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HUNTER THOROUGHBRED BREEDERS ASSOCIATION – SUBMISSION ON ANGLO AMERICAN'S DRAYTON SOUTH ENVIRONMENTAL ASSESSMENT.

The Hunter Thoroughbred Breeders Association (HTBA) appreciates the opportunity to comment on the AngloAmerican's Environmental Assessment (EA) for its Drayton South open cut proposal.

The HTBA opposes the submission by AngloAmerican for an open cut coal mine directly opposite two of Australia's largest, international scale, thoroughbred breeding operations.

We oppose this proposal for an open cut coal mining operation not only because it is clearly incompatible with international scale thoroughbred breeding enterprises (as found by the Bickham Planning Assessment Commission in its 2010 report) but because the Drayton South Environmental Assessment:

- **is manifestly deficient in its assessment of the surface and ground water impacts** of the proposal. In our view the water risks associated with this proposal are unacceptably high, are not adequately assessed, and may have unknown consequences for the Hunter Valley's already highly stressed water systems for hundreds of years after mining has ceased;
- **fails to assess the impact of this proposed open cut coal mine on the Hunter Valley's thoroughbred breeding industry as required by the Agricultural Impact Statement;**
- **fails to assess the impact of this proposed open cut coal mine on the Hunter Valley's thoroughbred breeding industry in the economic impact assessment.** The Drayton South EA makes assumptions that overstate the economic benefits of the project which if corrected could materially alter the proposal's economic impact assessment;
- **fails to adequately assess the impact of the Drayton South open cut coal mine on the Hunter Valley's thoroughbred breeding industry and community in the socio-economic impact assessment** by ignoring the incompatibility of landuses, underestimating the long term social costs from an open cut coal mine with a finite life compared to sustainable thoroughbred breeding industry and other agriculture that could operate in perpetuity;
- **reveals serious deficiencies in the air quality analysis;**
- **presents unacceptably high visual risks** which will irreversibly alter the Hunter Valley landscape and topography, be evident for over two decades, and materially and adversely impact on the productivity and investment attractiveness of the Hunter Valley studs located within 1km of this project, and the entire thoroughbred breeding and support industries concentrated in the Hunter Valley;
- **fails to address and account for the cumulative health impacts** of this proposal on the Hunter Valley community;
- **presents information on horse health that is incorrect or has little relevance** to the majority of horses in the Hunter Valley region;

- **does not adequately address the road safety impacts** of the Project;
- **fails to adequately address the broader and often interrelated impacts** of the proposal. This is a recurring problem throughout the EA (including its appended reports) that systematically fails to acknowledge and assess the cumulative impacts of existing mines together with this proposal on the local community and sustainable business operations.

The Drayton South EA fails to undertake any cumulative impact assessment of the impacts of mining in the Hunter Valley. This is a serious omission yet a vital consideration for the NSW Government, for Hunter Valley residents and communities, the future of sustainable agricultural businesses and the long term future of the region.

The Hunter Thoroughbred Breeders Association is of the strong view that the Drayton South proposed open cut coal mine is a high risk project that could critically and irreversibly affect the Hunter Valley's thoroughbred breeding industry - one of Australia's highest value and internationally acclaimed industries and an industry that is recognised by the NSW Government to be of regional and state significance.

There is a very real risk that the addition of this mine to the Hunter Valley, when considered jointly with existing and proposed mines in the area, could exceed critical thresholds, precipitate the demise of the Hunter Valley thoroughbred breeding industry and result in Australia no longer having one of only three International Centres of Thoroughbred Breeding Excellence in the world. In our view, there is too much at stake and this is not a risk worth taking.

The attached submission provides further details on all of the abovementioned issues.

This project is the first to be considered by the NSW Government since the announcement of its Strategic Regional Land Use Plan for the Upper Hunter. It will be **the first test of the Government's new planning processes** and whether these processes will truly protect our state and nationally significant industries as the Premier and Ministers have promised.

The Drayton South proposal is being considered under Part 3A planning processes and is not subject to the "Gateway". Given the serious implications of this proposal, the threats it poses to the Hunter Valley's multi-billion dollar thoroughbred breeding industry, to other sustainable industries in the area (including award winning wineries), the land use conflict this proposal will perpetuate, and the irreversible effect it will have on the Hunter Valley environment, businesses, community and landscape we urge the NSW Government to immediately **establish an Interim Gateway Panel and refer this proposal to that Panel for independent consideration**.

Given the serious and high risks posed by the Drayton South open cut coal mine proposal to the Hunter Valley's already highly stressed water systems, we urge the Government to **immediately refer this proposal to the Commonwealth Independent Scientific Expert Committee** for independent evaluation.

Further we recommend that the NSW Government **reconsider the suitability of a 7% discount rate as it masks the economic impacts** when mining projects draw to a close and biases decision making towards short-term development over long-term sustainable agricultural businesses. Economic assessments of sustainably related initiatives are increasingly using lower discount rates, for example the Garnaut Climate Change Review used discount rates between 1 and 4% and we suggest that consideration be given to a more

appropriate discount rate to be applied to the Drayton South project and all other mining projects.

We note that the EA has been prepared with the input of many consultants over a number of years and comprises over 4,000 pages. This is a substantial volume of information for landholders to digest, assess and prepare and lodge a submission in a six week period prior to Christmas. We thank the Department of Planning for allowing us and others some additional time over Christmas –New Year break to review and provide some balance and proper scrutiny into this issue.

It is our view however that **the short exhibition period and the highly complex nature of EAs represents a serious flaw in the planning process is biased in favour of mining companies** as individual landholders are not financially or technically equipped to properly evaluate and comment on highly complex assessments in such a short timeframe. In this case this situation was exacerbated by the timing of the exhibition period (weeks before the Christmas holiday period).

The partisan nature of EAs and their supporting reports further complicates the integrity and independence of information submitted for evaluation as part of the planning process.

The HTBA suggests the Government give serious consideration to **instituting independent evaluation of mining proposals** (commissioned by the Government and paid for by the proponents). Such reviews should be independently peer reviewed so that all involved can be satisfied of the rigour, independence and integrity of the information provided to decision makers. This would enable the production of independent environmental assessments, restore credibility in the system, benefit the NSW Government, NSW taxpayers and affected communities and landholders, and better inform the decision making process. The HTBA would welcome the opportunity of working with the NSW Government to develop such a proposal.

Thank you again for the opportunity of commenting on the Drayton South Environmental Assessment. Please direct any queries you may have to our Director of Policy and Public Affairs, Hellen Georgopoulos.

Yours sincerely

Dr Cameron Collins
President

Mr Andrew Wiles
Vice President

**HUNTER THOROUGHBRED BREEDERS ASSOCIATION
SUBMISSION ON ANGLO AMERICAN'S DRAYTON SOUTH ENVIRONMENTAL ASSESSMENT**

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HUNTER THOROUGHBRED BREEDERS ASSOCIATION

SUBMISSION ON ANGLOAMERICAN'S DRAYTON SOUTH ENVIRONMENTAL ASSESSMENT

The Hunter Thoroughbred Breeders Association represents over 150 industry participants including thoroughbred breeders and suppliers of equine support services. The Hunter Valley's Thoroughbred Breeding Industry is Australia's premier multi-billion dollar breeding industry, representing over half of all thoroughbreds produced in Australia. It is Australia's largest producer, supplier and exporter of premium thoroughbreds and acknowledged as one of only three international centres of thoroughbred breeding excellence in the world. It is an important employer of hundreds of thousands of Australians (directly and indirectly) throughout our value chain regionally, in NSW and across the nation. Appendix 1 to this submission provides more details on our industry and its history in the Hunter Valley.

The Hunter Thoroughbred Breeders Association appreciates the opportunity to comment on AngloAmerican's Environmental Assessment for the proposed Drayton South open cut coal mine in the Upper Hunter.

Water Related Risks

Surface and Groundwater interactions

Surface water and groundwater interactions in the Upper Hunter region are significant in respect of the hydrological regime and groundwater availability and use. Consequently any changes in surface water characteristics are likely to influence the groundwater resources of the area. Similarly any changes in groundwater levels will have the potential to cause significant impacts on in-stream values.

With significant changes affecting the Upper Hunter over recent years, the surface water and groundwater resources have become increasingly vulnerable and valuable. The Hunter Valley water system is currently considered "highly stressed" due to the over-allocation of water resources.

The potential effects of this project on the Hunter Valley's stressed water systems are confronting and concerning. Any impact on the quality and supply of water on either or both surface and groundwater systems as a result of this project could be significant. Impacts to drainage of aquifers, filling of voids, discharge of salinity, depressurization of aquifers could affect our water supplies for 100s or thousands of years to come.

It is very disturbing to read in the Drayton South EA that water levels in the final void are predicted to reach 85% of post-mining equilibrium within 147 years after the cessation of mining. It is even more concerning to read about reductions to the Hunter Valley alluvium that may occur 400 years after mining has ceased. Other water effects are predicted to occur 700 to well over 1,000 years after mining has ceased. These indicators should be signalling the high risk nature of this proposal and the need for a precautionary approach to be adopted by the Government to safeguard our water supplies now and for future generations.

Specific concerns relating to both the final void assessment results and in particular the interpretation thereof include:

- No recognition of the highly uncertain nature of the groundwater modelling upon which the very long term outcomes are based.

- The uncertainty in the approach and minimal detail committed to final void behavior outcomes (approx. 1 page in SW report) are particularly concerning given that the model indicates a change in the long-term behaviour of the void from a “sink” (i.e. drawing water from the natural surrounding aquifers) to a losing system in which (the now hyper-saline) void water seeps back into the surrounding aquifers and local watercourses.
- No meaningful discussion is provided regarding the effect on groundwater and surface water resources in either the initial period (i.e. steadily increasing TDS towards hyper-salinity and continued drawdown of connected aquifers) or the simulated very long-term conditions of flow of this now hyper-saline void water back into the natural system.

Notwithstanding the significant, unrecognised uncertainty in the model results, the time-scales attributed to changing void behaviour and any consequent impacts are of a scale (i.e. 100's to 1,000's of years) which would preclude any potential for management or mitigation of the impacts by the company and would become by default a legacy borne by the local and regional communities as well as a long-term liability for the State.

Surface Water Impacts

The Drayton South EA:

- reveals serious deficiencies with respect to the assessment of *surface water impacts* of the proposal;
- fails to provide credible justification for the assumptions underpinning the water balance modelling relating to the behaviour of mine waters over the life of the proposal;
- fails to undertake any sensitivity analysis or testing to assess potential impacts of adopted runoff parameters or water quality assumptions;
- neglects to include conditions between 2006 and 2012 (which include both an extended dry period and significant wet conditions) in the water balance modelling;
- manifestly fails to provide adequate, justified analysis of the proposal's water implications. The EA's generic treatment of the proposal's potential impacts, particularly where the interrelated impacts remain unknown, are not acknowledged nor adequately assessed;
- is silent on the potential impacts, management or mitigation of salinity increases in the final mine void;
- fails to adequately assess the potential implications for the long term impacts of the proposal on the salinity of the Hunter River;
- provides no consideration, identification or assessment of the impact of the proposal for other water users, enterprises or sensitive receiving environments;
- provides no meaningful assessment of potential mine induced reductions in unregulated flows and their aesthetic, environmental and/or water use impact

Groundwater Impacts

The Drayton South EA uses a Groundwater Numerical Model (GNM) as the basis for the groundwater impact assessment for the proposal. However:

- no independent peer review of the model is undertaken or reported in the EA;
- the model omits any clear explanation of its integration with surrounding existing impacts – including cumulative impacts from existing operations;
- the EA fails to acknowledge that the groundwater impacts resulting from the proposal are likely to be compounded by the impacts of adjacent mining projects (for example

the reactivation of Saddlers Pit at Mr Arthur Coal Mine is expected to influence groundwater levels in the Saddlers Creek alluvium);

- the baseline monitoring for this proposal has been insufficient – so much so that it compromises the model’s treatment of ambient groundwater conditions.

The deficiencies identified in the water modelling of this proposal are so significant, and the risks so high (to the thoroughbred breeding industry, the community, other landholders, water users and the environment) for many hundreds of years after the mining has ceased that the NSW Government should take a precautionary approach to this high risk proposal. The regional community and affected landholders need to be satisfied that all water impacts are identified, assessed, mitigated or avoided.

The HTBA strongly recommends that the water impacts of this proposal be referred to the Commonwealth Independent Scientific Expert Committee to fulsomely, credibly and independently assess the considerable water risks associated with this proposal.

Agricultural Impact Statement and Socio-Economic Impact Assessments

The Drayton South open cut coal mine proposal is the first to be considered under the Government’s new Planning approval processes following the finalisation of the Upper Hunter Strategic Regional Land Use Plan. Despite this, the Drayton South proposal is being considered under the old Part 3A process and is not subject to the full rigours of a Gateway process.

As part of the EA, AngloAmerican were required to complete an Agricultural Impact Assessment, Economic and Social Impact Assessments and to address the Gateway criteria when assessing the impacts of the proposal on strategic agricultural land. It is our view that these assessments fail to accurately examine and assess the impacts of this proposal on the thoroughbred breeding industry and other vital agricultural industries both locally and on a regional basis.

Agricultural Impact Statement

Requiring mining companies to undertake explicit agricultural impact assessments was a key Coalition election promise which is now part of the Strategic Regional Land Use Policy and an essential consideration at both the exploration licence and development application stages. The requirement of an Agricultural Impact Statement (AIS) ensures a targeted assessment of the potential impacts of mining and coal seam gas on valuable agricultural and water resources.

The primary purpose of an AIS is to determine “ *the significance of agricultural resources – including land and water – and associated businesses in the project area and surrounding locality; and the potential impact of the project on agricultural land, water and businesses at a local and regional level.*”

AngloAmerican’s AIS identifies a number of agricultural enterprises in the vicinity of the proposed Drayton South open cut mine. These include beef cattle grazing, 7 thoroughbred breeding operations, 11 dairies, 4 vineyards and an olive grove processing plant. Despite identifying the agricultural gross values of the majority of these industries, the Drayton South AIS fails to identify and quantify the impact of this proposed open cut coal mine on the thoroughbred breeding and wine making enterprises at both the local level and regional level as required by the AIS Guidelines.

The 2010 Planning Assessment Commission’s independent findings into the open cut mine

proposed at Bickham in the Upper Hunter, found that *“The thoroughbred industry in the Upper Hunter Valley is a very significant contributor to the regional, state and national economies and a major source of employment. The structure of the industry makes it particularly vulnerable to threats based on image and the introduction of coal mining to the Upper Hunter Valley is strongly identified as such a threat. The available evidence supports the view that open-cut coal mining and a viable international-scale thoroughbred breeding enterprise are incompatible land-uses.”*

Despite this finding and the requirements of the AIS, the Drayton South AIS gives no serious consideration to or analysis of the impact of this proposal on Australia’s premier thoroughbred breeding industry. Rather AngloAmerican’s experts, Scott Barnett & Associates with supporting analysis by Gillespie Economics, suggest that *“The Project will not reduce the availability of land for agricultural purposes or affect the productivity of existing agricultural land within the immediate locality, including land utilized by either equine or viticulture enterprises. As such, this has not been discussed further in the assessment. (Agricultural Impact Assessment Report, Scott Barnett & Associates, p39).*

The HTBA strongly disagrees and challenges this finding. At best it shows a total lack of understanding of the impact (visually, reputationally, environmentally and to landholder productivity) this project will have on not only the thoroughbred studs directly impacted by this proposal but to our entire, vertically integrated industry. At worst this is a very partisan report that clearly misunderstands, misrepresents and obfuscates the impact this proposal will have to the Hunter Valley’s multi-billion dollar internationally recognised thoroughbred breeding industry.

By submitting such a misinformed AIS, the Drayton South EA clearly demonstrates the need for truly independent assessments that properly assess the project’s impacts and fairly, impartially and credibly represent these findings so that decision makers can make fully informed decisions.

The Drayton South AIS manifestly fails to assess the impact of this proposal on valuable agricultural resources at both the local and regional level. The HTBA is strongly of the view that the proponent should be required to resubmit an AIS which adheres to the policy guidelines and properly, fairly and transparently assesses the impact of this open cut coal mine proposal on the thoroughbred breeding industry and other valuable agricultural resources.

To ensure that this will be done in a fair and unbiased manner the HTBA strongly recommends that the NSW Government commission its own report (paid for by the mining company), undertaken by truly independent and credible experts, so that Government decision makers can make fully informed decisions on this project. Alternatively the NSW Government should commission and independent team of experts to peer review all agricultural, social and economic impact assessments to inject both credibility and rigour into the decision making process.

Socio-Economic Impact Assessments

The Drayton South Economic Impact Assessment and Social Impact Assessment, have been undertaken by Gillespie Economics and Hansen Bailey for AngloAmerican.

These assessments conclude that the Drayton South open cut coal mine proposal will yield net economic benefits of at least \$490m.

Economic Impact Assessment

The Drayton South economic impact assessment erroneously assumes that this open cut coal mine will not impact upon the neighbouring thoroughbred breeding enterprises as they are compatible operations. The HTBA strongly disagrees with this assertion.

The Hunter Valley's multi-billion thoroughbred breeding industry, and particularly the international scale thoroughbred breeding operations of Darley Australia and Coolmore Australia, which are within 1 km or less (500m in the case of Darley) of the project are clearly not compatible with an open cut coal mining development on their doorstep.

The thoroughbred breeding operations of Darley Australia and Coolmore Australia are:

- world renown as elite thoroughbred breeding businesses;
- market leaders in the Hunter Valley, Australia and globally;
- owners of high value land and bloodstock assets;
- employment intensive businesses that have close links with the regional economy (85% of operational expenditure is spent within the local region);
- critical to the Hunter Valley's vertically integrated thoroughbred breeding industry;
- important and sustainable contributors to support industries and the regional economy;
- and

highly susceptible to issues that threaten their reputation, ability to attract clients and investors, their productivity and livelihood. *Open cut coal mining and international scale thoroughbred breeding enterprises are incompatible land uses*

The 2010 Planning Assessment Commission recognised that *"the structure of the industry, the obvious importance of reputation ... makes the industry very vulnerable to threats based on image."* The location of an open cut coal mine directly opposite two of Australia's world leading thoroughbred breeding operations poses a clear and imminent threat to these multi-billion dollar businesses their image, productivity, clients, investors and their reputation.

Economic Impact Assessment Deficiencies

Not only is the Drayton South EIS inconsistent with the 2010 Planning Assessment Commission's independent assessment that open cut coal mines and international scale thoroughbred breeding enterprises are incompatible land uses this and other assumptions necessarily leads to the economic benefits of the project being overstated and if corrected could materially alter the economic impact assessment.

For example:

- we would question why a 'spot price' for thermal coal price has been used in the analysis, particularly when the spot price is some 30 per cent higher than current forecasts by the World Bank and Bureau of Energy and Resource Economics;
- mining is highly price sensitive and recent price reductions have led to the closure of a number of projects. If this scenario were to eventuate for the Drayton South open cut coal mine, when coupled with the closure of local thoroughbred breeding operations and other related industries in the region (because these industries are incompatible) the regional social and economic impacts of this proposal would be very significant;
- the Drayton South mining proposal's exclusion or underestimation of important elements such as the impacts on the thoroughbred breeding industry, its farm productivity, land values, regional economic contribution and employment.

The Economic Impact Assessment should reflect the impacts of this proposal on Australia's thoroughbred breeding industry by including either farm impacts or land value impacts on neighbouring properties, reflecting the reality that they would no longer be viable for international class thoroughbred operations.

Tourism will be affected

Tourism in the region will also be affected. The Stallion Parades that occur in the last weekend of August of every year, attract some 5,000 clients and potential investors to the region annually. This is the second largest tourism attraction event in the Hunter after the Stand Alone Scone Race Days which attract some 10,000 visitors and attendees. The existence of an open cut coal mine directly opposite two of Australia's international scale and market leading thoroughbred breeding studs will significantly impair their and the industry's operations and negatively impact productivity, reputation, investment attractiveness, future viability and tourism development.

The risk of approving one mine at the cost of an entire industry

It is clear to anyone who understands the nature and operation of thoroughbred breeding enterprises that the Drayton South open cut coal mine poses a direct and significant threat to the image, reputation and future of Australia's premier thoroughbred breeding studs and industry.

If as a result of the Drayton South open cut coal mine proposal the Hunter Valley loses the top end of the thoroughbred breeding industry there would be material and irreversible costs that would be felt throughout the thoroughbred breeding, racing and related industries. If this were to occur the concentration of thoroughbred breeding activities would unravel, the Hunter Valley could lose its status as an International Centre of Thoroughbred Breeding Excellence and Australia could lose a multi-billion dollar industry and market.

Standard Discount Rates unfairly favour short term mining operations

We note that the application of NSW Treasury's standard discount rate (7%) to a project which involves a trade-off between open cut coal mining with a finite life (26 years) compared to a sustainable high value, nationally and regionally strategic agricultural industry that could operate in perpetuity is seriously concerning.

The suitability of a 7% discount rate needs to be carefully reviewed as it masks the economic impacts in year 27 when the project draws to a close and biases decision making towards short-term development over long-term sustainable agricultural businesses. Economic assessments of sustainably related initiatives are increasingly using lower discount rates, for example the Garnaut Climate Change Review used discount rates between 1 and 4%.

This approach is echoed by the Federal National Party in the additional comments made to the Federal Senate Committee Interim Report on The Impact of coal seam gas mining on the Murray Darling Basin. In this Interim Report the Federal Nationals recognised that "*Prime agricultural land is an asset whose lifetime is infinite and therefore the prospective cash flow would have to take into account the value of agricultural produce over thousands of years. The return to the nation over the long term is vastly superior from agriculture than from mining and as the premier of agricultural assets, prime agricultural land should be protected.*"

Social Impact Assessment

Similar to the economic impact assessment the social impact assessment needs to be grounded in an empirical framework that considers the social impacts both “with” and “without” the project. The lack of this framework and the premise that the thoroughbred breeding industry and open cut coal mining are compatible activities translates to a social impact assessment that:

- ignores the incompatibility of thoroughbred breeding and mining which are competitive land uses;
- underestimates the social costs associated with Drayton South’s open cut coal mine proposal;
- fails to assess the impact of the potential closure of an international thoroughbred breeding industry and the impact this will have on direct and indirect job losses in the local, regional and state economies;
- fails to adequately consider the long-term social costs from an open cut coal mine with a finite life compared to a sustainable world renowned industry that could operate in perpetuity;
- fails to recognise the lasting and sustained shock to local, regional and state economies of the loss of a viable and employment intensive thoroughbred breeding industry versus the short term gains from one finite mining operation.

The Drayton South open cut coal mining proposal is a high risk project that could critically and irreversibly affect one of Australia’s highest value and internationally reputed industries. The Hunter Valley’s thoroughbred breeding concentrated critical mass cannot be relocated. The risk one mine poses to the entire industry is too great a risk to take.

The Drayton South agricultural impact statement and socio-economic impact assessments ignore and misrepresent the impact this mining proposal will have on our industry and to the local, regional and state economies. Short term gains should be balanced against the preservation and protection of long term sustainable industries. Australia’s reputation as a world leading thoroughbred breeding and racing centre is at risk along with the equine support industries, the thousands of Australian jobs and the communities that rely on them.

HTBA strongly recommends that the NSW Government should commission its own socio-economic reports (paid for by the mining company), undertaken by truly independent and credible experts. Such reports should be peer reviewed, use appropriate discount rates for agricultural operations that could occur in perpetuity and provide unbiased, expert advice to decision makers.

Air Quality

Air Quality is a significant issue for the Hunter Valley thoroughbred breeding industry and the Hunter Valley community. The HTBA is very concerned at recent reports¹ of over 200 air quality breaches of national and international air pollution standards in the Hunter during 2012.

While there may be some debate about the accounting practices used to determine a small number of these results, the fact remains that these breaches are too high and real-time assessments (not averages over a 6 day period) are needed so that air quality breaches are significantly reduced and every effort is taken to protect Hunter Valley communities and industries from the deleterious effects of air pollution. The cumulative impacts of open cut

¹ 200 air quality breaches in the Hunter, Newcastle Herald, 4 January 2013

coal mining, mentioned in this submission, on air quality and health is long overdue. This issue warrants independent assessment and strict enforcement of serious penalties. Air quality and its impact on the health of our communities warrants serious action not spin.

Our preliminary review of the Drayton South EA suggests that there are some serious deficiencies in the air quality analysis that need to be explained and rectified. These include:

- the lack of TSP and PM10 records (recorded on 24 hour averages every 6th day). This suggests that it is possible that not all background is reported and that certain weather events that exacerbate background concentrations will be missed;
- the proponent has avoided any assessment that indicates dust deposition rate data is generally increasing with monitoring years. This may link to ever increasing mining intensity for the region;
- power station cumulative contributions (both current and potential future) are not adequately captured by the existing HVAS monitoring network. Consequently there is concern that air quality impacts from power stations are underestimated. This underestimation could also lead to the simulation of fewer dust exceedence events than would otherwise be estimated as occurring due to the project;
- the above concerns are reinforced by PAEHolmes admission that the monitoring network is scarcely located;
- there is no year-by-year comparison of climatic statistics that may substantiate why 2005 was the best year to model the project;
- the lack of information at Appendix A on wind rose information for Macleans Hill upon which the selection of 2005 as a representative year for air dispersion modelling was based;
- the significant irregularities between stations in the recorded data that has been provided (for example the September 2009 dust storm is not represented at all stations);
- no discussion of regional climate change and how climate change may impact on surface wind speeds, rainfall, air temperature, evaporation, periods of wind calm and other meteorological parameters that have the potential to influence the dispersion of dust from the Project site;
- PAEHolmes has provided no sensitivity analysis on the increase in off-site impacts relating to climate change impacts associated with the project;
- the detail and approach of the proposed Monte Carlo methodology requires at a minimum more explanation to show how and why this is a suitable assessment and at worst, this lack of detail implies that an accurate estimation of the cumulative impacts is not available.

Visual Impact Risks

The visual impact the Drayton South open cut coal mine will have on Darley, Coolmore, the reputation of the Hunter Valley's thoroughbred industry and the thousands of visitors to the area will be devastating and has been inadequately addressed by the Drayton South EA.

Visual amenity is a key element that underpins the thoroughbred breeding industry's business model. As an industry that breeds elite athletes and whose image, business and investment attractiveness is based on a clean, green image reliant on clean water sources, clean air, an undulating topography and fertile lands any threats to this image, directly threatens our reputation and future viability.

The development of the Houston bund is estimated to take 16 months but it will take between 15 and 25 years before vegetation plantings will mature to a point where they could potentially conceal the bund. Furthermore there are operational and strategically

important vantage points from both Coolmore and Darley (including Trigg Hill) where the effect of the open cut coal mining operations and residual landforms will be in clear view throughout and beyond the life of the mine. Coolmore has an on-property airstrip that is used by Coolmore clients and Darley regularly utilises helicopter transport to and from the Woodland Property. The effects of the Drayton South coal mine in such close proximity to the both operations will have a significant effect on their clients and investors.

No reasonable investor in our industry or any other sports or tourism related industry would choose to invest in a location next door to, across the road from, or on top of a coal mine. It is simply bad for business and clearly demonstrates that these land uses are incompatible and cannot and should not co-exist in such close proximity.

The 2010 Planning Assessment Commission (PAC) recognised our industry's vulnerability to threats based on perception and reputation. It is why the PAC concluded that open cut coal mines and international scale thoroughbred breeding enterprises are incompatible land uses.

The Drayton South EA:

- ignores the PAC's 2010 conclusions;
- underplays the significant visual threat that the Drayton South open cut coal mine proposal poses on international scale thoroughbred studs, our industry's reputation and future viability;
- fails to recognise or acknowledge the importance of visual amenity to the reputation and future of the Hunter Valley's thoroughbred breeding industry;
- fails to adequately assess the visual effects of the Project either in the immediate short-term (ie. The initial 27 years of physical construction and operation) or longer-term (residual non-natural land-forms, ongoing final void issues, etc) in its socio-economic impact assessments;
- does not recognise or acknowledge the importance of air access (plane and helicopter) to both Darley and Coolmore properties by customers, visitors and potential investors. Nor does it acknowledge that regardless of any potential mitigation measures, visitors, clients and investors accessing these properties by air will experience high visual impact as a result of the close proximity of this open cut coal mine to international scale thoroughbred breeding enterprises;
- fails to assess the cumulative visual impacts of this Project on the Hunter Valley landscape;
- presents no consideration or assessment of the Project's cumulative light or dust impacts and the consequent adverse impacts on thoroughbred breeding activities;
- bases its visual mitigation strategy on tree plantings however fails to recognise that there is a high potential for failure (noting the inadequate existing mine screen planting in the vicinity) and the significant doubt relating to the success of this mitigation measure.

We note that some of the key pictures and photomontages appended to the Drayton South EA are presented in a manner that soften, distort or make it difficult to visualise the effect and impact of this open cut coal mine on the stud farms and the surrounding landscape. Through the selective use and softening of pictures and photomontages, the EA fails to fully and adequately show what the full visual impacts will be from all key vantage points and throughout the life of the mine. We append pictures of the visual impact of the mine from Trigg Hill (Darley's property) that show the direct and visual impairment that will occur in years 3, 5 and 10 and throughout the life of the mine to illustrate this point.

This is a very serious issue. The impact this mine will have on international scale thoroughbred breeding industries and the current landscape of Jerrys Plains will be irreversible. It is important for all stakeholders, the community and decision makers to have a full visual, warts and all picture of the actual impact this mine will have on the Jerrys Plains Landscape before it is too late. If a decision is made to proceed with this open cut coal mine the impact on our businesses, industry, community and landscape will be irreparable and irreversible.

The Drayton South EA recognises the high visual sensitivity of the Drayton South open cut mine proposal to urban and rural houses, horse studs and vineyards, tourist roads such as the Golden Highway and commercial facilities within a radius of 500m to 7.5km from the mine Yet it fails to adequately mitigate these effects and suggests in the Executive Summary of the EA that the visual impact on surrounding receivers will be limited for the majority of the mine life. This further demonstrates that open cut coal mines and international thoroughbred breeding enterprises in such close proximity cannot co-exist and are incompatible land uses. The key issue for this Government is whether one poorly located coal mine could be allowed to destroy an entire industry that is internationally acclaimed and recognised by the NSW Government to be nationally and state significant.

Health Related Issues

Human Health

The University of Sydney recently (October 2012) published research into 10 countries on the effects of coal mining on communities. This research analysed 50 peer reviewed research papers from 10 countries². It:

- found a critical lack of local studies investigating the effects of coal mining on Australian communities;
- identified problems in children and infants in coal mining communities including impaired growth and neurological development, high blood levels of heavy metals, higher prevalence of birth defects and a greater chance of low birth weight – a risk factor for future obesity and heart disease;
- revealed that adults were shown to have higher rates of death from lung cancer and chronic heart, respiratory and kidney diseases. They also had increased chances of developing other cancers and hypertension. Some studies also showed higher rates of miscarriages and stillbirths; and
- found that studies conducted in regions in the US, the UK, Canada, Turkey, Israel and Asia indicated serious health impacts for communities living near coal mines and coal combusting power stations

These types of long-term, chronic health issues further increase the liability that would be borne by the State associated with the range of environmental, agricultural, social and economic impacts that would continue to accumulate long after mining operations (and any responsibility/imput from the Company) had ceased.

The Hunter Valley has more than 30 mostly open cut coal mines and six active coal-fired power stations.

The communities in the Hunter Valley are literally canaries in the coal mine. Many federal and state members of Parliament have publicly recognised that the Hunter Valley is at a

² Health and Social Harms of Coal Mining in Local Communities, Spotlight on the Hunter Region, University of Sydney, October 2012

tipping point. The dearth of cumulative impact assessments on the effects of coal mining operations to the health of the Hunter Valley communities is a serious problem.

The HTBA notes with serious concern the critical lack of studies into the effects of coal mining on Australian communities. We agree with the University of Sydney's international research findings that there is a pressing need for Australia to re-evaluate whether the overall health and social costs of Australia's reliance on a coal economy will ultimately outweigh its economic benefits. The Hon George Souris has publicly stated that *"It may be that the Upper Hunter Valley has reached saturation point with mining. The cumulative impact of dust fallout alone has reached a point where it may dictate the need for a pause on any new mining."*³

The NSW Government has a duty of care to its communities that needs to be acted upon.

The Drayton South EA fails to address and account for the cumulative health and social impacts of this proposal on the Hunter Valley community. HTBA strongly recommends that the EA either properly addresses, and independently peer reviews (by credible independent experts not associated with coal companies) the cumulative health impacts of mining in the Hunter Valley or failing that the NSW commissions an independent cumulative health report (funded by the proponent) into the social and health impacts of coal mining and power generating operations in the Hunter Valley. This cumulative impact assessment should be done prior to any further decisions are taken on the Drayton South open cut coal mine proposal so that decision makers are fully and properly informed of the health impacts of this additional mining proposal on the Hunter Valley community.

Horse Health

Australia's Thoroughbred Breeding Industry breeds elite athletes that are world-renowned. Published information on the possible effects of coal mining dust on equine health is scant.

Our preliminary review of the equine health impacts presented in the EA suggest that:

- the EA information is based largely on studies of stabled horses in race training and has little relevance to the majority of horses in the Hunter Valley region;
- the implication that horses commonly inhabit dusty environments but are well adapted to high levels of dust is inaccurate (as documented by the author himself throughout the report);
- it is well established that a significant proportion of horses are adversely affected by the "dustiness" of their environments (this is detailed throughout the report);
- no information is provided about the specific adverse effects associated with dust generated by coal mining;
- no information is provided to support the statement that "horses have a highly refined respiratory tract that greatly protects against contamination";
- the author appears to be attempting to trivialise the potential effects of environmental pollutants on equine airway by stating that these effects would be difficult to differentiate from the contribution of other factors. This is not a valid argument.
- the statement that horses exposed to "high levels of dust can compete to the best of their ability" is incorrect and contradicted on numerous occasions in the body of the report;
- the author states that dust without endotoxin does not contribute to inflammatory airway disease (IAD) however this is not known for certain. Further this line of argument

³ *Mine impacts should be determined first, Lets think more before we act, writes George Souris, Newcastle Herald, April 8 2010.*

is not relevant to the potential effects of coal mining-related dust on horses on breeding farms;

- the conclusions referring to cleaning practices and bedding types in stabled horses is irrelevant to dust associated with coal mining activities.

In our view the equine health analysis presented as part of the Drayton South EA is misleading. It misunderstands and misrepresents the operation of our industry in the Hunter Valley and presents information on horse health that is incorrect, not well researched, not supported by empirical data and has little relevance to our operations and the majority of horses in the Hunter Valley.

Transport and Road Safety

Safety on our roads is a primary concern for our industry and our community. Injuries, threats to or loss of life as a result of congestion or poor road construction is a very serious matter and concern to our industry and local communities.

A preliminary review of the road traffic report prepared as part of the Drayton South EA suggests that the impacts of the Project on key intersections (such as Denman Road/Thomas Mitchell Drive, New England Highway/Thomas Mitchell Drive and the Drayton Mine Access Road/Thomas Mitchell Drive) and the Edderton Road are not adequately addressed.

In our view the Drayton South EA:

- does not adequately address whether these intersections and roads will have sufficient capacity to safely accommodate significantly increased traffic associated with the proposed mine and adjacent mines;
- fails to include traffic associated with the planned expansion of Mt Arthur Coal;
- raises serious issues relating to road safety as a result of increased traffic volumes;
- presents saturation levels and road capacity constraints that are serious concerns to users of these roads;
- exacerbates the existing road deficiencies.

Furthermore we do not agree with the Drayton South traffic report suggestion that any existing deficiencies relating to the Drayton Mine access road are not the responsibility of AngloAmerican.

The above saturation and capacity constraints raise serious issues and pose significant safety concerns for all users of these roads, nearby communities and our industry. They demonstrate additional deficiencies in the EA and good reasons, from a community safety perspective, why this project should not proceed.

Noise, Blasting and Vibration

In addition to air quality, water and visual risks associated with this project, light, noise, blasting and vibration will have significant impacts on adjacent thoroughbred breeding studs, their employees and productivity, and to the reputation of the industry as a whole.

We are advised that 5 blasts per week would be required to support the proposed production rate of the Project. That equates to almost a blast every weekday. For thoroughbred breeding studs located directly opposite this proposed coal mine, and the communities of people and families who live on those studs, and the valuable livestock on these properties this continual process of blasting will be highly intrusive, damaging and plainly an untenable situation to endure for any period of time.

We do not agree with the implication that either people or livestock would or should become desensitised to blasting and vibration over time and suggest that this further illustrates a complete misunderstanding of potential impact and/or a desire for advocacy on the part of the assessment. This assumption is invalid, fundamentally misunderstands the nature of our business, the potential damage blasting could pose to valuable bloodstock and represents a most cavalier attitude to what the communities of people residing close to this mine should be expected to tolerate and live with.

The Drayton South EA:

- raises serious concerns in relation to background noise levels adopted in some locations;
- does not adequately address worst case noise assessment scenarios;
- incorrectly applies low frequency corrections;
- fails to assess actual noise exposure at affected receiver locations for rail noise assessment;
- factors in approvals for noise levels on rail which should not be included and could have potential impacts on noise exceedences;
- excludes any assessment of blasting overpressure on horses (despite acknowledging in the EA that at its peak noise levels would generally be considered unsettling for horses);
- is based on an “assimilation” of a gradual increase of noise over time which should not be relied upon as the basis for acceptability of response to blasting overpressure noise.

The Hunter Valley's Thoroughbred Breeding Industry

The Hunter Valley's multi-billion dollar Thoroughbred Breeding Industry is a nationally and internationally significant industry. It has evolved over 150 years and has gained critical mass and international prominence over the last thirty years. It is the heartland of Australia's national Thoroughbred Breeding Industry and is one of three international Centres of Excellence (alongside Kentucky in the USA and Newmarket in the UK).

The Hunter Valley's rich history of breeding Thoroughbred Champions has attracted significant domestic and international investment and a concentration of Thoroughbred Breeding support industries making the Hunter Valley the envy of our domestic and international competitors.

The Hunter Valley holds the second largest concentration of horse studs in the world, outside Kentucky in the USA. It produces approximately half of all Thoroughbred horses born annually in Australia and represents nearly 70% of all Australian Thoroughbred horse exports. It is a world recognised and major national and international source of Group 1 winners (the equine equivalent of Olympic Gold Medal winners).

Our industry is based on access to clean water, clean air and topography that blends rich valley pastures for lactating mares and their foals and more testing, rugged terrain for the development of young thoroughbred lungs and limbs. Clean air and water supplies are critical to our industry and our clean, green, Thoroughbred champion-producing character and reputation.

The major Thoroughbred Breeding players in the Hunter Valley have invested billions of dollars in establishing world-leading properties, breeding and bloodstock. They have attracted a sophisticated network of thoroughbred support industries which would not be located in the Hunter Valley but for the existence of our world-class Thoroughbred Breeding Industry.

Our industry underpins the business operations of regional thoroughbred breeding related industries. Approximately 85% of capital expenditure by the Thoroughbred Breeding Industry is spent within the Hunter Valley region. The largest equine hospital in the Southern Hemisphere, the Scone Equine Hospital, provides world class veterinary services and research and provides veterinary care for 90% of the stud farms in the area. It is located in Scone because of the critical mass of Thoroughbred breeding operations in the region.

The Hunter Valley's Thoroughbred Breeding Industry generates and supports thousands of jobs in the region and hundreds of thousands of jobs across the nation. It has been acknowledged that the horse racing and breeding industry is one of the largest employers in Australia, supporting over 200,000 direct and indirect employees, participants and volunteers.

Thoroughbred Investments in the Hunter Valley

Major investments in world-class Thoroughbred Breeding have been made in the Hunter Valley by significant international and domestic investors.

The largest Australian-owned thoroughbred breeder, Arrowfield, the Irish conglomerate, Coolmore, Dubai's Darley stud farms, the Australian owned Vinery stud, the Japanese

Yoshida and Northern Farm, the Malaysian Kia Ora stud are just a few examples of major Australian and international investors locating their Thoroughbred Breeding operations in the Upper Hunter Valley because it is a Centre of Excellence with a critical mass of Thoroughbred Breeding operations, world-leading support services and a unique environment.

The major international operators have multi-regional operations. Their Hunter Valley businesses are a key element of their international breeding operations. They have invested many billions of dollars in establishing their properties, operations, bloodstock and supporting infrastructure.

Should the operating environment significantly alter, these major international investors could choose to relocate their operations (especially their stallions) to any one of their other major international regional centers. Any dislocation would not only affect international investors but would flow through to Australian investments in the area as prime Thoroughbred Breeding stock and broodmare farms respond to any depletion in the stud farms.

The Australian Industry – Structure and Economic Significance

Overall the Hunter Valley's major stud farms support some 100 broodmare farms and a sophisticated network of support industries – including veterinarians, farriers, horse transport companies, veterinary laboratories, feed merchants, lucerne growers, horse breakers, agronomists, irrigation specialists, saddlers, catering and hospitality industries. It also supports equine auction houses such as Magic Millions and Inglis. The Hunter Valley Thoroughbred Breeding Industry is interconnected and inextricably linked to the NSW Racing Industry (insert cross ownership stat). It is also internationally recognized as a centre of excellence and respected as a producer of premier Australian thoroughbred and world thoroughbred champions. It is ironic therefore that at a time when the NSW Government is seeking to emulate the economic and reputational benefits derived by the Melbourne Spring and Cup carnivals it is jeopardizing the world class thoroughbred breeding centre of excellence which is the feeder industry upon which the NSW racing industry is based.

IER Pty Ltd in its report "Economic Impact of Australian Racing" produced in August 2007 assessed the Thoroughbred Breeding and Racing Industry's economic contribution in 2006 at:

- \$5 billion in value added to the national economy (with regional economies generating more than \$2.2 billion);
- over \$1.1 billion in state and federal taxes;
- over \$1.1 billion invested annually by breeders, owners and trainers.

Further this report highlighted that:

- more than 4,700 thoroughbred trainers play a vital role in the preparation of more than 40,000 race horses each year
- more than 78,000 thoroughbred owners, 5,000 trainers and over 1,100 jockeys also play a pivotal role in the production, training and racing of Australia's thoroughbred horses.

The Hunter Valley is highly valued and internationally recognised for its ability to produce Group 1 winners (the equivalent of Olympic gold medal winners).

The dislocation of the Hunter Valley's major investors would have devastating effects upon the entire value chain, the reputation of the Hunter Valley as a national and international breeding centre of excellence and the fabric the Hunter Valley's regional economy.

Export Markets

Australia's major export markets are Hong Kong, South Africa, Singapore, Malaysia and New Zealand. Australian thoroughbred horses from the Hunter Valley also comprise a significant proportion of Australia's exports to other markets such as the Philippines, Thailand, the USA, UK, Ireland and Japan.

In the 2008/2009 financial year, the number of thoroughbred exports sired or bred in the Hunter Valley represented 67% of total Australian thoroughbred exports. In dollar terms the percentage of exports sourced from the Hunter Valley would be significantly higher (perhaps as high as 80% or 90% of the total value of Australian thoroughbred exports) reflecting the fact that the Hunter Valley produces the majority of premium quality thoroughbred horses.

Australia is a respected and major supplier of Thoroughbred horses to Asia and is well positioned to respond to increasing interest from China.

Over the past decade there has been a significant increase in the number of Australian thoroughbred horses exported to Hong Kong, Singapore and Malaysia. China is set to become a major international player. China's growing interest in horse racing and breeding is driving strong growth in the demand for imported horses – making China an important potential market for Australia. The Hunter Valley is well placed to service China's growing interest in horse breeding and racing. The potential to service the growing Chinese market will result in significant benefits for Australian thoroughbred breeders, the economy and jobs – particularly in the Hunter Valley.

The increasing quantity of thoroughbred horses being exported reflects the demand for, and reputation of, Australian race winning thoroughbreds.

Importance of the Hunter Valley Thoroughbred Breeding Industry

In May 2010, the independent Planning Assessment Commission (PAC) reported its expert findings on the Bickham Coal Project in the Hunter Valley. In its report, the PAC concluded that:

"The thoroughbred industry in the Upper Hunter Valley is a very significant contributor to the regional, state and national economies and a major source of employment. The structure of the industry makes it particularly vulnerable to threats based on image ... The available evidence supports the view that open-cut coal mining and a viable international-scale thoroughbred breeding enterprise are incompatible land uses."

The PAC recognised that:

- the industry in the Hunter Valley is based on the international reputation that the Hunter Valley has acquired for producing premium quality stock;
- the industry's production capacity is based on key environmental attributes including clean air, clean water and green rolling hills;
- the high net worth individuals in whose hands the top breeding stallions are concentrated are potentially very mobile and should they decide to move, they could

move offshore;

- the extent of this potential mobility could see 60% of the premier stallion strength move overseas with a consequent impact on 80% of the broodmare farms and the supply industries.

Australian Centre of National and International Significance

The Upper Hunter is referred to as the “Horse Capital of Australia”. It has the second largest concentration of horse studs in the world, outside Kentucky USA.

The Upper Hunter Valley horse studs produce around half of all thoroughbred horses born annually in Australia (ie 6,529 out of 16,606) and are nationally and internationally acknowledged for breeding quality horses and one of the three major thoroughbred nurseries in the world (along with Bluegrass in Kentucky USA and Newmarket in the UK).

The majority of yearlings sold at the major Australian sales (such as Magic Millions and Inglis) were produced in the Hunter Valley. The prices paid for premier yearlings from the Hunter Valley reinforce the Valley’s reputation for breeding high quality thoroughbred horses of international standing.

The Hunter’s stallion stud farms support some 100 broodmare farms and a network of support industries throughout the Hunter Valley.

This concentration of Thoroughbred Breeding operations in the Hunter Valley has attracted other state-of-the-art equine operations **which would not be located in the Hunter but for the existence of its world class Thoroughbred Breeding Industry.**

The Scone Equine Hospital, is the largest equine hospital in the Southern Hemisphere. It employs over 100 staff, including 30 qualified veterinarians, 5 Specialists and some 70 support staff. The Scone Equine Hospital operates a 24 hour surgical and intensive care facility. It is a major employer of professional staff in rural NSW and the surgical and intensive care facilities are major referral centers for local, state and interstate veterinarians.

The Scone Equine Hospital’s research outcomes deliver world-first advancements in equine care with major domestic and international benefits. In addition the Scone Equine Hospital provides training for up to 40 veterinary students and annually and plays an active role in the training of 60 veterinary nurses each year at the local TAFE.

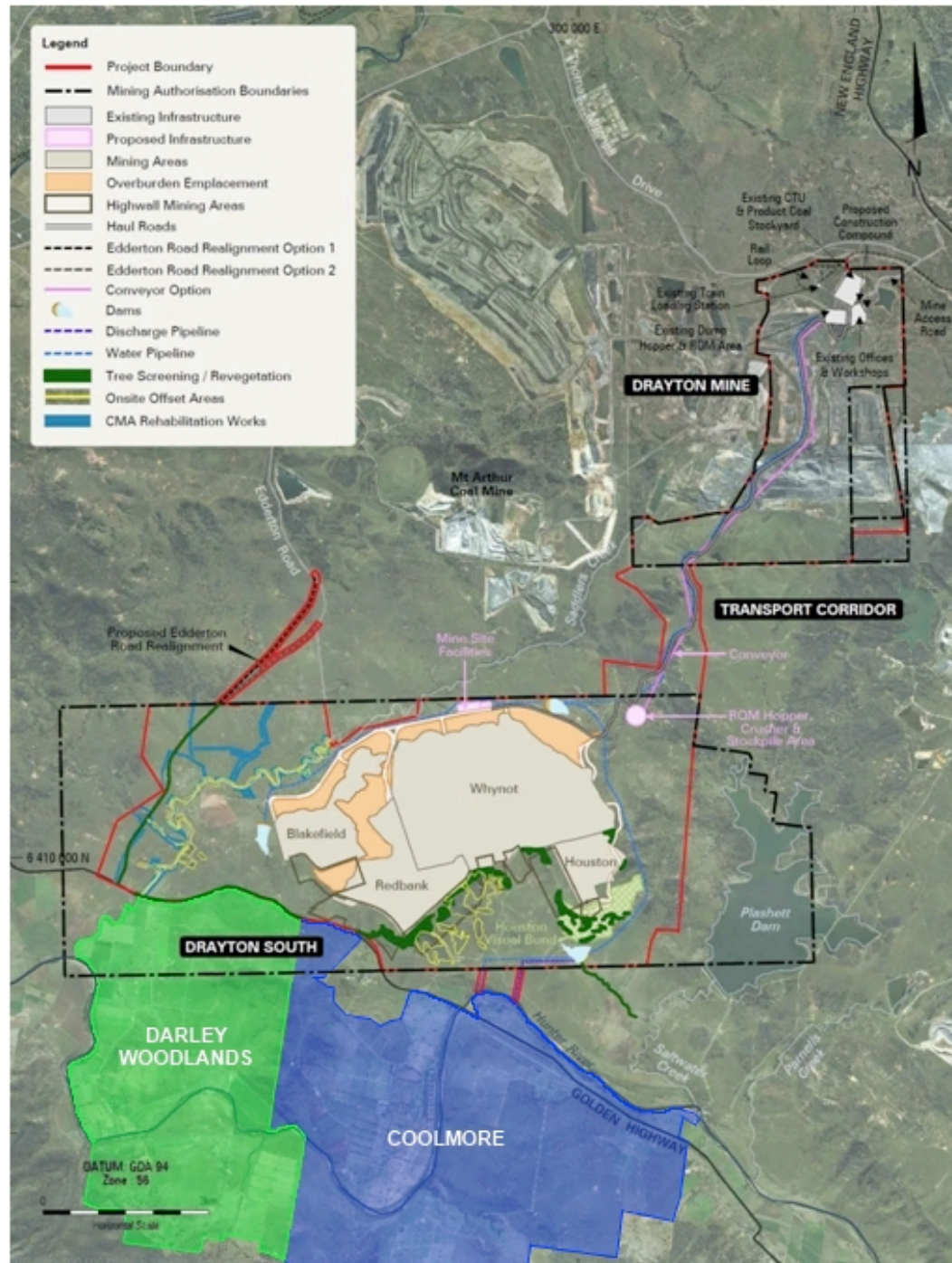
Scone’s Equine Hospital provides primary veterinary care for the thoroughbred breeding industries in the area. Its business almost entirely (90%) dependent on the thoroughbred breeding industry. The Scone Equine Hospital’s fate is therefore inextricably tied to the fate and future of the Hunter’s Thoroughbred Breeding industry. The Hospital’s future \$8-10 million investment to develop a state of the art equine hospital is on hold given the level of uncertainty resulting from this and other mining projects in the Upper Hunter.

Scone has a world-class equine research, training and education centre, the **Hunter Valley Equine Research Centre** which was founded in 1999 to foster and support equine research in Australia, including developing effective diagnosis and prevention technologies for all horse diseases.

The Scone Cup is the richest Country Cup meeting in Australia and is held as part of the **Scone and Upper Hunter Horse Festival** held each Autumn. In 2012 it attracted some 10,00 visitors to the region. The **Thoroughbred Breeding Stallion Parades**, held in the last

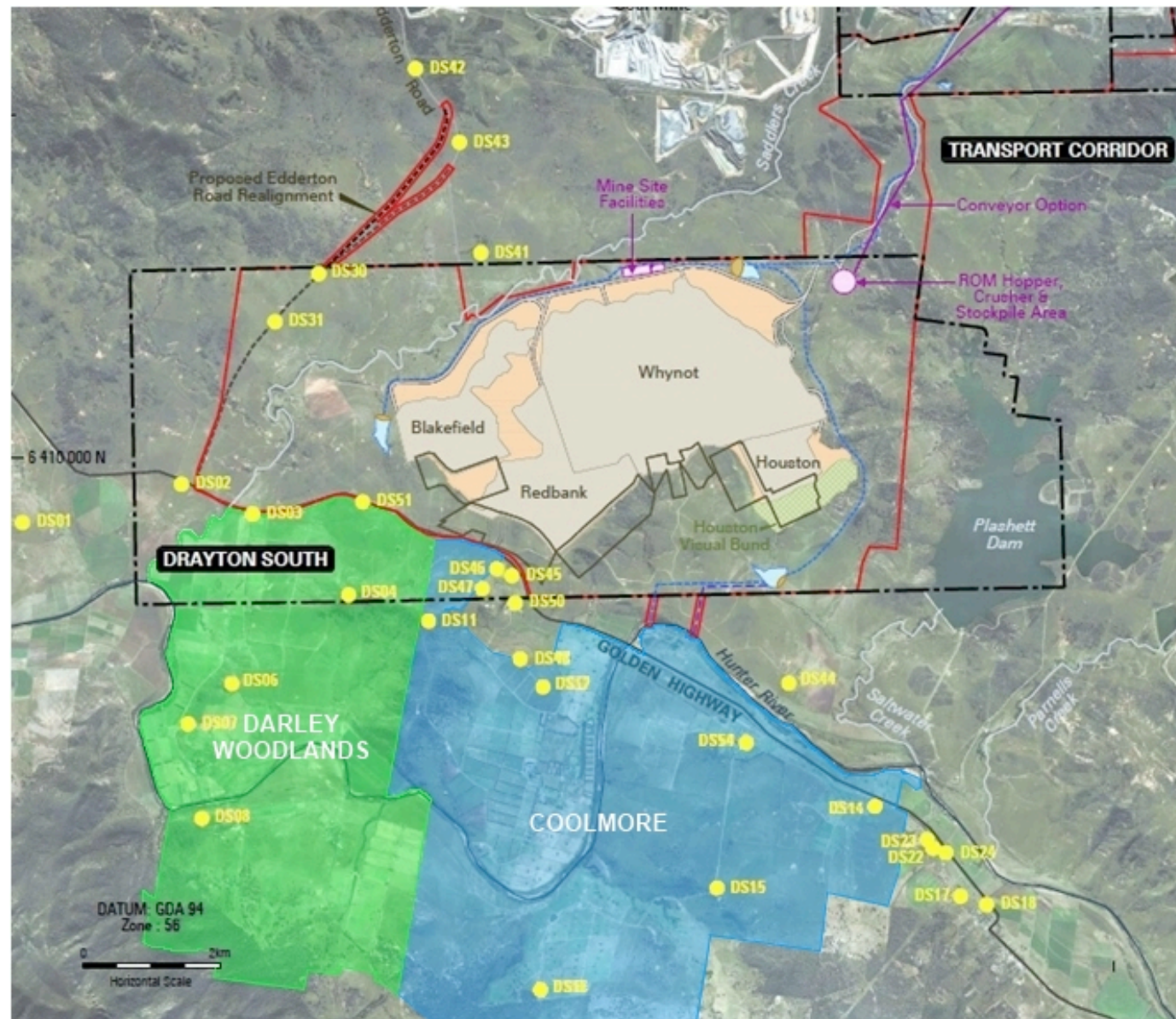
weekend in August annually, attract some 5,000 visitors, clients and investors to the area. These events are an important part of the economic, cultural and social fabric of the Hunter. They attract significant tourism to the region and reinforce the Hunter as the Horse Capital of Australia.

Australian Stock Horse Society is headquartered in Scone. Established in 1971, it is the largest of more than 70 horse breeding associations in Australia – with more than 66 branches. Some 10,000 individual members and over 165,000 nationally and internationally registered horses. The Society's purpose is to preserve the bloodlines of the Australian Stock Horse and promote the breed domestically and internationally.



Drayton South Open Cut
Coal Mine proximity to
Darley Woodlands and
Coolmore Australia

Drayton South Open Cut Coal Mine Proximity to Darley Woodlands & Coolmore Australia



**DS04 Darley Trig Hill
Existing View**



DS04 Darley Trig Hill – View into Blakefield and Redbank Pits
Year 3



DS04 Darley Trig Hill – View into Redbank and Blakefield Pits
Year 5



DS04 Darley Trig Hill – View into Redbank and Blakefield Pits

Year 10



Current View from Ellerslie Residence, Coolmore Australia, towards Houston
(Overburden) Bund



View from Ellerslie Residence, Coolmore Australia Across to Houston (Overburden)
Bund (Options 1,2 & 3)



Existing View from Batty Hill, Coolmore Australia, towards Houston (Overburden) Bund



View from Batty Hill, Coolmore, towards Houston (Overburden) Bund
(Options 1, 2, & 3)



Existing View from Oak Range, Coolmore, towards Houston (Overburden) Bund



View from Oak Range, Coolmore, towards Houston (Overburden) Bund
(Options 1, 2, & 3)

