turn this inhibits seed germination and growth and will only favour the growth of salt tolerant species. Use of the subsoil to recreate Endangered Ecological Communities (EEC) will be problematic

and pasture will be slow to re-establish; this itself reflects inappropriate assessment and elimination of highly productive BSAL land.

- The EIS also demonstrates a major net loss of productive land from the area
  - a loss of 253 ha of class 3 land that 'is moderately productive and well suited for grazing or to crop cultivation with a pasture rotation';
  - a net loss of 122 ha of class 4 land. This land is 'suitable for grazing but not cultivation'.
- it is highly unlikely that the excavated soils can be used to rehabilitate and revegetate the area to pre-mining conditions.
- Significant time, commitment to biodiversity and land management strategies would be needed to reduce the affects of the adverse and variable soil properties on the site. Such measures are costly and are often not successful. Such measures have not been proposed by Anglo American.

The loss of productive agricultural land and the increased risk of salinity to the already stressed Hunter River and its tributaries is of serious concern – particularly given the Hunter River is the lifeblood of our operations traversing both Darley's integrated Woodlands and Kelvinside stud farms in the Upper Hunter.

The loss of productive agricultural land and the high improbability of rehabilitation and re-vegetation of the land post mining, given the unstable, sodic and saline qualities of the subsoils, is seriously disturbing.

The assessment and mysterious disappearance, without any appropriate, independent or qualified assessment, of highly productive BSAL land calls into question the credibility of the assessment presented by Anglo American and the uncritical and/or inexperienced review by the Department of Planning.

A copy of the full analysis conducted by Drs Hazleton and Bacon along with a copy of the presentation made by Dr Hazelton at the PAC Hearing is appended to this submission.

#### 4.6 Water and Final Void Impacts – Not Credible

Mr Owen Droop, principal of OD Hydrology conducted a review of the water related impacts of Anglo American's second Drayton South application. Mr Droop routinely advises mine operators on water management.

His analysis revealed:

- the most recent Drayton South EIS did not provide an appropriate robust scientific justification to underpin the conclusions reached by the Proponent;
- water management impacts resulting from this mine would not be limited to the 15 year current estimated life of mine – they would effectively be a legacy left to the State and regional water users for ever;
- life of mine project modeling is uncertain, unreliable and contains significant risk with respect to life of mine water management impacts;
- The range of actual possible conditions haven't been assessed, with assessment of life-of-mine water management outcomes and requirements for a single, 'most favourable' scenario only;
- The impact assessment conclusions, including the assessment against AIP requirements, are based on:
  - a. inappropriate assessment or interpretation of real-world system behaviour and/or modeling results; and
  - b. demonstrably flawed modelling of final void salinity behaviour.

- the Department of Planning's Preliminary Assessment Report acknowledges these risks and uncritically accepts a yet to be assessed undefined alternative plan;
- final void water assessment and groundwater/spoil water assessment proposed by the Proponent are fundamentally inconsistent;
- **it is a scientific impossibility and physically impossible for both sets of final void outcomes proposed by the Proponent to occur together in the real world. One or both are incorrect;**
- serious shortcomings and errors with respect to interconnectivity of Whynot pit, data inputs and assumptions used and the simulated long term/very long behavior of water and salt associated with mined-out pits;
- significant salinity risks associated with the Project, either:
  - salinity will continue to increase well beyond reported periods and times reported in the EIS or a greater rate and load (Hyper-saline open void and interconnected spoil pore water in the long-term); or
  - a greater rate and load of salt migration from the mined - output will be transferred to the surrounding groundwater and Hunter River than reported; or
  - BOTH.
- Independent Expert Scientific Committee Experts have raised identical concerns and consider the information contained in the EIS insufficient to assess the cumulative impacts to Saddlers Creek, the Hunter River, the associated alluvium and the underlying Permian groundwater system. The Proponent's response to the IESC concerns was to refer the IESC back to the inadequate EIS.

The analysis conducted by Mr Droop on the water related implications of Anglo American's current application echoes the concerns and impacts expressed by Mr Droop as part of the assessment for the rejected first Drayton South application.

The impacts on ground and water systems, including the stressed Hunter water system, its tributaries and users, and the treatment of the final void were all issues that were highlighted by the Review PAC as needing rigorous scientific analysis, including worst case scenarios.

It is clear from Mr Droop's analysis that neither we, the Proponent, the Department and the PAC can be sure of the real-world impacts of this mine on water because:

- The range of actual possible conditions have not been assessed; and
- Critical parts of the analysis cannot be relied upon.

Mr Droop concludes, and we agree, that water use and availability in the Hunter are critical concerns and neither the EIS, the RTS nor the Department's Preliminary Assessment Report provide information upon which a well founded decision on the Project can be made.

A copy of Mr Droop's report and presentation are appended to this submission.

## 4.7 Visual Landscape/Brandscape

This section summarises the conclusions of assessments undertaken by Mr Michael Wright, registered landscape architect and Dr Lance Bell founder and owner of LGB, LLC the largest thoroughbred advertising agency in America.

### 4.7.1 Visual Landscape

*"The landscapes of the studs are of **special intrinsic scenic quality and character, historically significant and of importance to the story of development of the Upper Hunter Valley, the theme of agriculture and rural industry and the thoroughbred racing industry. They are of special and possibly unique sensitivity to***

impacts on the scenic values of their settings and are **highly vulnerable to direct and indirect visual impacts.**" (Review PAC p 17)

- Both MR Wright and Dr Bell attest to the importance of the surrounding highly scenic landscape that epitomizes high end, world's best practice thoroughbred breeding enterprises - surroundings and aesthetics that are vital to their image, reputation, business model and viability.
- Mr Wright notes that the visual impacts of the mine less than 1km from the studs will be direct, indirect and dynamic – an assessment that is consistent with that undertaken by previous PAC advisers Dr Lamb and Mr Short.
- Importantly Mr Wright's assessment is that, contrary to Anglo American's claims that the mine will not be visible and will have no impacts on the Coolmore and Woodlands studs and the amenity of the surrounding landscape, the mine will be visible from both the studs and by travellers, clients and staff travelling along the Golden Highway for the entire 15 year mine life of the project.
- Further Mr Wright confirmed that the mine will also be visible for a distance of 2.5 km along the current Edderton Road and for 4.5km from the realigned Edderton Road.
- None of these direct visual impacts can be mitigated. The Proponent's EIS suggests that tree screens could be used to mitigate direct visual impacts. However this approach will be inadequate and, as current experience has shown, overly optimistic and ineffective.
- In addition to the direct visual impacts of the mine, indirect visual impacts (such as dust, gas lighting, blasting, blast dust plumes, mining vehicles on public roads) will be audible and visible to visitors, clients and staff at the studs.
- In Mr Wright's opinion the Drayton South open cut coal mine is too close to the studs. The studs are very vulnerable and visually sensitive to threats imposed by mining. The open cut mine impacts are too severe and cannot be mitigated. The Proponent's EIS is inadequate and no amount of conditions can protect the studs from the highly intrusive and visually impactful nature of open cut coal mining less than 1km from their operations.

#### 4.7.2 Brandscape

- In his report Dr Bell, highlights the highly competitive nature of world-class stud facilities to attract the best customers, the best mares, produce the best progeny and attract the best trainers.
- Dr Bell emphasizes the criticality of premier stud facilities to the purchase and standing of the best stallions in the world. He highlights the intense competition in this market and the highly mobile nature of investments and clients.
- The hallmark of an international leader and innovator in the thoroughbred breeding industry is "quality delivered immaculately at every touch point to the customer".
- Dr Bell emphasizes that it is critical to understand that the cornerstone of world leading studs' reputation and brand story and the key driver of the brand experience is **the farm itself**.
- There are very high expectations associated with attracting discerning customers to a property capable of producing elite athletes and delivering a world class experience.
- Dr Bell notes that if a premium property or stud farm was promoted to be located in close proximity to a coal mine, it would demonstrate that they are "completely out of touch with their market".
- Dr Bell attests to the fact that the physical beauty of the surrounding landscape represents a dedication to detail and a commitment to the customer that communicates attention to every detail. Maintenance of the physical environment is a window into how well a farm is paying attention to the management of all other risks, challenges and details associated with breeding and raising champion athletes. These businesses are "richly visual".



- Dr Bell confirms that reputation is paramount in the horse business because of the inherent risks – including infertility, mare miscarriages, foal lung and bone development and risks of horses being hurt.
- Dr Bell attests to the fact that perception is reality in this industry.
- Dr Bell's professional opinion is that the presence of an open cut coal mine, such as that proposed at Drayton South, would present a definite threat to the commercial viability of the neighbouring studs.

Copies of relevant reports and presentations prepared by Mr Wright and Dr Bell are attached to this submission.

## 4.8 Heritage

GML Heritage has reviewed the Aboriginal and Non-Aboriginal aspects of the EIS and the Department's Preliminary Assessment Report. This analysis reveals:

### 4.8.1 Non-Aboriginal Heritage

- The Upper Hunter Valley constitutes a significant cultural landscape with historic, aesthetic, social and spiritual values that would likely satisfy one or more of the NSW, State or National heritage assessment criteria.
- Contrary to the SEARs, the Proponent has not engaged in any further consultation with respect to the known and potential social values, meanings and associations associated with the Upper Hunter cultural landscape.
- In the case of Darley's (and in particular the Randwick Homestead) property, the heritage assessment remains incomplete. Similarly, the significance assessment of National Trust listing for the Muswellbrook–Jerrys Plains Landscape Conservation Area relies on data that is over 30 years old and that has not been updated to reflect current applicable NSW heritage assessment criteria.
- Contrary to Government guidelines the cultural heritage assessment has not been undertaken in accordance with the ICOMOS Burra Charter 2013 – historic, social, spiritual and scientific values, settings and meanings which define "cultural significance" have been omitted or ignored.
- Given a comprehensive assessment of potential heritage impacts of this proposal has not been undertaken it cannot be established, as suggested by the Department's Preliminary Assessment Report, that all impacts can be satisfactorily managed or mitigated through measures that focus exclusively on the physical fabric of the affected heritage items and landscape.
- The requirement to prepare a Heritage Management Plan following approval does not reflect accepted process or practice in accordance with Article 6 of the Australia ICOMOS Burra Charter.
- Importantly it does not recognize that once the damage is done to this historic landscape it is irreversible and irreparable.
- The omissions in the EIS and the Department's approach to ignore these serious deficiencies and to seek to defer the assessment of cultural heritage in effect to future unspecified management plans is unconscionable and unacceptable.

### 4.8.2 Aboriginal Heritage

- As with the Non-Aboriginal Heritage assessment, GML has found that the Aboriginal Heritage Assessment does not conform with relevant Government guidelines, including OEH Guidelines for Aboriginal consultation.

- GML notes that the project application area is entirely within a registered Native Title claim area. The Native Title claimants have not been consulted on the Aboriginal heritage values or the impacts of the proposal on their culture and traditions as defined in their Native Title application.
- The GML findings are entirely consistent with the presentation to the PAC by representatives of another registered Native Title claimant in the Singleton area.
- The extent of known Aboriginal cultural heritage values has not been identified, mapped or assessed during the EIS process.
- The Proponent's EIS has not identified the range or extent of documented Aboriginal cultural heritage values as required by the SEARs.
- Aboriginal archaeology is inadequately identified and assessed and fails the SEAR and Government policy requirements for archaeological test excavation. The requirements are that archaeological test excavation be undertaken to assess the nature of subsurface archaeology within the Drayton South Coal Project in order that the area can be understood and assessed – none has been undertaken.
- Cumulative impacts on Aboriginal heritage values - including social, historic, aesthetic or spiritual values - have not been recognised or assessed.
- It is clear that open cut coal mining has already removed significant areas associated with Aboriginal traditions, dreaming, and initiation and creation stories – of monumental significance to Indigenous culture and history. This of itself underlines the importance of the proper assessment of this site, which must occur by necessity (and in accordance with the requirements) prior to any consideration of the proposal.
- The failure to consult Native Title Claimants, acknowledge the Native Title Claim over land encompassing the Drayton South Project Area, recognise and undertake a comprehensive Aboriginal Heritage Assessment, including comprehensive archaeological surveys and excavations, is a manifest deficiency in the EIS and which has not been identified in the Department's Preliminary Assessment Report.
- It is another significant reason why the Commission should apply the precautionary principle and recommend against this mine.

#### 4.9 Equine Health

Eminent equine specialists Drs Brett Tennent Brown (University of Melbourne Equine Centre) Andrew van Epps (University of Queensland Equine Hospital) and Dr Jennifer Hogson (University of Virginia) and Dr Andrew Maclean, equine behaviouralist, were engaged to review the equine health assessments prepared by Anglo American.

Their findings are unequivocal. The equine health impact statement provided by Anglo American:

- is best described as an inadequate desk top literature review;
- contains no directly relevant information on the effects of coal mining dust on horse health;
- does not consider relevant published information on horse health;
- ignores extensive literature and information on the impacts of coal dust on humans;
- presents distracting and largely irrelevant information on inflammatory airway disease – a disease which is not relevant to this assessment;
- displays a lack of knowledge and understanding of air quality impacts on horses;
- under-estimates the dust burden on equine respiratory tract (which is critical to the athletic performance of elite athletes);
- provides erroneous information on the equine health risks posed by coal dust;

- does not provide any precise details of the regular explosions at the mine adjacent to the studs;
  - the impacts and uncertainty of this will add significant stress to horses, handlers, and families living on the studs;
  - this uncertainty and impacts will also present significant risks to the daily planning and operation of the studs;
- ignores the temperament and characteristics that exemplify elite thoroughbred athletes:
  - particularly their strong flight response when compared to other non-racing horse breeds – a factor that inherently differentiates thoroughbreds and equips them with speed and their powerful flight response;
- disregards and dismisses the significant stress effects on horses resulting from unpredictable effects of explosions which:
  - cannot be habituated;
  - make training young horses difficult and dangerous (to both the horse and its handlers);
  - can negatively affect a horse's immune system creating colic, reproductive disorders and possibly miscarriages in mares and negatively affect the libido of all horses.

All experts agree. There is no scientific literature on the effects of open cut coal mining on horse health or behavior. This is because nowhere else in the world have open cut mining operations been allowed to encroach so closely to international scale thoroughbred breeding operations.

The evidence provided by human health literature on negative health effects of coal mining is compelling. It would be unthinkable that any potential stud investor or developer would choose to locate adjacent to a coalmine.

Importantly equine health experts confirm that dust originating from coal mining activities can cause severe respiratory disease in humans and horses. The lack of information on dust in the EIA obscures acute increases in dust that might be detrimental to equine respiratory health.

Uncertainty of timing, duration and impact of blasting events will cause chronic stress and impact behavioral responses, deterioration of learning abilities, miscarriages and reproductive disorders – impacts and responses which cannot be habituated.

All experts agree that the utmost care and importance must be placed on taking the precautionary principle, and not allowing the world's two largest thoroughbred breeding operations become the science experiment of coal mine explosions and dust exposure. It emphasizes the sense in the Determination PAC finding that the approach of monitoring the response of thoroughbreds to address uncertainty is not acceptable.

There has been a continued failure to demonstrate that the project will not adversely impact equine health and the operations of the studs.

The Department has not had the Proponent's reports independently analysed and the highly qualified expert evidence Drs Tennent-Brown, van Eps and Hogson highlights that critical issues have not been addressed and absolutely dispels any suggestion that there has been a shift (let alone a "significant shift") in the evidence.

It is eminently clear that the impacts on equine health have not and cannot be accurately or confidently predicted, assessed or managed. The risks remain far too high and the costs of rendering the world's and Australia's two largest studs as coal mine experiments unthinkable and unacceptable.

What is clear, in the expert opinions now provided to the PAC, is that once adverse impacts on equine health are detected, potentially irreversible damage will have occurred.

Copies of the reports prepared by Drs Tennent-Brown, van Eps, Hogson and McLean are appended to this submission.