



**NSW Planning Assessment Commission Determination Report
Drayton South Coal Project (SSD 6875)**

1. INTRODUCTION

An application was made by Anglo American Metallurgical Coal Pty Ltd (the Applicant) seeking consent to develop the Drayton South mine (the Project) within its Drayton South coal exploration license, as State significant development (SSD). Under the *Environmental Planning and Assessment Act 1979* (EP&A Act), the Minister for Planning is to determine whether consent should be granted to carry out SSD.

Under delegation from the Minister, either the Department of Planning and Environment (the Department) or the Planning Assessment Commission (the Commission) may determine SSD applications. As the Department received more than 25 submissions in the nature of objections in respect of the application, and a political disclosure statement was made, the application could not be determined by the Department (under the terms of the delegation). The application was therefore referred to the Commission for determination.

On 16 September 2016, the Department provided the Commission with its Final Assessment Report in respect of the Project noting that it *'builds upon and should be read in conjunction with the Department's Preliminary Assessment Report, dated August 2015'*.

Lynelle Briggs AO, Chair of the Commission, nominated Paul Forward (as chair), Annabelle Pegrum AM and John Hann as the Commission to determine the application. None of the nominated Commission members were involved in any previous applications or reviews in respect to a mine at Drayton South, nor have they discussed the current application with any other Commission members.

The existing Drayton mine is located approximately 13km south west of Muswellbrook in the Upper Hunter Valley and is owned by the Applicant. Coal extraction operations ceased at the existing Drayton mine in October 2016.

1.1 Summary of the Development Application

The Project site is located on rural land some 10 kilometres to the west of Jerry's Plains and involves:

- 36.5 hectares (ha) of pit extensions to the existing Drayton mine to the north, east and south;
- establishment of two new open cut mining pits at Drayton South, identified as 'Whynot' and 'Blakefield', with a combined total disturbance area of 1,477.5 ha;
- total Run Of Mine (ROM) coal recovery of 74.9 megatonnes (Mt) over a 15 year period at a rate of 6.4 megatonnes per annum (Mtpa);
- mining operations 24 hours per day, seven days per week;
- employment of up to 500 personnel;
- use and augmentation of existing Drayton mine infrastructure, including the coal handling preparation plant, the Antiene rail spur and surface facilities;
- development of mining operation infrastructure at Drayton South including:
 - standard surface facilities including a workshop and office;
 - a run-of-mine hopper, crusher and stockpile; and
 - a water management system.

- construction and use of a transport corridor from the existing Drayton mine to the proposed Project mining area;
- provision of biodiversity offsets;
- rehabilitation works, including:
 - progressive rehabilitation of disturbed areas with woodland and pasture species, including 1,127 ha of rehabilitated woodland; and
 - incorporation of micro-relief to the final landform and conformation to surrounds.
- three final voids post rehabilitation, with two at Drayton and one at Drayton South;
- realignment of a portion of Edderton Road and construction of a new intersection with the Golden Highway; and
- consolidation of the existing consent for the Drayton mine into a single, contemporary planning approval for the entire operation of both the Drayton and Drayton South mines.

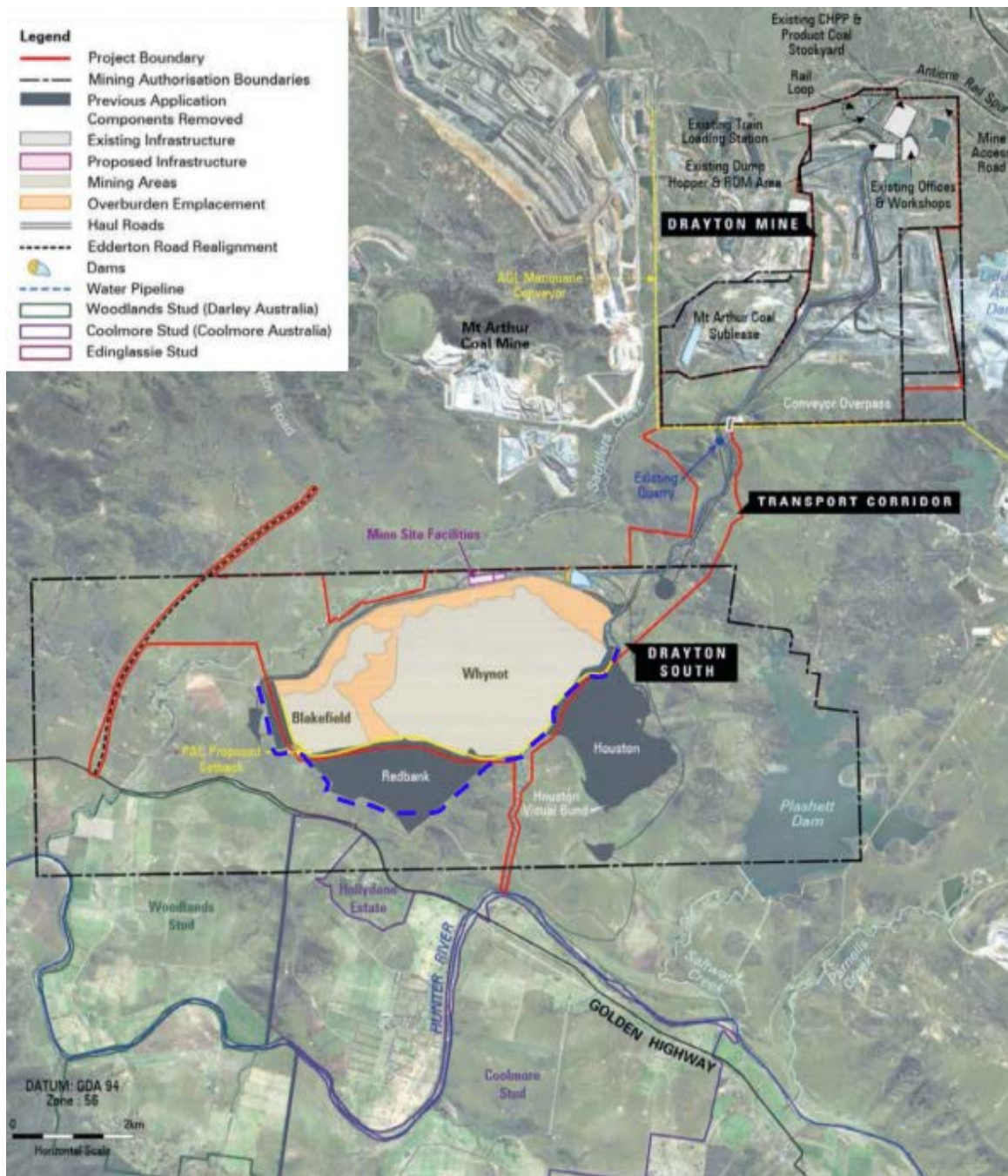


Figure 1: Proposed Drayton South mine location (Source: Department's review report)

NOTE 1: The reference to 'PAC Proposed Setback' shown as a yellow line, refers to a recommendation in the Commission's Review Report in 2013 in relation to a different application for a mine at Drayton South (see **Appendix 1** for additional information on the site chronology).

NOTE 2: The area referred to as Woodlands Stud is referred to as Darley in the Department's Preliminary and Final Assessment Reports. As it is occupied by Godolphin, it is so referred to as Godolphin within this Commission report.

1.2 Project Background

The following is a brief overview of the history of the application and assessment of the Project:

- December 2014: The Applicant requests the Secretary's Environmental Assessment Requirements (SEAR) for the Project;
- April 2015: A Conditional Gateway Certificate and SEAR are issued, followed by supplementary SEAR;
- May 2015: The Applicant lodges a development application and Environmental Impact Statement (EIS);
- August 2015: The Department completes its Preliminary Assessment Report recommending the Project be approved subject to recommended conditions. The Minister for Planning (Minister) requests the Commission review the Project and conduct a public hearing during the review;
- November 2015: The Commission releases its Review Report recommending the Project not proceed (refer **Section 4.1**);
- May 2016: The Applicant submits its response to the Commission's Review Report to the Department; and
- September 2016: The Department completes its Final Assessment Report, to be read in conjunction with its Preliminary Assessment Report dated August 2015. The Minister requests the Commission to determine the Project.

The following is an overview of the former reviews and determinations undertaken by the Commission for previous applications within the Drayton South site. These reviews and determinations are provided for context and do not form part of the Commission's consideration of the current Project:

- November 2012: Anglo American lodged its first development application and environmental assessment to develop the Drayton South coal reserve;
- March 2013: The Minister requested the Commission to review the application and conduct a public hearing during the review;
- August 2013: The Department completed its Preliminary Assessment Report recommending approval of the project, subject to conditions;
- December 2013: The Commission released its Review Report concluding that the mine '*should not proceed at the planned scale in this location*', and '*that any future application for a much smaller mine on the northern portion of the site must remain north of the natural ridgeline*', and '*these setbacks are the absolute minimum required*'. This is now commonly referred to as the 'PAC Proposed Setback' as reference in **Figure 1** above. The Commission also identified that Coolmore and Godolphin's '*significance to the broader equine Critical Industry Cluster meant they should be afforded total protection from the impacts of mining*';
- March 2014: Anglo American submits a revised mine plan that removed the Houston Pit and part of the Wynot Pit but does not address all of the 2013 Commission's review recommendations;
- July 2014: The Department completed a Final Assessment Report and the Commission is requested to determine the application; and
- October 2014: The Commission refused the revised application.

A more detailed chronology associated with the Drayton South mine project area, including the current Project, and the Commission's review and determination of a previous application for a mine, is included in **Appendix 1**.

A more detailed summary of the current Project, and the review and determination of the previous application undertaken by the Commission and the Department are included within **Appendix 2**.

1.3 Key operations within the vicinity of the Project

This outline of the historical context of the current and existing key operations in the vicinity of the Project is provided to assist in understanding subsequent considerations by the Commission within this report.

Since early European settlement, the site and surrounds have largely been used for agricultural purposes including grazing, cropping, dairying and horse breeding. Horse breeding has been recorded in the South Drayton area and at the locations currently occupied by Coolmore and Godolphin as early as 1824 and the 1880s respectively¹.

Coal mining within the Muswellbrook area commenced in a similar period evolving from small underground operations to large-scale open cut operations in more recent times. The Department notes that *'prospecting in the area (South Drayton) began in the 1940s and intensified in the 1960s and 1970s'*.

The purchase of Woodlands in 1985² and of Arrowfield in 1986³ started the transformation of these two studs into the internationally recognised operations they are today. Development consent was granted to Mount Arthur South Coal for the Drayton South site in 1986. The Mount Arthur South Coal project did not proceed and the consent and mining lease lapsed in 1991 and 1994 respectively. The Applicant acquired the exploration licence over the area in 1998.

The Department's Final Assessment Report notes that:

- *'the Hunter thoroughbred industry is one of the largest and most important breeding clusters in the world together with Newmarket in the United Kingdom and Kentucky in the USA. The region produces around half of all thoroughbred horses in Australia and around 70% of Australia's thoroughbred horse exports';* and
- *'the Hunter Valley Coalfield is the largest and most significant coalfield in NSW, producing around 60% of the State's coal ... and accounts for around half of the mining jobs in NSW'.*

Godolphin and Coolmore have become the most significant thoroughbred breeding participants within the Upper Hunter Region (refer **Sections 1.4.2** and **1.5.1**).

Within the vicinity of the Project coal mining operations are dominant to the north and east with thoroughbred equine operations dominant to the south and south-west. The Commission has prepared **Figure 2** to illustrate the key operations within the vicinity of the Project and the approximate distance to Coolmore and Godolphin.

¹ Department's Final Assessment Report.

² The stud is now Godolphin and is so referred to within this Commission report. Readers should note that it is referred to as Darley in the Department's Final Assessment Report.

³ Arrowfield is now the Coolmore stud and is so referred to within the Department's Final Assessment Report and in this Commission report.

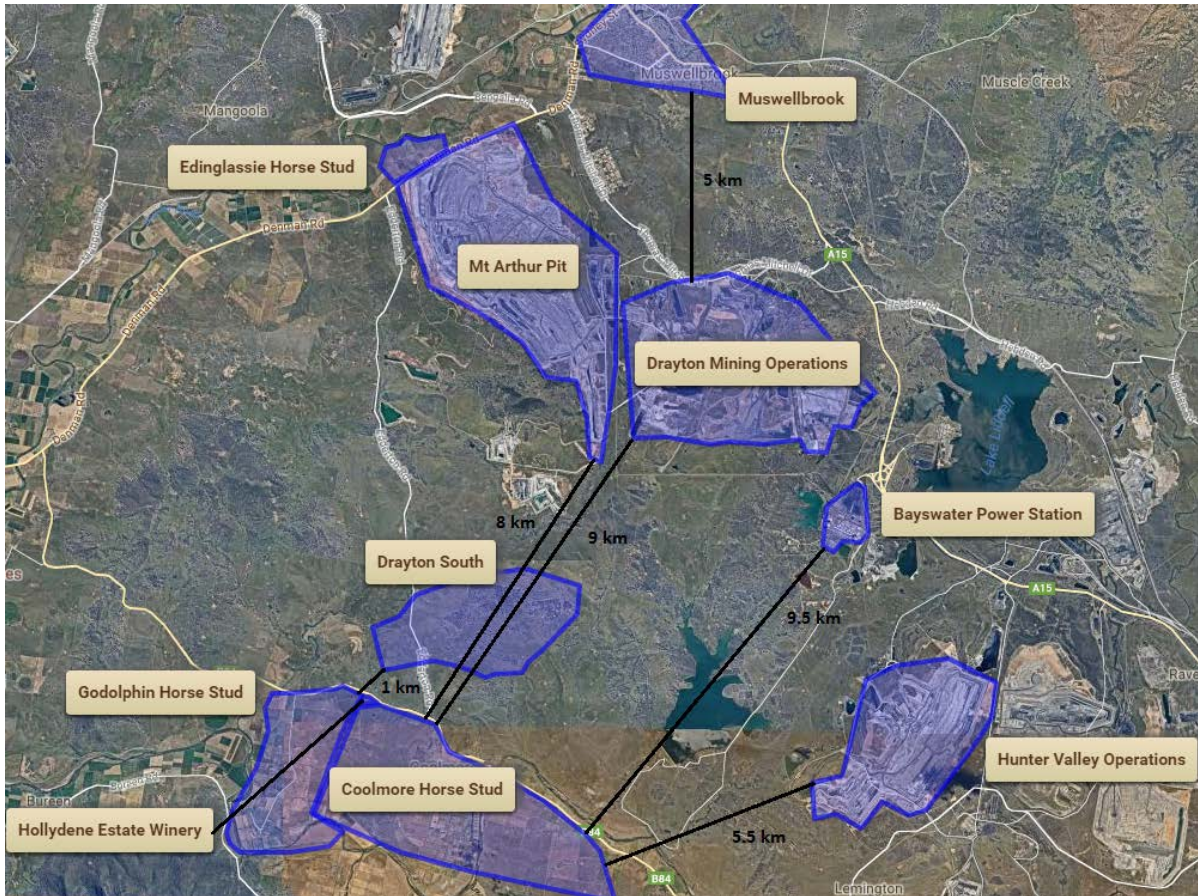


Figure 2: Key operations within the Project vicinity.

Note: Figure 2 shows many of the key operations within the vicinity of the Project. Distances identified are approximate only and the Commission has not relied on any precise distance in its determination of the Application. The Commission notes that the Applicant and others have referred to different distances between the Project disturbance area and Coolmore and Godolphin.

The following operations currently exist within the vicinity of the Project:

1.4.1 Drayton Mine

The Drayton Mine commenced production in 1983 and produced up to 8 million tonnes of ROM coal a year. Drayton Mine was an open cut operation where mining advances based on dragline strips. Mining activities operated 24 hours per day, seven days a week. Drayton Mine ceased coal extraction operations in October 2016 and is currently subject to progressive remediation of the site.

1.4.2 Coolmore and Godolphin

Thoroughbred breeding operations have been carried out since 1985 and 1986⁴ on properties in close proximity to the Project site. Namely, in the locations identified as Coolmore Stud (Coolmore) and Woodlands Stud (Godolphin) in **Figure 2**.

⁴ Department's Final Assessment Report

Coolmore is part of the Coolmore international thoroughbred equine business founded in Ireland in the 1850s. Coolmore offers services to client/owners ranging from stallion covering, foaling and agistment. These services are primarily fee based offering breeders the covering services of stallions with recognised racing pedigrees. Their mission is *'to produce the best racehorses in Australia by making the best bloodlines available to Australian breeders'*.⁵

Godolphin is part of Sheikh Mohammed bin Rashid Al Maktoum's international thoroughbred breeding business and aims to produce fillies and mares that perform at the highest racing level and that are eventually retired to provide additional stock for the betterment of the Godolphin operations⁶.

Coolmore and Godolphin have substantially different business models as a result of their ownership and operations. Coolmore and Godolphin are at times discussed separately within the report due to the variances in their operating models.

The Commission was advised that in 2002 both studs combined retained 18 of the top 35 stallions in Australia and in 2016, 17 of the top 35 stallions⁷.

In 2013, Coolmore and Godolphin accounted for 41% of mares covered (or inseminated) in Australia with a cover fee as high as \$250,000. Of the \$500m spent annually within the Hunter on breeding mares, approximately \$300m is paid to businesses to look after mares and a total of approximately \$100m of that amount is paid to Coolmore and Godolphin⁸. The quality of covering services offered is demonstrated by the track performance in the horses foaled. Coolmore's capability to deliver performing horses is illustrated by them having produced the top three all-time Australian Group 1 leading sires namely:

- Danehill - sired 89 winners;
- Sadler's Wells sired 73 winners; and
- Galileo - sired 60 winners.

Thoroughbred industry submissions advise that the development of a highly competitive equine industry is dependent on the support and confidence of thoroughbred owners who seek every advantage possible to increase their chance of winning races. This includes the pedigree and bloodline of the horses' parents, the care of the broodmares and the rearing of the foals.

Coolmore's reputation has been built on being able to provide high quality stallions with progeny that win key races in Australasia and also on its expertise and quality management of the foal and rearing process⁹. This includes the selection of suitable topography, soils and pasture combinations and the development of exceptional support facilities. Godolphin is recognised as a high quality horseracing stable and breeding operation¹⁰.

The Commission accepts that both Coolmore and Godolphin compete on an international scale and have knowledge and expertise in the production of quality thoroughbreds.

⁵ Coolmore Australia: At a glance

⁶ Godolphin Website

⁷ Daryl Guihot submission

⁸ Ibid.

⁹ Coolmore website cites horses *'raised and grazed'* at the stud include *'Fastnet Rock, Redoute's Choice, Special Harmony, Sea Siren, Vancouver, Pride of Dunbai and Winx'*.

¹⁰ The Godolphin Australia (Darley) website cites that its horses *'have won many of the world's most famous races including 225 Group One races in 12 different countries, across 4 continents'*.

1.4.3 Hollydene Estate Winery

Hollydene Estate is a relatively small winery located within the boundary of property occupied by Coolmore, in close proximity to that occupied by Godolphin and directly adjacent to the Project site. The estate was recently purchased by Coolmore and operates a cellar door and restaurant business within the site. Muswellbrook Shire Council has granted development approval for the establishment of tourist and visitor accommodation on the estate.

1.4.4 Mount Arthur Coal Mine

Mount Arthur coal mine is located to the north of Drayton South and is adjacent to the existing Drayton mine. Mount Arthur is one of the oldest open cut mining operations in the Hunter Valley, with operations commencing at the site in the early 1960s. The mine has undergone several modifications and is currently operated by Hunter Valley Energy Coal Pty Ltd (HVEC), a subsidiary of BHP Billiton. The existing approval, dated 26 September 2014, is valid through to 2026 and permits extraction of up to 32 Mtpa of ROM coal from an open cut disturbance area of approximately 6,400 ha.

1.4.5 Edinglassie Thoroughbred Stud

Edinglassie Thoroughbred Stud (Edinglassie) is a broodmare farm providing agistment for mares and progeny, foaling facilities, hospital and yearling preparation facilities and is located on Denman Road, some 10-12 kms north west of the Project and in proximity of the Mt Arthur coal mine. Edinglassie is used by the Applicant as an example of coexistence of open cut coal mining and thoroughbred horse breeding.

The Commission sought to meet with Edinglassie to obtain information on its operations and the impacts of adjacent mining. Edinglassie declined to meet the Commission and did not make a submission (refer page 40 of this report).

1.4.6 Bayswater Power Station

Bayswater Power Station is a coal-powered thermal power station located to the east of the Project. Bayswater Power Station has been operating within the area since the mid-1980s.

1.5 Critical Industry Clusters

Critical Industry Clusters (CIC) are defined in the *Upper Hunter Strategic Regional Land Use Plan* (UHSRLUP) as industry clusters that meet the following criteria:

- there is a concentration of enterprises that provides clear development and marketing advantages and is based on an agricultural product;
- the productive industries are interrelated;
- it consists of a unique combination of factors such as location, infrastructure, heritage and natural resources;
- it is of national and/or international importance;
- it is an iconic industry that contributes to the region's identity; and
- it is potentially substantially impacted by coal seam gas or mining proposals.

1.5.1 Equine Critical Industry Cluster

The equine Critical Industry Cluster (equine CIC) is identified in the UHSRLUP and includes a highly integrated concentration of horse breeding facilities and related infrastructure covering thoroughbred farms, stock horse breeding centres and numerous other equine developments and support services, such as specialised veterinary centres. In 2009 - 2010 the Upper Hunter region provided 80% to 90% of the total value of stud horses exported by Australia¹¹.

The attraction for equine interests to the region lies in its combination of a temperate climate, protected aspect and varied terrain combined with a lack of tropical diseases as well as accessibility to Sydney¹².

The Department's Final Assessment Report and the *Hunter Regional Plan 2036* (HRP) note that the equine CIC produces around half of all thoroughbred horses in Australia and around 70% in volume and 80% in value of Australia's premium thoroughbred exports. The industry contributes \$2.6b to the NSW economy annually, of which some \$565m is generated in the Hunter Valley. Additionally the industry within the Hunter Valley generates around \$300 million in business income each year, including horse exports estimated at over \$100 million and is a significant employer of some 5,000 people in the Hunter Valley.

The Hunter Thoroughbred Breeders Association (HTBA)¹³ state that, thoroughbred breeding provides two times the value of irrigated agriculture, 4.5 times the value of dairy, and 10 times the value of meat and cattle. The operations, employment and economic value of the equine CIC have become an important part of the Hunter Valley and NSW economy.

The Commission was advised in many submissions that the presence of Coolmore and Godolphin within the Hunter Valley is both systemic to and central to the success of the cluster and has supported the development of a number of related industries and operations including other studs, the Scone Equine Hospital¹⁴, quality farrier services, feed suppliers and specialist horse transport services.

The HTBA noted and had concerns that:

- the Hunter Valley is *'one of three centres of thoroughbred breeding excellence in the world ... is Australia's thoroughbred breeding capital ... (and is) 'vertically integrated' (in a sophisticated network of support services'*;
- *'impact on Coolmore and [Godolphin] affects future entire industry cluster'*; and
- *'irreparable harm to reputation and brand of individual studs and the region's equine industry as a whole'*.

¹¹ *Upper Hunter Strategic Regional Land Use Plan.*

¹² *Upper Hunter Strategic Regional Land Use Plan.*

¹³ The HTBA represents over 200 industry organisations including stallion farms, broodmare farms, the Scone Equine Hospital and a network of equine support industries.

¹⁴ Dr Angus Adkins submission: The Scone Equine Hospital has become the largest veterinary practice in the Southern Hemisphere, employs over 100 people in practice, is engaged in tertiary education and has an international reputation.

1.6 Defining the Locality

In accordance with s79C(1)(b) of the EP&A Act, the Commission has considered the likely impacts of the Project including the environmental, economic and social impacts in the locality. The Commission has identified what it considers to be the locality of the Project. The Commission considers that the locality is most readily defined as being the economic reach of the Project which is most relevantly contained by the extent of employment and services expenditure and subsequently this reach is largely contained within the broader geographical region known as the Hunter Valley.

Geographically this locality is considered best represented by the map at **Figure 3**, in which both the Upper Hunter and Lower Hunter form the area known as the Hunter Valley. The Project is expected to employ up to 500 people and have an annual operational expenditure within the locality of \$213m.

The Hunter Valley's setting has encouraged development of the equine CIC by providing it with conditions that are highly complementary to thoroughbred horse breeding. The Hunter Valley has rich soil fertility, a temperate climate, high rainfall and reliable water supply. The UHSRLUP identifies the *'significant advantages for agricultural production also result from the combination of the region's natural resources, infrastructure and strong marketing advantages such as accessibility to urban centres and markets'*. The Commission considers that the equine CIC is largely coincident with the locality, although it is most prevalent to the Upper Hunter.

The Commission has identified as an important consideration the potential impacts of the Project to those land uses within the 'vicinity' of the Project on which there may be a direct impact and flow-on impacts for the equine CIC. The environmental, economic and social impacts of the Project in the locality are discussed and evaluated further within this Report (refer **Section 4.2.2**).



Figure 3: Hunter Region context (Source: Hunter Regional Plan 2036)

2. DEPARTMENT'S FINAL ASSESSMENT REPORT

The Department's Final Assessment Report had regard to its Preliminary Assessment Report of August 2015 and considered the following:

- recommendations made in the Commission's Project Review Report dated November 2015;
- additional information received from the Applicant in response to the Commission's Review Report and the Department's proposed conditions of consent, including an Expert Report by Mr Greg Houston dated 29 March 2016¹⁵;
- a peer review of Mr Houston's report undertaken for the Department by Prof Jeff Bennett and dated 22 June 2016;
- further advice received from Government agencies following the Commission's Review Report;
- public, special interest group and agency submissions made on the Project including supplementary submissions made by the HTBA, Coolmore and Godolphin following the Applicant's response to the Commission's Review Report; and
- a further peer review of the HTBA, Coolmore and Godolphin supplementary submissions undertaken for the Department by Prof Jeff Bennett and dated 21 August 2016.

The Final Assessment Report states that the Commission's Review Report *'expresses confidence that the project can be carried out generally in accordance with all relevant environment impact assessment criteria... therefore, the key remaining consideration for the project is the extent to which the project would result in unacceptable impact on the neighbouring Coolmore and [Godolphin]'*.

The Department concludes that *'the project can be developed and operated to meet all applicable NSW Government policies and assessment criteria, without impacting on the continued operation of either the Coolmore or Woodlands [Godolphin] studs'*. The Department recommended approval of the Project, subject to conditions.

3. COMMISSION'S MEETINGS AND SITE VISIT

In order to more fully understand the application, the Commission met with the Department, the Applicant, representatives of the Scone Equine Hospital, the HTBA, Coolmore and Godolphin. The Commission also visited the Scone Equine Hospital facilities, the existing Drayton mine, the proposed Project site, inspected the vicinity by helicopter, and conducted a two day public meeting in Muswellbrook. A summary of each of these meetings and site visits are included within **Appendix 3**.

3.1 Briefing from the Department

On 17 October 2016 the Department briefed the Commission in relation to its assessment of the application.

On 31 October 2016 the Commission was further briefed by the Department's Director, Regions Hunter and Central Coast. In that briefing the Department provided more information on the development of the HRP and *Hunter Regional Plan Implementation Plan 2016-2018* (HRPIP).

¹⁵ The Applicant wrote to the Department on 18 November 2016 clarifying that it incorrectly referred to Mr Houston as 'Dr Houston' in some of the documentation supporting the application.

3.2 Briefings from Other Agencies (at the request of the Commission)

On 28 November 2016, the Commission was briefed by the Office of Environment and Heritage (OEH) and the Environment Protection Authority (EPA).

3.3 Briefing from the Applicant and Site Visit

On 14 October 2016 the Commission met with the Applicant and undertook a site visit. During that visit the Commission was shown the existing Drayton mine, active rehabilitation works at the Drayton mine, the indicative transport corridor between the Drayton mine and the Project, and a tour along the boundary of the proposed Drayton South mine.

3.4 Meeting with Muswellbrook Shire Council

On 12 October 2016 the Commission met with Muswellbrook Shire Council (Council) to discuss the Project.

3.5 Meetings with Equine industry

On 12 October 2016 the Commission met with the HTBA and also with Dr Cameron Collins (Managing Director) and Angus Adkins (Director) of the Scone Equine Hospital.

On 13 October 2016 the Commission met with representatives of Coolmore and Godolphin. The site visits included a tour of the business' facilities and an aerial inspection of the proposed mine site and the vicinity.

3.6 Public Meeting

The Commission held a public meeting at the Muswellbrook Conservatorium of Music on 15 and 16 November 2016. A list of the 67 speakers and a summary of the issues presented to the Commission are included in **Appendix 4**.

The Commission acknowledges that although the majority of speakers at its 2016 public meeting opposed the Project, over 17,000 written submissions were received during the 2015 Review process that supported the Project.

4. COMMISSION'S EVALUATION

In its determination, the Commission has considered relevant matters under section 79C(1) of the EP&A Act. The Commission has had regard to information, including but not limited to the information contained within the following:

- the Commission's Review Report of the Project in 2015;
- the Department's 2016 Final Assessment Report (in conjunction with its Preliminary Assessment Report of August 2015);
- information and presentations provided by the Applicant;
- information and presentations from the equine industry;
- advice from government agencies; and
- submissions and presentations from the public.

The Commission requested and received additional information from the following groups:

- the Applicant responded to further information sought by the Commission from the Australian Competition and Consumer Commission (ACCC) and further information from OEHL and the EPA;
- the Department on the application of volunteer exclusion zones, Edderton Road, water resources, heritage and site locality;
- the EPA on environmental impacts;
- the OEHL on indigenous and non-indigenous heritage matters; and
- the ACCC clarifying comments on its website referring to the 2008 Darley acquisition of Woodlands stud.

4.1 The Commission's Review in 2015 (the Review)

Three recommendations in relation to the Project were made at the conclusion of the Review and four recommendations were made in relation to strategic planning issues relevant to the context of the Project.

This Commission considered the Review and relevant responses to the findings and recommendations in it, including that of the Department in its Final Assessment Report¹⁶.

Recommendation 1: *'The application for Drayton South open cut coal mine should not proceed.'*

The Commission considered the Review findings underpinning its recommendation that the coal mine should not proceed, notably that open cut coal mining and thoroughbred industry land uses *'are vastly different and are not compatible in close proximity'*.

Recommendation 2: *'That the part of the project related to the extension of the existing Drayton Mine operations is approvable and should be allowed to progress as it will provide some short term extension of the current employment on the mine.'*

The Department's Final Assessment Report identifies that the Department approached the Applicant in response to this recommendation, to seek further clarification on if it intended to proceed with the small extension areas to the existing Drayton mine. This extension was originally proposed to afford continuity in mining operations and coal extraction until Drayton South commenced coal extraction. The Commission is not aware of any response provided to the Department by the Applicant.

The Commission is determining the Application before it which is for the Project as a whole. An extension to the existing Drayton Mine has not been proposed separately to the Project.

Recommendation 3: *'The proposed conditions of consent relating to the existing Drayton Mine's rehabilitation should be strengthened.'*

The Department's report identifies that this recommendation is *'more likely if either a new consent or a modification imposes rehabilitation, close and final landform requirements that are additional to those in the existing consent'*.

¹⁶ The Commission did not meet with any Commissioners involved with the 2015/16 Review or the determination of a previous application by the Applicant in 2014. The Commission considers this material to the independence of its determination of the application.

The Commission saw active rehabilitation underway during the site visit and is satisfied that the draft rehabilitation conditions proposed by the Department for the Project are in accordance with contemporary arrangements.

Recommendations 4-7 on planning

The Commission does not consider these policy related recommendations relevant to the determination of the Project.

4.2 Matters for consideration under section 79C of the *Environmental Planning & Assessment Act 1979*

The Commission has given consideration to relevant matters under section 79C of the EP&A Act in arriving at its determination.

'in determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application'.

(a) the provisions of:

4.2.1 79C 1(i) any environmental planning instrument

State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 (Mining SEPP)

Clause 12 - Compatibility of proposed mine with other land uses

Under clause 12 of the Mining SEPP, before determining a development application for the purposes of mining, petroleum production or extractive industry, the consent authority must:

a) consider:

- i. the existing uses and approved uses of land in the vicinity of the project; and*

There are a number of existing and approved land uses within the vicinity of the Project. These land uses include, but are not limited to the following:

- animal boarding or training establishment – including the thoroughbred horse breeding operations at Coolmore and Godolphin;
 - viticulture – including that at the Hollydene Estate;
 - tourist and visitor accommodation – as approved for the Hollydene Estate;
 - agriculture – typical grazing lands;
 - open cut mining – existing open cut coal mines such as Mount Arthur; and
 - electricity generating works – Bayswater Power Station.
- ii. whether or not the development is likely to have a significant impact on the uses that, in the opinion of the consent authority having regard to land use trends, are likely to be preferred uses of land in the vicinity of the Project; and*

The land use trends in the vicinity reflect an initial history of agriculture, including thoroughbred horse breeding, along with small scale mining operations commencing in a similar period. Mining has become more prominent in recent decades with the increase in open cut coal mining operations. At the same time as open cut coal mining has intensified, investment in thoroughbred horse breeding has also seen significant growth.

Currently there are two demonstrable land use trends in the vicinity of the Project with open cut coal mining as the preferred use of land to the north and east of the Project site and agriculture and animal boarding and training establishments, specifically thoroughbred horse breeding, the preferred use of land to the south and south west of the Project site. Both of these land uses have developed over a considerable period of time (refer to **Section 1.3**).

Having regard to these land use trends and the continued development and significant investment in these uses, it is the opinion of the Commission, that both open cut coal mining and animal boarding or training establishments, specifically thoroughbred horse breeding, are likely to be equally preferred land uses in the vicinity of the Project.

The HRP and UHSRLUP also identify that both land uses are important to the future of the Hunter Valley and that neither should be given more weight than the other, nor should one be compromised at the expense of the other. The HRP and UHSRLUP give no planning guidance for assessing or determining development applications in terms of how this balance is to be maintained or what constitutes a reasonable buffer between industries. However, the plans emphasise that one industry should not be pursued at the expense of the other. These strategic plans are discussed further in this Report (refer to **Section 4.2.4**).

In considering the Mining SEPP, the Commission is required to establish whether or not the development is likely to have a significant impact on the preferred uses of land. The Commission has formed the view that the development will not have a significant impact on open cut coal mining which occurs to the north and north east of the Project. However, the evidence presented to the Commission, and as discussed in this report, demonstrates that on balance, the Project is likely to create significant negative impacts on the preferred land uses identified as animal boarding or training establishments, specifically thoroughbred horse breeding, located to the south and south west of the Project (refer to **Section 4.2.2**).

iii any ways in which the Project may be incompatible with any of those existing, approved or likely preferred uses; and

In assessing incompatibility with existing and approved uses, the Commission considers the existing viticulture and approved tourist and visitor accommodation, which are located within the Hollydene property, as being potentially incompatible due to the visual impact of the open cut mining operations.

The Commission considers that the Project would not be incompatible with open cut coal mining as the existing, approved and preferred use to the north and east.

With regard to the existing, approved and likely preferred uses to the south and south west of the Project, the Commission acknowledges that applicable environmental criteria are designed to address potential impacts on humans and structures and not impacts on animals or specific types of 'animal training or boarding establishments' such as thoroughbred horse breeding.

However, having regard to the specific nature of the thoroughbred horse breeding land uses to the south and south west, the Commission considers that the Project would be incompatible with these existing, approved and likely preferred uses due to the negative effects arising from dust and blast noise on equine health and thoroughbred operations (refer to **Section 4.2.2**).

b) evaluate and compare the respective public benefits of the development and the land uses referred to in paragraph (a) (i) and (ii); and

The Commission recognises that open cut coal mining delivers significant economic flow on benefits to the community and a number of associated industries. The Project is predicted to employ up to 500 employees, with indirect employment of up to 984 jobs in the Hunter Valley and 2,085 jobs in NSW over the 15 year life span of the Project. The predicted monetary value of the Project is estimated as follows:

- \$233 million to the NSW Government in royalties;
- \$93 million to the Commonwealth Government in company tax;
- \$355,000 to Council each year for the provision of local infrastructure and services and community enhancement;
- \$131 million Capital investment; and
- \$213 million annual operational spending.

The Commission accepts that there would be public benefits derived from job creation and the revenue and expenditure generated as a result of the Project. The public of NSW would also benefit from increased government expenditure directly resulting from mining royalties.

The Commission also notes that open cut mining approved at Mt Arthur mine to the north was predicted to employ up to 2,600 full time equivalent personnel and generate almost \$300 million in royalties for the NSW Government.

Animal boarding or training establishments, being Coolmore and Godolphin, to the south of the Project currently generate approximately \$300m in business income annually, and as a result provide significant direct and indirect employment and expenditure opportunities.

The Commission considers it important, when evaluating and comparing the respective public benefits of the Project and the existing land uses identified within the vicinity of the Project, to highlight that whilst both the Project and other land uses generate benefits, there is a significant difference in the nature of these land uses that make any direct comparison challenging.

However, the Commission finds that the established thoroughbred equine operations are sustainable in the long term and are key to the equine CIC in the locality, whereas the Project has a finite lifespan of 15 years and would not be central to the sustainability of mining as a preferred land use. The Commission considers that this is an important and relevant distinction in evaluating the public benefits of the development and the land uses referred to in paragraph (a) (i) and (ii).

c) evaluate any measures proposed by the applicant to avoid or minimise any incompatibility, as referred to in paragraph (a) (iii).

The Applicant has proposed a number of measures to avoid or minimise the incompatibilities identified in paragraph (a) (iii) that include visual, noise, vibration and dust impacts. A summary list of the measures proposed is included in **Appendix 5**.

The Commission finds that the Applicant's measures, including setting mining operations behind the ridgeline and tree screening, would adequately minimise visual impacts on 'viticulture' and on 'tourist and visitor accommodation' in the vicinity and remove incompatibility between the Project and these land uses.

The Commission finds that the measures proposed to avoid or minimise blast noise and vibration, air quality and lighting impacts are satisfactory and that the proposed open cut mining operation is capable of operating within regulatory criteria. The Commission is satisfied that the Project can comply with the relevant regulatory criteria noting that these criteria address only impacts on humans and structures.

Clause 12A - Voluntary Land Acquisition and Mitigation Policy

The Project is predicted to comply with relevant criteria and as a consequence, no mitigation or acquisition is required.

Clause 12AB - Non-discretionary development standards for mining

Pursuant to clause 12AB of the Mining SEPP, the EIS demonstrates that the Project complies with the non-discretionary development standards for mining in relation to cumulative noise level, cumulative air quality level, airblast overpressure, ground vibration and aquifer interference. The Commission is satisfied that the Project can comply with the relevant regulatory criteria noting that these criteria address only impacts on humans and structures.

Clause 13 – Compatibility of proposed development with mining, petroleum production or extractive industry

This clause applies as the Mt Arthur mine is within the vicinity of the Project per clause 13(1)(a).

Specifically in relation to clause 13 (2)(a) the Commission has given consideration to the following:

- the existing and approved uses per clause 13(1)(a) within the vicinity of the Project;
- the potential of significant impact on current or future extraction or recovery of minerals, petroleum or extractive materials; and
- any potential incompatibility between the Project and existing or approved uses, or current or future extraction or recovery.

The Commission finds that exploration of the site has revealed that significant coal resources exist within the site and the Project's open cut operations would not preclude the future recovery of further coal resources from a potential underground operation. The Commission further notes that neither the Applicant's EIS, nor the Department's Assessment Reports, makes reference to any other notable resources within the site that would be sterilised as a result of the Project.

Furthermore, the Commission finds that the Project would not prevent the future recovery of resources from within the vicinity of the Project, nor does the Project present any noted incompatibility with other mining, petroleum production or extractive industries within the vicinity.

In giving consideration to clause 13(2)(b) the Commission finds that there would be public benefits derived from job creation and the revenue and expenditure generated as a result of the Project. The public of NSW will also benefit from the increased government expenditure directly resulting from mining royalties. Open cut mining approved at Mt Arthur mine to the north was predicted to employ up to 2,600 full time equivalent personnel and generate almost \$300 million in royalties for the NSW Government.

The Commission finds that both the Project and Mt Arthur are capable of providing public benefits.

In giving consideration to clause 13(2)(c) the Commission finds that the Project is unlikely to generate any incompatibility with the Mount Arthur mine due to the similar nature of both land uses. Regardless, the Applicant has proposed a number of measures to avoid or minimise potential incompatibilities that include visual, noise, vibration and dust impacts. A summary list of the measures proposed is included in **Appendix 5**.

The Commission finds that the Applicant's proposed measures in **Appendix 5** to avoid incompatibility are satisfactory and that the proposed open cut mining operation is capable of operating within regulatory criteria.

Other applicable Environmental Planning Instruments

Applicable provisions of the following Environmental Planning Instruments (EPIs) were addressed by the Department in its preliminary Assessment Report 2015:

- *Muswellbrook Local Environmental Plan 2009*;
- *Hunter Regional Environmental Plan 1989*;
- *State Environmental Planning Policy No.33 Hazardous and Offensive Development*;
- *State Environmental Planning Policy No.44 Koala Habitat Protection*;
- *State Environmental Planning Policy No.55 Remediation of Land*;
- *State Environmental Planning Policy (State and Regional Development) 2011*; and
- *State Environmental Planning Policy (Infrastructure) 2007*.

The Commission considered these EPIs and has formed the view that the Project satisfies the requirements in each.

4.2.2 s79C 1(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,

Avoidance, Mitigation and Adaptive Management

In relation to the evaluation of impacts, the Commission has considered the proposed draft conditions of consent, including the adaptive management condition recommended by the Department.

The EPA defines adaptive management as being '*a procedure for implementing management while learning about which management actions are most effective at achieving specified objectives*'¹⁷.

¹⁷ Office of Environment and Heritage – Adaptive Management
<http://www.environment.nsw.gov.au/research/adaptive-management.htm>

The consideration of adaptive management is important in the determination of the Project. It allows the consent authority to give appropriate consideration to uncertain and/or unpredictable impacts, the proposed mitigation strategies and relevant performance criteria with the knowledge that the Project operator is required to operate in a state of constant monitoring and process improvement. This is designed to reduce uncertainty and to ensure that exceedances of criteria or standards are avoided to the highest possible extent.

The Department's draft Condition 1 – Schedule 5 requires that the Project adopt adaptive management:

Condition 1 – Schedule 5

The Applicant must assess and manage project-related risks to ensure that there are no exceedances of the criteria and/or performance measures in schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

Where any exceedance of these criteria and/or performance measures has occurred, the Applicant must, at the earliest opportunity:

- (a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not recur;*
- (b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and*
- (c) implement remediation measures as directed by the Secretary.*

ENVIRONMENTAL IMPACTS

Water

The Commission received submissions raising concerns with the assessment of water impacts presented by the Applicant, suggesting that:

- information presented was insufficient, in particular that the assessment was deficient in its consideration of water impacts during the life of the mine and once mining operations had been completed; and
- salinity will continue to increase well beyond the levels reported within the EIS and that a greater rate and load of salt would migrate to the surrounding groundwater and Hunter River than reported.

The Applicant's response concluded that:

- the submissions contained a number of inaccuracies;
- the assessment addressed concerns related to the mine plan, water licensing, water balance model predictions, final void assumptions and water contamination; and
- that surface and groundwater impact assessment undertaken '*were peer reviewed by, and discussed and endorsed by the NEW DPI-Water, peer reviewed by Federal and State Government independent experts (including the IESC and NSW Commission for Water)*'.

The Commission, on review of the information submitted by both the Applicant and by submissions, is satisfied that the Applicant has adequately addressed the concerns raised.

The Commission finds that the Project would, subject to the mitigation measures proposed by the Applicant and the conditions recommended by the Department, have an acceptable impact on surface water and groundwater resources.

The Commission also finds that the proposed adaptive management requirement of Condition 1 Schedule 5 (refer page 17 of this report), provides for the suitable assessment and management of project related risks.

Biodiversity

The Commission received submissions raising concerns with the assessment of biodiversity impacts presented by the Applicant, suggesting that:

- impacts to threatened species have not been adequately avoided, mitigated or offset;
- the Department's flexibility around offsets being 'like for like' will see the critically endangered Box-Gum Woodland destroyed and not offset within the Region; and
- the approval of numerous mines in the Hunter Valley is leading to a cumulative loss of suitable habitats for many flora and fauna species.

The Applicant's response concluded that:

- the current offset package exceeds current State and Federal Government biodiversity offsetting policies;
- the cumulative impacts of the project had been addressed within the EIS; and
- as the Project will be staged, rehabilitation and restoration works will occur concurrently making impacts of the project negligible.

The Commission, on review of the information submitted by both the Applicant and by submissions, is satisfied that the Applicant has adequately addressed the concerns raised.

The Commission finds that the Project would, subject to the mitigation measures proposed by the Applicant and the conditions recommended by the Department, have an acceptable impact on biodiversity.

The Commission also finds that the proposed adaptive management requirement of Condition 1 Schedule 5 (refer page 17 of this report), provides for the suitable assessment and management of project related risks.

Air Quality

As presented within the EIS, the Applicant undertook modelling of the potential air quality impacts resulting from the project, in accordance with the SEAR. The modelling results confirmed that when mitigation measures were applied, the impacts would meet the regulatory criteria. The Department's Preliminary Assessment Report stated that *'the Department and the EPA are satisfied that air quality predictions are a conservative and robust representation of the dust impacts from the project'*.

The Commission received submissions raising concerns with the assessment of air quality impacts presented by the Applicant, suggesting that the accuracy and validity of the Applicant's air quality modelling and assessment was questionable.

The Commission consulted the EPA to confirm the accuracy and validity of the Applicant's findings and is satisfied that, based on the information provided, the air quality assessment is accurate and valid in relation to the current standards.

The Commission also reviewed the additional information submitted by the Applicant in response to submissions and acknowledges that whilst the Project will result in an air quality impact, such impacts comply with the standards set within the Mining SEPP in relation to cumulative air quality for private dwellings. The Commission also notes that the EPA is satisfied that air quality impacts on humans are acceptable.

The Commission finds that the Project would, subject to the mitigations measures proposed by the Applicant and the conditions recommended by the Department, have an acceptable impact on air quality and comply with the relevant non-discretionary development standards for mining prescribed by clause 12AB of the Mining SEPP.

The Commission also finds that the proposed adaptive management requirement of Condition 1 Schedule 5 (refer page 17 of this report), provides for the suitable assessment and management of project related risks.

The Commission has separately considered the impacts of dust on equine health and the resulting effect that may have on economic and social impacts in the locality.

Noise and Vibration

The Applicant undertook an impact assessment that accompanied its EIS. The modelling predicted that noise and vibration levels for construction and operation, when mitigation measures were applied, would not exceed any of the regulatory amenity noise criteria. The Department's report assessed that the Applicant *'has implemented a range of reasonable and feasible mitigation measures to avoid or minimise the air, noise and blasting impacts from the project'*.

The Commission received submissions raising concerns with the assessment of blast noise and vibration impacts presented by the Applicant, suggesting that:

- regulatory noise limits would be exceeded;
- noise and blast modelling has not been validated for local conditions;
- noise source data and plots are incomplete; and
- the EIS does not provide the confidence or transparency expected against "best practice" methodologies.

The Applicant's response concluded that:

- the EIS contained significant assessment of blasting impacts;
- the only receivers within the area that would record noise exceedances are to the north of the existing Drayton mine; and
- EPA have confirmed that blasting will meet relevant criteria at all privately owned residences and heritage structures.

The Commission has reviewed the information submitted by the Applicant and is satisfied that it has adequately addressed the concerns raised, relative to the standards. The Commission acknowledges that whilst the Project will result in noise and vibration impacts, such impacts comply with the respective applicable standards.

The Commission finds that the Project would, subject to the mitigation measures proposed by the Applicant and the conditions recommended by the Department, have acceptable noise and vibration impacts and comply with the relevant non-discretionary development standards for mining prescribed by clause 12AB of the Mining SEPP.

The Commission also finds that the proposed adaptive management requirement of Condition 1 Schedule 5 (refer page 17 of this report), provides for the suitable assessment and management of project related risks.

The Commission has separately considered the impacts of blast noise on equine operations and the resulting effect that may have on economic and social impacts in the locality.

Lighting

The Commission received submissions raising concerns with lighting impacts from the Project, particularly in relation to increases in uncontrolled light exposure on nearby properties with potential negative impacts for their operations.

The Applicant's response concluded that the mine will have little fixed infrastructure, which is the main source of light emissions, and that the existing infrastructure at the Drayton mine (when it was operating) and Mt Arthur were likely to have had a greater impact than any light emissions resulting from the Project.

The Commission acknowledges that whilst the Project will result in lighting emissions, such impacts are required to comply with the relevant Australian Standards for light emissions.

The Commission, on review of the information submitted by both the Applicant and by submissions, is satisfied that the Applicant has adequately addressed the concerns raised.

The Commission finds that the Project would result in an acceptable lighting impact, subject to the mitigations measures proposed by the Applicant and the conditions recommended by the Department, including Condition 38 Schedule 3, which requires compliance with the latest version of *Australian Standard AS4282 – Control of Obtrusive Effects of Outdoor Lighting*.

The Commission also finds that the proposed adaptive management requirement of Condition 1 Schedule 5 (refer page 17 of this report), provides for the suitable assessment and management of project related risks.

Visual impacts

The Commission received submissions raising concerns that despite the setback and proposed tree screening, there would still be a direct and indirect visual impact from particular vantage points on nearby properties.

The Applicant's response concluded that a number of mitigation measures have been implemented to reduce visual impacts that included the Project being located behind a number of prominent ridgelines and that tree screening around the perimeter of the Project would further reduce impacts.

The Commission, on review of the information submitted by both the Applicant and by submissions, is satisfied that the Applicant has adequately addressed the concerns raised.

The Commission finds that the Project would, subject to the mitigations measures proposed by the Applicant and the conditions recommended by the Department, have acceptable visual impacts.

The Commission also finds that the proposed adaptive management requirement of Condition 1 Schedule 5 (refer page 17 of this report), provides for the suitable assessment and management of project related risks.

Indigenous Cultural Heritage

The Commission received submissions, including a confidential report, raising concerns with the assessment of indigenous cultural heritage issues within the Project site. The submissions suggested the Project's SEAR have not been fully complied with due to:

- an absence of consultation with the relevant native title group;
- the Burra Charter process had not been followed, with an absence of assessment considering the cultural significance of the region, compatible land use, setting, social and aesthetic values; and
- a program of archaeological test excavation is required and has not been undertaken.

Furthermore, the confidential report noted that the Applicant's indigenous cultural heritage report did not consider the value of, or impacts to, 25 of the 27 cultural heritage aspects that were identified in the confidential report. The key finding of the confidential report was that the Applicant's report does not represent an accurate, comprehensive and adequate assessment of indigenous heritage values, or assessment of the heritage impact to those values.

The confidential report was submitted to OEH for review and confirmed that the information and sources used within the confidential report are credible.

In response to the confidential report and OEH comments the Applicant concluded:

- the Archaeological and Cultural Heritage Impact Assessment for the project was completed in accordance with the SEAR and OEH requirements;
- test excavations are not a must do requirement, and may be required for the purposes of identification;
- test excavations will destroy the original context of a find, and undertaking this work prior to Project approval is considered inappropriate;
- a comprehensive program of archaeological test and salvage excavation has been proposed should the Project be approved;
- consultation with native title groups has been undertaken in accordance with the *Aboriginal Cultural heritage Consultation Requirements for Proponents (DECCW, 2010)*¹⁸;
- a comprehensive background review of Aboriginal archaeological and ethno-historical context of the Hunter Valley region was undertaken to identify the region's cultural significance; and
- appropriate impact assessment had occurred of each of the aspects and places of Aboriginal cultural significance within the Project area and vicinity.

The Commission acknowledges that the Project could result in impacts on indigenous cultural heritage. However, the Commission, on review of the information submitted by the Applicant, OEH and in submissions, is satisfied that the Applicant has adequately addressed the concerns raised, noting that the approach to excavations proposed is consistent with that advocated by OEH and with the guidelines relevant to indigenous heritage assessment.

On this basis, the Commission finds that the Project would, subject to the mitigation measures proposed by the Applicant and the conditions recommended by the Department, have an acceptable impact on indigenous cultural heritage.

¹⁸ Office of Environment and Heritage <http://www.environment.nsw.gov.au/licences/consultation.htm>

The Commission also finds that the proposed adaptive management requirement of Condition 1 Schedule 5 (refer page 17 of this report), provides for the suitable assessment and management of project related risks.

Non-Indigenous cultural heritage

The Commission received submissions raising concerns with the assessment of non-indigenous heritage issues within the Project site which suggested that:

- the existing cultural heritage values assessment is not adequate or comprehensive;
- cultural values and significance should have been assessed prior to any decision; and
- areas of exceptional heritage significance are at risk.

Further advice was sought from OEH and the following comments were received in response:

- the non-indigenous heritage impact assessment submitted with the EIS does not include a rigorous assessment of the significance of the cultural landscape; and
- is not an adequate basis for the assessment of impacts and mitigation measures.

The Commission referred the OEH response to the Department and received the following response:

- it had undertaken a thorough assessment on non-Indigenous heritage in its preliminary Assessment Report;
- it had previously consulted with the Heritage Division on the Project; which did not object, and required that the impacts on cultural landscape should be addressed through the reinstatement of appropriate landscape features in the rehabilitation strategy; and
- the advice provided by OEH to the Commission is contrary to that previously provided to the Department.

In response to OEH comments, the Applicant concluded:

- its response addressed each of the issues raised within OEH's assessment;
- it identified why the non-indigenous heritage impact assessment sufficiently assessed the impacts of the Project and satisfactorily included mitigation measures where possible; and
- the response identified and references a number of sources on how the Applicant had undertaken a thorough assessment in accordance with the relevant legislation and guidelines.

The Commission acknowledges that the Project will result in impacts on non-indigenous cultural heritage.

The Commission, on review of the information submitted by both the Applicant, OEH and by submissions, is satisfied that the Applicant has adequately addressed the concerns raised. The Commission is satisfied the Applicant had responded appropriately to the guidelines relevant to non-indigenous heritage assessment.

The Commission finds that the Project would, subject to the mitigations measures proposed by the Applicant and the conditions recommended by the Department, have an acceptable impact on non-indigenous cultural heritage.

The Commission also finds that the proposed adaptive management requirement of Condition 1 Schedule 5 (refer page 17 of this report), provides for the suitable assessment and management of project related risks.

ECONOMIC IMPACTS

The Commission considers that dust and blast noise resulting from the Project is likely to affect thoroughbred breeding operations within the vicinity of the Project. These environmental factors would lead to operational and reputational risk for Coolmore and Godolphin with flow on economic impacts having significant consequences for the continuing development of the equine CIC in the locality.

Impacts on Coolmore and Godolphin

The Department's assessment and submissions by the Applicant conclude that the Project will not have significant impacts on the operations of Coolmore and Godolphin and that, subject to the Department's recommended draft conditions and use of adaptive management, the two land uses would remain compatible.

However the Commission considers that the key impacts on the operations of Coolmore and Godolphin that would arise from an open cut mine in such close proximity as that proposed by the Project relate to:

- air quality;
- blast noise; and
- reputation.

The Commission is cognisant of the relationship of Coolmore and Godolphin to the sustainability of the equine CIC. This was reinforced to the Commission in a number of submissions from a range of horse owners, businesses and competitors who identified how their businesses and investments would be impacted should Coolmore and Godolphin's operations be limited.

The Commission is persuaded by the evidence provided in submissions. The Commission finds that due to their national and international importance, an interdependence and reliance on Coolmore and Godolphin has developed within the equine CIC. Consequently, impacts on Coolmore and Godolphin are likely to result in impacts in the locality and specifically on the sustainability of the equine CIC.

Effects of dust on thoroughbred equine health

The Applicant's EIS included an assessment of the potential effects from dust on the equine health on horses at Coolmore and Godolphin. The Applicant submitted information from Dr Nicholas Kannegieter on equine health effects, which was subsequently peer reviewed by Associate Professor Kristopher Hughes. The Applicant's assessment concluded:

- There would be no adverse effects on equine health;
- Appropriate worst case cumulative modelling of air quality undertaken for the Project predicts no exceedances of the relevant criteria;
- Threshold levels of dust respiratory impacts for horses in pasture are significantly higher than any predicted dust levels at Coolmore and Godolphin;
- The Equine literature review shows respirable dust levels in pasture of 80 – 170µg/m³ to be normal;
- There will be no increase in annual average PM₁₀ levels at Godolphin and only an increase of 2µg/m³ at Coolmore which '*would be considered negligible and have no detectable effect on horse health*' and that '*this level of predicted impact is indiscernible*';

- maximum average 24 hour PM_{10} contributions from the project at Coolmore and Godolphin are predicted to be 10 – 25 PM_{10} with no risk to horses when combined with background levels;
- short term increases in dust levels well above those predicted would be well handled by horses at the studs and any dust inhaled would be rapidly cleared with no adverse impacts; and
- Edinglassie is cited as providing certainty to the conclusions that there will be no adverse effects on equine health.

The Department's Final Assessment Report concludes that the Project could operate to meet all relevant criteria and *considers that the criteria established to protect human health and natural resources (as well as guidelines and policy specifically established to manage a wide variety of land use conflicts) are sufficient to assess and manage these impacts*'.

However, the Commission notes that there is no definitive information that human health criteria would also protect equine health especially elite racehorses associated with thoroughbred operations and that it received submissions containing evidence suggesting otherwise.

The Commission received submissions from Dr Tennent-Brown, Dr Hodgson and the Scone Equine Hospital raising concerns that reduction in air quality / increase in dust could have a significant effect on equine health. Specifically that:

- there is a direct correlation between a horse's lung capacity and its potential race performance;
- the equine respiratory tract is sensitive to particulate matter and particulate matter can weaken respiratory defence mechanisms and increase the risk of respiratory disease, particularly in young horses;
- minor impediment of respiratory function will adversely affect a horse's ability to compete at a top level;
- increased levels of horse trachea mucus are associated with short term overnight elevated levels of PM_{10} and reduced racing performance;
- horses are more susceptible than humans to particulate matter because dust settles on the surface of pastures and the resting particulate matter is disturbed by the horse in the process of grazing;
- evidence based maximum levels of airborne particulate matters in pastures for horse respiratory health and thoroughbred racing performance has not been established, although, recent studies indicate PM_{10} levels, similar to those predicted within the EIS at Coolmore and Godolphin, can lead to increases in trachea mucus;
- the information provided by the Applicant on threshold levels of dust in pastures are based on limited studies from winter pastures in Scotland, are not representative of Australian pastures and do not examine the effects of these levels of dust on equine respiratory function;
- the EIS literature review is deficient, omitting relevant and recently published studies that found adverse effects on equine respiratory tract function in response to lower levels of dust than that reported in the EIS;
- the way in which the air quality modelling data measures averages, where the 24 hour PM_{10} cumulative levels do not reflect peak levels of particulate matter that horses in pasture would be experiencing over a 24 hour period;
- no evidence is presented on how horses are monitored at Edinglassie stud, what studies have been conducted to establish the equine health at the stud and no diagnostic basis to justify that there is no adverse equine health impact;
- adaptive management methods cannot address the practical challenge of monitoring horse respiratory function;

- once Project related elevated dust levels are confirmed by monitoring, it would be too late to adapt Project operations, because the effects on the horses would have already occurred;
- the conclusions made by the Applicant that there will be no impact on the equine health cannot be validated by the evidence presented in the EIS and there is no conclusive information presented to determine that the Project does not pose a risk to equine health; and
- the impacts on equine health from dust effects is exacerbated by the nature of horse breeding and racing which requires a significant lead time, measured in years, to establish the racing performance of the horses.

The Applicant's response to submissions states that Dr Kannegieter '*prepared an Equine Health Impact Assessment as part of the EIS... his assessment definitively demonstrated the Project will not pose any risk to equine health at either Coolmore or [Godolphin]*'. Furthermore, the Applicant identified that '*the evidence is conclusive and as such equine health cannot be considered a relevant consideration*'.

The Commission has been presented with a range of competing arguments on the relationship between air quality, equine health and performance. The Applicant provides expert opinion indicating that there is no risk to equine health. Conversely other experts have provided submissions with published research and competing testimonies in submissions that significant impacts on equine health, standing and operations at Coolmore and Godolphin cannot be definitively ruled out and poses a likely risk of deleterious effects to equine health and racing performance.

The Scone Equine Hospital submission states that '*both the Kentucky USE and Newmarket US equine clusters are recognised and protected from the incursion of incompatible land uses*'. The Commission acknowledges that globally there is no precedent for determining the impacts on thoroughbreds as Newmarket in the UK and Kentucky in the US have implemented controls around their thoroughbred clusters to prevent such scenarios from presenting.

The Commission is persuaded by the evidence provided in submissions including those outlined above. The Commission finds that an increase in dust, or reduction in air quality, as predicted to occur by the Applicant's EIS will pose a likely risk to equine health.

Adaptive Management of Dust Effects

In relation to the evaluation of impacts on Coolmore and Godolphin, the Commission has considered the conditions and application of adaptive management as recommended by the Department on an impact by impact basis (refer page 17 of this report).

The guiding aim is to ensure that harmful effects are eliminated or adequately minimised over the life of the Project. This is to be achieved by adapting and implementing management procedures while at the same time, based on monitoring, learning about which management actions are most effective to meet specified objectives.

The consideration of adaptive management is important in the determination of the Project, as it allows the consent authority to give appropriate consideration to the predicted impacts, risks and uncertainty and the likely effectiveness of proposed mitigation strategies, relevant to performance criteria. To achieve the objectives of adaptive management, the project operator is required to operate in a state of constant monitoring and continuous process improvement to ensure that harmful impacts are eliminated or minimised.

The Commission, in considering if adaptive management could mitigate harmful air quality effects on the operations of Coolmore and Godolphin, has reviewed the information provided by the Applicant, in submissions and in the Department's recommendations. The Commission acknowledges the different arguments presented.

The Applicant proposes to implement best practice controls that are now widely applied in Hunter Valley open cut coal mines. Specifically, the mitigation measures include:

- *'in known or suspected high dust areas, production processes will be modified to ensure effective management of visible dust levels'*;
- *'real time monitoring of air quality emissions'*; and
- *'implementation of available measures to keep visible dust as low as possible from offsite at all times'*.

Submissions note the threshold level of dust and duration of exposure required to cause respiratory disease in horses is unknown and that short duration elevated dust levels in pasture within a 24 hour period, could be harmful to horses. Argument is also presented in submissions challenging the validity of methodologies used to predict and measure air quality that may be harmful to horses and conclude they are inadequate when attempting to quantify the dust effects on horse respiratory tracts. Effective monitoring would also most likely require each horse to be fitted with monitoring apparatus.

The Commission notes that the best practice dust controls for open cut coal mining have not been developed specifically for the protection of thoroughbred operations and that the Applicant's proposed mitigation measures reflect this. As a consequence, the Commission finds that there remains considerable doubt as to the capacity of the Project to meet the aims of adaptive management as applied to thoroughbred operations, in order to uphold the conclusions of the EIS that *'there will be no increase in risk to foals or yearlings from disease or from the physical impact of dust inhalation as a result of the Project'*¹⁹.

The Commission is also cognisant of the challenge in the provision of effective real time monitoring techniques that could detect pasture dust levels relevant to equine respiratory function, particularly at a stud wide operational scale.

The Commission concludes that effective operational scale real time monitoring of thoroughbred pasture dust levels over the life of the Project would be difficult to implement and disruptive to the thoroughbred operations. Furthermore, monitoring results are only available 'after the fact', with identification of effects and implementation of Project adaptive measures, too late to redress any equine harm. This lag effect between monitoring, impact identification and adaptive management measures on equine health from dust effects is exacerbated by the uncertainty of threshold harm levels and the nature of horse breeding and racing which requires a significant lead time, measured in years, to establish the racing performance and any long term impacts on the horses.

For these reasons, the Commission finds that adaptive management would not be an effective mitigation measure that could protect the thoroughbred operations of Coolmore and Godolphin from harmful dust effects.

The Commission is persuaded by the substantial and credible body of technical evidence presented in submissions that challenges and refutes the Applicant's conclusions that there will be no adverse impact from dust on equine health.

¹⁹ Applicant's Environmental Impact Statement Main Report

The Commission finds that the possibility of adverse dust effects on equine health would have a likely detrimental effect on the operations of Coolmore and Godolphin (including reputational risk – refer **Section 4.2.2**) with likely flow-on adverse economic impacts to the equine CIC in the locality.

Effects of Blast Noise on Equine Operations

The Applicant undertook an acoustic assessment during preparation of the EIS. The findings of the acoustic assessment were taken into consideration when reviewing the equine health effects. The Applicant's EIS identifies that the Project will be within the acceptable criteria for noise, is not predicted to exceed existing background levels at Coolmore and Godolphin and will therefore have no effect on equine health. However, the Commission notes that the EIS identifies that the worst case modelled blasting noise impact at either Coolmore or Godolphin which is predicted at 98dBL to 105dBL respectively.

The Applicant's response to submission to the Department, prepared by Dr Kannegieter, found that:

- *'equine hearing is similar to humans although less sensitive with horses hearing approximately 15 dBA less sensitive than humans. It is reasonable to conclude that human guidelines regarding noise will be relevant';* and
- *'given that noise levels are not predicted to exceed existing background levels, noise levels from the project will not impact equine populations on Coolmore and Godolphin owned land. As a result, noise from blasting or mine operations will not induce a flight response for horses'.*

The Commission received submissions stating that increases in blast noise effects could have a significant effect on equine operations. Specifically that:

- as a consequence of blasting, noise will startle horses and could result in them bolting with injury to themselves as they try to flee pastures;
- a startle reaction during the covering process could put handlers and horses at risk;
- the resultant impacts of blasting could have a detrimental impact on covering operations and hence the viability of the location for thoroughbred horse breeding; and
- covering activities would be abandoned during blasting periods as it poses an unacceptable risk to both horses and staff.

Coolmore made a submission to the Department identifying that *'the covering process presents one of the most sensitive, unpredictable and high risk activities undertaken on the farm. Given the intensity of this process in which timing is critical, it would be impossible to adapt our operating procedures to blasting and other impacts'*. Coolmore has stated that the risk to a handler or horse, from a startled horse during a cover is considerable and that covering would not occur during blasting. The need to suspend covering schedules due to the high risk further emphasises the doubt that adaptive management could mitigate effects.

The Commission also received a submission from Godolphin, prepared by ARUP, which contained a review of the noise assessment undertaken by the Applicant. That review found that:

- *'the noise and blast assessment contained insufficient information to accurately assess the impact of the Project to the surrounding community';*
- *'inconsistencies existed within the EIS, and that blasting standards for humans does not equate to, or negate the potential impacts on the equine industry';* and
- *'there remains a high risk that blasting operations will significantly impact equine operations at Coolmore and Godolphin, and that there is insufficient evidence to rule out potential impacts on equine health'.*

The Commission has been presented with a range of competing arguments, on the relationship between blast noise effects and equine health impacts due to potential injury, as well as risks to the operations of Coolmore and Godolphin.

The Department's Final Assessment Report determined that *'the criteria established to protect human health and natural resources (as well as guidelines and policy specifically established to manage a wide variety of land use conflicts) are sufficient to assess and manage these impacts'*. The Department concluded that the mitigation and management measures proposed by the Applicant are sufficient to allow Coolmore and [Godolphin] to operate successfully.

The Department has proposed conditions for the establishment of a consultative committee between Coolmore, Godolphin and the Applicant to manage matters such as the logistics around blasting in the cover season. However, the Commission notes information presented in submissions that the covering operations of standing stallions are carefully scheduled within a narrow breeding season each year, have limited flexibility and are logistically complex. The Commission considers that cancelling or postponing these operations is not considered a viable option²⁰. Equally the blasting operations of the mine are sensitive to climate conditions and have limited flexibility due to impacts on production schedules and it would not be feasible to either guarantee the timing of each blast or cancel blasting for the entire cover season each year.

Information within the EIS related to the frequency of lightning strikes within the vicinity of the Project also identified that such strikes occur on a number of occasions across the Project site and at Coolmore and Godolphin. Lightning strikes range from 120 decibels (dBL) to 130 dBL, which is significantly greater than the worst case modelled blasting noise impact at either Coolmore or Godolphin, which is predicted at 98dBL to 105dBL respectively.

The Applicant states that if Coolmore and Godolphin can withstand lightning strikes, then blasting should not cause any further impacts to the operations.

Coolmore and Godolphin informed the Commission that lightning strikes are currently the most dangerous time to be in paddocks with horses as they often startle, flee and potentially injure themselves. Coolmore and Godolphin also advised that they amend the covering schedules when metrological events are predicted to present a likelihood of lightning strikes due to risks of injury to staff and the horses themselves.

Neither the Applicant nor the Department address the potential for cumulative blast noise effects relating to thunderstorm activity combined with the proposed blast program. In this instance the cumulative effect relates to the increase in days / time when covering cannot be conducted. The potential for cumulative effects are exacerbated by the narrow cover season for breeding which also coincides with spring thunderstorm activity.

The Commission is persuaded by the evidence provided in submissions including those outlined above. The Commission finds that an increase in blast noise, as predicted to occur by the Applicant's EIS will pose a likely risk to equine operations.

²⁰ The covering period has a precisely defined window in Spring. Due to the timing of yearling sales, the duration of the gestation period (roughly 11 months) and the importance of horses being born after the Southern Hemisphere's 'horse's birthday' (1 August).

Adaptive Management of Blast Noise Effects

In relation to the evaluation of impacts on Coolmore and Godolphin, the Commission has considered the conditions and application of adaptive management as recommended by the Department on an impact by impact basis (refer page 17 of this report).

The guiding aim is to ensure that harmful effects are eliminated or adequately minimised over the life of the Project. This is to be achieved by adapting and implementing management procedures while at the same time, based on monitoring, learning about which management actions are most effective to meet specified objectives.

The consideration of adaptive management is important in the determination of the Project, as it allows the consent authority to give appropriate consideration to the predicted effects, risks and uncertainty and the likely effectiveness of proposed mitigation strategies, relevant to performance criteria. To achieve the objectives of adaptive management, the Project operator is required to operate in a state of constant monitoring and continuous process improvement to ensure that harmful impacts are eliminated or minimised.

The Commission, in considering if adaptive management could mitigate the potentially harmful blast noise effects on the operations of Coolmore and Godolphin, has reviewed the information provided by the Applicant, in submissions and in the Department's recommendations. The Commission acknowledges the different arguments presented.

The Applicant proposes to implement best practice controls that are now widely applied in Hunter Valley open cut coal mines. Specifically, the key relevant mitigation measures include:

- *'A blast monitoring program which is representative of the closest sensitive receptors to ensure compliance with the relevant blast criteria';*
- *'Coordination of blasting schedules with adjoining mines to avoid any potential for simultaneous blast events';*
- *'Notification of blast events to sensitive receptors upon request and on the [Applicant] website prior to the blast event and establishment of appropriate signage, if required'; and*
- *'Blast events will be designed and conducted at a time of day to meet the relevant overpressure and ground vibration criteria'.*

The Commission has considered if adaptive management could mitigate the potential blast noise effects on Coolmore and Godolphin. The Commission notes that the best practice blasting controls for open cut coal mining have not been developed specifically for the protection of thoroughbred operations and that the Applicant's proposed mitigation measures reflect this.

The Commission accepts the evidence provided in the submissions that in addition to natural thunderstorm activity, blast noise represents a real risk to both the success of covering operations and the safety of the horse handlers. Due to the operational requirements of blasting to be conducted on a frequent and regular basis and the limited season available for covering, the Commission finds that there remains considerable doubt as to the capacity of the Project to meet the aims of adaptive management as applied to thoroughbred operations, in order to uphold the conclusions of the EIS of no blasting effects on equine operations.

The Commission concludes that effective operational scale real time monitoring of blast noise levels over the life of the Project would be possible to implement. However, monitoring results are only available 'after the fact', with identification of effects and implementation of Project adaptive measures severely constrained by the immediate operational needs of both enterprises. Such operational imperatives are likely to render the normal process of adaptive management ineffective, being too late to redress any equine harm. This lag effect between monitoring, impact identification and adaptive management measures on equine operations from noise effects is exacerbated by the uncertainty of threshold harm levels and inability of the Project to guarantee the precise timing of each blast in advance.

For these reasons, the Commission finds that adaptive management would not be an effective mitigation measure that could protect the thoroughbred operations of Coolmore and Godolphin from noise effects.

The Commission is persuaded by the evidence presented in submissions that challenges and refutes the Applicant's conclusions that there will be no adverse impact from blast noise on equine operations.

The Commission finds that the possibility of adverse blast noise effects on equine operations would have a likely detrimental effect on the operations of Coolmore and Godolphin (including reputational risk – refer **Section 4.2.2**) with likely flow on adverse impacts to the equine CIC in the locality.

Reputational Impacts

Reputation is defined as *a widespread belief that someone or something has a particular characteristic*²¹. A positive reputation is important to a business enterprise, takes time to build and will generally contribute to its competitive edge and will influence stakeholder and customer trust in the quality of services or products. Conversely, a negative reputation can manifest very quickly to disrupt and damage a business.

The Department of Primary Industries in June 2013, identified the Upper Hunter's historic national and international reputation as being critical to the region's marketing success and to the future of the equine industry²². The Department in its assessment report notes that the *Hunter Valley thoroughbred industry is significant at the regional, State, national and international level (and that) this is one of the fundamental reasons the equine industry is recognised as a critical industry cluster in the Department's Upper Hunter Regional Land Use Plan*'.

The Commission accepts that Coolmore and Godolphin have built national and international reputations as equine industry leaders and are integral players in the Hunter Valley Equine CIC. The Commission received submissions that Coolmore and Godolphin's reputations are linked to the exceptional quality of the thoroughbred horses they supply or service and their sustained ability to produce high performing progeny.

Submissions also pointed to the link between the reputation of both Coolmore and Godolphin and their ability to provide horses with the best possible environmental conditions, including high quality pastures and associated infrastructure, from conception through to the rearing and maturing of foals.

²¹ Oxford dictionary

²² Upper Hunter Equine Profile - <http://www.dpi.nsw.gov.au>

The equine industry, including thoroughbred owners, raised concerns that:

- the potential impacts of the future performance of a race horse due to environmental impacts would heavily weigh on their decision making;
- if the Project were to proceed, they would move their assets /investments / stock away from Coolmore and Godolphin to a location of lesser risk; and
- the extent of studies prepared for the Project have highlighted the environmental risk of the Project to the wider equine community.

In their own submissions to the Commission, Coolmore and Godolphin acknowledge that:

- their proximity to the mine would impact on their capacity to continue to produce the highest quality thoroughbred horses;
- their reputation is built on their proven ability to deliver high quality services;
- their clients are attracted to and derive confidence from these services and the associated facilities;
- they believe their business operations would be impacted by clients questioning how high quality services could be delivered within the vicinity of the Project; and
- should the Project be approved, they would have no other option but to relocate outside of the Hunter Valley.

On behalf of the Applicant, Mr Houston prepared supplementary material for the Commission stating that:

- other broodmare farms, similar to Godolphin, operate successfully in close proximity to mines;
- open cut coal mining operations already occur within 5km of Coolmore (at the Hunter Valley Operations open cut); and
- coal mining is already generally apparent to visitors to the locality.

In support of their position, the Applicant also cites Edinglassie as an example of how a thoroughbred operation can be successful within close proximity to an open cut mine (refer page 40 of this report).

The Commission had regard to the Department's assessment of the likelihood or otherwise of Coolmore and Godolphin leaving the Hunter Valley because of (among other things) diminished '*brandscape of the stud operations*' due to the Project's impacts on image and visual presentation. Having visited the vicinity and had regard to submissions on the visual assessment, the Commission does not consider that the Project's impact on the visual setting of Coolmore and Godolphin is the key factor related to reputational risk for the studs (refer **Section 4.2.2**)

The Commission recognises that business reputation is built over long periods of time and is sustained by continuing consumer confidence in services or product. The Commission agrees with submissions that the nature of thoroughbred operations, including owners' desire to maximise race performance and protect their investments, is such that the reputations of Coolmore and Godolphin in the Hunter Valley, as a producers of winning race horses, would be damaged due to the proximity of the Project. The Commission considers that this derives from the possible negative impacts on equine health and operations from the Project (as described previously in this section) and that this is likely to result in reputational risk for Coolmore and Godolphin with likely flow-on adverse effects for the equine CIC in the locality.

The Commission also notes that given the competitive nature of horse racing, thoroughbred owners are likely to choose to protect their investments by placing their horses with other studs not located in the vicinity of mining operations. Due to the likely negative business impacts, the Commission finds it then follows that there is a real risk that Coolmore and Godolphin would seek to protect their reputation and business interests by leaving the Hunter Valley.

The Commission is persuaded by the evidence provided in submissions including those outlined above. The Commission finds that reputational damage poses a likely risk to Coolmore and Godolphin's business reputation and operations with consequent negative flow-on impacts for the sustainability of the Equine CIC in the Hunter Valley.

Applicant's horse agistment program

The Applicant undertook its own horse agistment on land within close proximity to Drayton's existing mining operations and presented information detailing the findings to the Commission. The Applicant sought to use the following findings as justification to how thoroughbred horses and mining can coexist in close proximity:

- there was no signs or symptoms of discomfort, restlessness or injury within any of the horses;
- horse conditions and growth had not been negatively impacted in any way;
- monitoring of grass feed in the paddock has shown sustainable pastures with no requirement to supplement feed;
- horses did not try to escape; and
- there was no significant change in species composition or abundance in vegetation.

The Commission found the Applicant's study was limited as there is no evidence presented of studies to assess supervised covers during blasting and no evidence presented of any a technical diagnostic program based on published standards, to monitor and assess horse respiratory tract conditions and function, relative to dust exposure.

The Commission is persuaded by the evidence provided in submissions. The Commission finds that the Applicant's study was not comparable to the type and nature of the operations and horses located at Coolmore and Godolphin, including an absence of a covering program, or adoption of scientific analysis and therefore concludes that the study is not of a comprehensive or conclusive standard to be given any weight as substantive evidence.

Impacts on the Upper Hunter equine Critical Industry Cluster

The Commission received submissions raising concerns that should the relocation of Coolmore and Godolphin out of the Hunter Valley occur, there would be significant knock on effects felt within the locality and specifically on the equine CIC, particularly in regard to the potential loss of employment within equine industries due to the decline and relocation of the equine CIC

The Applicant addressed the potential impact of Coolmore and/or Godolphin choosing to leave the Hunter Valley. The Applicant concluded that despite Coolmore and Godolphin's departure, the fundamental attractive features of the locality for the thoroughbred industry would remain, that being:

- *'it is close to major ports and markets (in particular Sydney)';*
- *'it has the best reputation of any thoroughbred breeding area in the southern hemisphere';*
- *'it has a large number of high quality service providers that are required by the thoroughbred breeding industry';* and
- *'It has an ideal environment for breeding thoroughbreds, including a temperate climate, protected aspect and varied terrain combined with a lack of tropical diseases. The resultant moderate climate, low risk of pests and diseases, topography, and reliable irrigation options are ideal for producing premium quality horses'.*

The Applicant also argues that if Coolmore and/or Godolphin were to depart, it would create an excellent opportunity for a new entrant as there would be an excess supply of broodmares.

Many of the submissions received were from a number of equine industries that identified their interdependence and reliance on Coolmore and Godolphin for the future of their business and the significant role that both play in maintaining and developing the equine CIC. These operators contribute to, benefit from, and are dependent on the conglomeration of the equine CIC and the proximity to Coolmore and Godolphin. A number of allied businesses including equine health, equine research and development, equine legal, bloodstock agents, farriers, feed suppliers, feed producers and various trades have developed as a result of being part of the equine CIC.

The economic importance of Coolmore and Godolphin (refer **Section 1.4.2**) to the equine CIC was further demonstrated in industry submissions including advice that if both left, the three biggest competing studs would need to stand six additional stallions each²³ and the lost stallions would be of a pedigree that is not easily replaced. The HTBA, as the peak industry body representing stallion farms, broodmare farms, the Scone Equine Hospital and a network of supporting industries, recognise Coolmore and Godolphin as the epicentre of the Hunter Valley thoroughbred industry.

The Scone Equine Hospital is an example of one organisation that has been provided with increased business opportunity as a result of the equine CIC's expansion becoming the largest veterinary practice in the southern hemisphere. The Scone Equine Hospital's veterinary program and research initiatives have developed as a result of the success of the equine CIC and it advises that its future in the Hunter Valley is tied to the continuing development of the thoroughbred breeding industry in the locality.

Many of the submissions received by the Commission speculate on the potential flow-on effects should Coolmore and Godolphin relocate from the Hunter Valley, and include the following concerns:

- there would be an immediate decline in the quality of high end stallions and mares;
- a number of the ancillary support industries would gradually relocate and follow these operators, or suffer a decline in business; and
- it would lead to the demise of the equine CIC in the Hunter Valley.

The Applicant's response to submissions identified that their position remains unchanged. The Applicant perceives that the structural threat to the CIC is *'minimal or non-existent and there is no reasonable basis to conclude that the Upper Hunter equine CIC would be under threat or at risk of collapse from the Project'*.

Currently coal mining and equine operations co-exist in the Hunter and in the South Drayton area. Submissions on this Project by the thoroughbred industry are that this co-existence will be tipped out of balance should the Project be approved due to the potential decline of their industry in the region. Fundamental to this position are the potential impacts on the Coolmore and Godolphin operations, both of which are considered by the industry as central to the success and sustainability of the Upper Hunter equine CIC.

The Commission considers that a unique set of circumstances does exist due to the proximity between the Project and Coolmore and Godolphin.

²³ Darryl Guihot submission to the Department. July 2016.

The Commission is persuaded by the evidence provided in submissions. The Commission finds that the consequences of equine health, operational and reputational risk impacts will occur and have a detrimental effects on Coolmore and Godolphin and by extension will have flow-on economic impacts on the locality and within the equine CIC.

Expert Report of Mr Greg Houston of HoustonKemp Economics commissioned by the Applicant

In its response to the 2015 Review Report the Applicant submitted an additional report to address the following matters:

- the likelihood that either Darley Australia’s Woodlands [Godolphin] broodmare farm and its Kelvinside stud near Scone(now both owned by Godolphin) would leave the Upper Hunter if the Drayton South mine proceeded;
- the likelihood that Coolmore would leave the Upper Hunter if the Drayton South mine proceeded; and
- the economic impact on the Equine CIC in the Upper Hunter if either or both of Godolphin or Coolmore were to leave the Upper Hunter.

Mr Houston reached several conclusions, namely:

- *‘on the presumption that [Godolphin] is a rational economic decision-maker, it is extremely unlikely that the proposed mine expansion would cause it to leave the Upper Hunter’;*
- *‘even in the unlikely event that Coolmore left the Upper Hunter, the equine CIC would not be under threat’;* and
- *‘it is even less likely that both Coolmore and [Godolphin] would leave the Upper Hunter. However, the equine CIC would not collapse if they both left the Upper Hunter because it would still be double the current size of the next largest thoroughbred breeding areas in Australia and New Zealand, even before the likely expansion by other, competing stud farms is taken into account’.*

Mr Houston assumed that the two studs are *‘rational economic decision-makers ... likely to act in a way that maximises their profits, particularly given that their rivals will do the same’.*

The Department commissioned Professor Jeff Bennett of the Australian National University to undertake an independent peer review of the report.

In summary, Prof Bennett found that the *‘benefits of agglomeration and the forces of competition are too strong to see the [equine CIC] disbanded, with or without the continued presence of the Studs’.*

Prof Bennett agreed with Mr Houston’s report that:

- there are *‘good profit based reasons’* for Coolmore and Godolphin to not relocate;
- that relocation to an alternative site within the existing CIC would be the *‘second-best outcome in terms of profitability’;* and
- that Mr Houston’s report employed *‘sound economic analysis’* that was reinforced by conceptual principles.

Prof Bennett did acknowledge, however, that *‘...given that the ownership of the Studs is in the hands of high wealth individuals, it could be expected that profit may not be the only or even the primary driver of decisions. The marginal utility of money (profit) to high wealth individuals can be diminished to the point where other factors become more prominent’.*

In response to Mr Houston’s Report, the Commission received submissions that raised a number of concerns with the underlying assumptions and findings of the Report. These are summarised below.

Action of horse owners

Mr Houston's report implies that the owners are indifferent to whether an open cut coal mine is located adjacent to where they purchase equine services and where they choose to locate their valuable equine assets.

The Commission received a number of submissions that claim:

- the properties where Coolmore and Godolphin are located adjacent to the proposed mine would be tainted and perceived as presenting a high risk to investors that the performance of their mares / stallions and/or foals would be adversely affected; and
- investors would seek out properties with a lower risk and/or follow either of the studs should they choose to relocate.

A number of submissions received by the Commission represented the views of horse owners who identified that, if the Project were to proceed, they would move their assets /investments / stock away from Coolmore and Godolphin to a location of lesser risk.

The Commission is persuaded by the evidence provided in submissions. The Commission finds that should the Project proceed, the economic operations of Coolmore and Godolphin would be impacted as owners were likely to consider their options and relocate their assets, if Coolmore and Godolphin remained in their current location and the Project were approved.

Substitutability and shuttle stallions

Mr Houston's report concludes that if Coolmore was to leave the Hunter Valley and take its stallions elsewhere, *'the exit of Coolmore would provide an excellent opportunity for entry by another stud farm'*.

The Commission received submissions identifying that:

- Coolmore could not be substituted by another provider;
- the stallions with the highest pedigree are held in high demand and fetch the highest price for their cover. Within Australia, Coolmore and Godolphin have 12 of the top 22 stallions based in the Hunter Valley;
- there is a finite market of high end stallions available globally and not an excess of supply waiting to be utilised;
- the caliber of stallions, both in pedigree and racing history and the quality of services offered by Coolmore makes it a unique provider) and there are very few operators globally that could fill the gap left by its departure;
- Coolmore and Godolphin are the largest thoroughbred equine breeders within the Hunter Valley and in Australia and their departure could not be substituted by another provider; and
- that the highest quality stallions are typically not shuttled as they are pivotal to stud operations and the risks associated with transportation are not worth the returns.

Mr Houston's report assumes that shuttle stallions could be brought in to fill the gaps left by Coolmore and Godolphin if they relocated from the Upper Hunter. Submissions contest that these statements are not an accurate reflection of how the industry operates and that shuttle stallions are not a viable alternative.

In the Applicant's response to the submissions received by the Commission, Mr Houston states that *'the exodus of stallions would cause a shortage in the Upper Hunter, attracting other stallion owners'*. Mr Houston's response continues to assert that stallion owners would respond to market opportunities if they arose, yet he provides limited evaluation in determining if such stallions, with a suitable pedigree, exist and if the owners of these stallions would consider shuttling to the area.

Submissions to the Commission state that should the Project proceed, the land which is currently occupied by Coolmore and Godolphin would effectively be tainted if they chose to relocate. In effect, should Coolmore or Godolphin submit that their thoroughbred breeding operations would be compromised by remaining on the site, their subsequent departure would render the site as being unattractive for a comparable breeder to pursue developing their own operations on the site.

The Commission is persuaded by the evidence provided in submissions. The Commission finds that should operational or reputational risk result in the departure of either Coolmore or Godolphin from the Hunter Valley, this would hinder any potential operator of notable size and reputation from pursuing the opportunity to replace Coolmore and Godolphin within proximity to the Project. Furthermore, that if Coolmore or Godolphin were to leave their current location, it is unlikely a suitable operation of a similar reputation and scale would present to substitute for the lost operations.

Existing stallions filling the gap

Mr Houston's report concludes that within the equine thoroughbred breeding industry stallions are substitutable for breeding purposes. That is to say, if Coolmore were to exit the Hunter Valley, the shortage of stallions could be filled by other studs increasing the covers undertaken by their stallions.

The Commission received submissions identifying that:

- there is a finite number of stallions globally, let alone within the Hunter Region, with a pedigree that could replicate the stallions and the associated services currently offered by Coolmore/Godolphin;
- the remaining stallions within the Hunter Region would have to cover an unsustainable number of broodmares daily, resulting in a reduction in the libido and long term covering potential of the stallions; and
- relying on the existing stallion population within the Hunter Valley to fill the void left by Coolmore and Godolphin's departure is untenable.

Submissions to the Commission described the importance of pedigree, bloodlines and prior racing performance in making each stallion unique. The Commission acknowledges that Coolmore and Godolphin have a high proportion of the higher quality stallions within the equine CIC. The calibre of stallions retained by Coolmore and Godolphin is demonstrated through their retention of high proportion of the top stallions in Australia.

The Commission is persuaded by the evidence provided in submissions. The Commission finds that if Coolmore or Godolphin were to leave, it is unlikely that existing comparable stallions would be found or available, to fill the void left by those stallions retained at Coolmore and Godolphin.

Stallions follow mares

Mr Houston's report concludes that stallions follow mares and that stallion owners will locate their stallions nearest to the highest concentration of eligible mares to maximise cover profits. He states that *'broodmare owners prefer to choose from many stallions in close proximity'* and that *'stallion owners prefer a large pool of high quality broodmares nearby'*.

Prof Bennett supports Mr Houston's findings noting that he (Houston) does not *'go far enough in recognising the competitive potential in the stallion services supply and the prospect of substitution in the segment of the market currently occupied by the Stud's'*.

The Commission received submissions identifying that:

- stallions locating to be in close proximity to mares is not reflective of the equine industry;
- it is not feasible or economic for stallions to visit each individual mare;
- only 11% of Coolmore's broodmare clients are located within the Hunter Valley. They are largely from foreign owners who locate their broodmares in close proximity to the stallion of their choice;
- to protect high end stallions, a safe, tranquil, quality environment and regular regime are particularly important; and
- owners of mares are aiming to foal a horse with the capacity to win horse races and will follow the stallions for the most desirable covers.

The mobility of the mares was further recognised within the Department's report stating that *'transporting broodmares to be serviced by stallions is common practice and that it is not an obstacle even for pregnant mares to be transported until late in their gestation period'*.

The Applicant's response to submissions, prepared by Mr Houston, states that *'although the equine CIC may reduce in size if Coolmore and [Godolphin] left the Upper Hunter, the equine CIC would not collapse even if all the stallions currently standing at Coolmore and [Godolphin] left in addition to the broodmares they cover'*. Mr Houston considers that the question of stallions following mares versus mares following stallions is immaterial to the outcomes and that the equine CIC *'would not be under threat or at risk of collapse from the project'*.

The Commission recognises the importance of this mare to stallion relationship and that Coolmore and Godolphin are not bound to the Hunter Valley by proximity to broodmare clientele. Broodmare farms and mare owners would also weigh up their own profitability in the long term and decide whether it was worth continuing operations in their current location or to relocate elsewhere closer to quality stallions.

The Commission is persuaded by the evidence provided in submissions. The Commission finds that if Coolmore or Godolphin were to leave, it is likely that a significant proportion of mares, and the industries that support them, would not choose to remain in the Hunter Valley.

Rational vs irrational decision-making

Mr Houston's report concludes that it would be an irrational decision for Coolmore or Godolphin to leave their current location and that as rational economic decision-makers, it would not be in the interest of Coolmore and Godolphin to leave the Hunter Valley.

The Commission received submissions identifying that Mr Houston did not have regard to:

- the international reputation and image of Coolmore and Godolphin;
- the horse owner's expectations and perceptions of the services provided and of the environmental conditions for their assets, and
- the resultant impacts of the Project on Coolmore and Godolphin that would be detrimental to future earning capacity and diminish their reputation.

The Commission has considered submissions which assert that if the Project were approved, Coolmore and Godolphin would relocate their assets to an environment where they could guarantee equine safety and continue to maximise the potential economic return on investment for owners and for the studs.

The Commission considers that as Coolmore represents clients/investor interests and Godolphin represents its own interests, if either considered their business to be at risk, it would be rational for them to relocate. Furthermore, the Commission notes that the barriers to exit facing Coolmore and Godolphin are relatively low, as they have operations in Europe and the United States where they could relocate their horses at relatively short notice or until an alternative location could be found.

The Commission is persuaded by the evidence provided in submissions. The Commission finds that in the context of the thoroughbred industry business model, a decision by Coolmore and Godolphin to move would be rational and based on sound economic principles, which are relevant to their specific operations.

Barriers to entry

Mr Houston's report concludes that if Coolmore was to leave, *'it would provide an excellent opportunity for entry by another stud farm'*. Mr Houston relied partially upon the Australian Competition and Consumer Commission (ACCC) response to Darley's (Godolphin) merger acquisition of Woodlands report in 2008 stating that *'barriers to entry into the national market for breeding thoroughbred horses appear to be relatively low'*.

The Commission received submissions identifying that the barriers to entry for studs comparable to Coolmore and Godolphin are high due to:

- a scarcity of legitimate elite performance stallions;
- the significant capital investment needed to secure such elite performance stallions;
- the lack of substitutability among individual stallions;
- the long lead times to prove stallion performance; and
- and the established international reputation of Coolmore and Godolphin.

The Commission sought clarification from the ACCC on the context of its statement regarding low barriers to entry into the thoroughbred horse breeding industry. The ACCC confirmed that:

- low barriers to entry were in reference to thoroughbred breeding generally and *'did not relate specifically to new entry in the Hunter Valley area or to the costs of replicating any particular horse stud'*;
- *'there is significant risk associated with breeding thoroughbred horses ... potential entry with stallions at the highest possible quality level may involve high risks... these risks may deter actual market entry'*; and
- its conclusions were made in 2008, and *'2008 conclusions in relation to market definition and barriers to entry will not necessarily be the same'*.

The Commission provided the ACCC advice to the Applicant who subsequently referred the matter to Mr Houston for a response. Mr Houston advised the Commission that the 2008 matter and the current matter before the Commission are contextually different and that this has implications for drawing inferences from one context to another.

The Commission finds that the views of the ACCC, that there are low barriers into the equine thoroughbred breeding industry, are being quoted out of context by Mr Houston and the Applicant and that the barriers to entry to replicate an operation of the scale of Coolmore or Godolphin are high when considered in the context of the premium end of the thoroughbred equine market.

Edinglassie Thoroughbred Stud

Edinglassie is cited by the Applicant as an example of successful co-existence between mining and the equine industry as it is located directly between two large open cut mines, namely, the Mt Arthur and the Bengalla mines. The Applicant has relied on the Edinglassie Stud as a precedent for how coexistence between mining and thoroughbred horse operations may occur within close proximity of each other without adversarial equine impacts. Edinglassie has also been referenced in the economic analysis to demonstrate how horses reared within close proximity to an open cut coal mine can still fetch high sale values.

Submissions to the Commission from the industry dispute Edinglassie as a reliable benchmark. Noting that its operations and cluster position are substantially different to that of Coolmore and Godolphin, noting that it is primarily a broodmare farm and does not stand stallions²⁴. No submissions or information have been presented which provide any environmental monitoring results or details of any related research program addressing equine health from Edinglassie. The Commission's request for a briefing with Edinglassie was declined. As the Commission has received several competing testimonies and is unable to confirm the potential impacts of the Mt Arthur mine on the operations of Edinglassie, it has not relied on it in its determination of the application.

SOCIAL IMPACTS

Submissions to the Commission raise both the potential negative and positive social impacts that may arise from the Project. The Commission notes that the primary social impacts flow from the potential employment generated by the Project, estimated at 500 employees, and the potential loss of employment associated with the decline of the equine CIC should the Project proceed.

The Commission acknowledges that many of the social impacts are considered a by-product of the economic impacts considered likely to occur should the Project proceed. The Commission also notes that the Project would continue to provide wider social benefit through:

- employing up to 500 employees and 984 indirect jobs;
- \$355,000 per year to Muswellbrook Shire Council for local infrastructure and community enhancement;
- economic flow on benefits to a number of associated industries;
- \$233 million in mining royalty to the NSW Government; and
- \$93 million in company tax to the Commonwealth Government.

The Applicant's EIS concluded that *"the Project will benefit the local community by securing the long term employment of up to 500 personnel, providing much needed employment in an area that is currently experiencing a major downturn²⁵".*

²⁴ Edinglassie Thoroughbred Stud <http://www.edinglassie.net.au/>

²⁵ Since the submission of the EIS the existing Drayton Mine operations ceased in October 2016.

In the Department's Preliminary and Final Assessment Reports, the Department has concluded that the Project would provide major social benefits to the region. The Commission notes that the Department's reports appear to contain their assessment of social impacts purely to the economic benefits of the Project, and does not recognise the existence of potential negative social impacts.

The evidence provided in submissions and within the EIS persuades the Commission to form the view that the potential social impact is directly linked to final economic outcome. In this regard the Commission acknowledges that should the Project be approved there is the potential social benefit of approximately 500 mine employees and flow-on benefits to mining support industries. Countering this is the extent of potential employment losses and social consequences associated with the decline of the equine CIC.

The Commission finds there will be a decline in the equine CIC should the Project proceed. The consequences would be a less diversified and less sustainable economy in the Hunter Valley, with skilled equine workers and their families relocating to other centres to gain employment. Links to university research institutes would diminish and many other equine support industries would either decline or relocate, with social consequences for the locality.

Conclusions on economic and social impacts

Having taken into consideration information submitted by the Applicant and the submissions received in the determination of the Project, the Commission finds there will be likely adverse economic and social impacts should the Project proceed. These impacts are derived from the likely impacts of dust and blast noise on equine health and on the operations and reputation of Coolmore and Godolphin.

The Commission does not accept the view presented by the Applicant and the Department that the Project would have no negative impact on the operations and reputations of Coolmore and Godolphin. The Commission finds that there will be negative impacts on Coolmore and Godolphin, with flow-on economic and social impacts to the equine CIC in the locality.

4.2.3 s79C 1(c) the suitability of the site for the development,

The Commission notes the presence of coal ore beneath the surface of the Project site and that coal mining is permissible on the site. The Commission considers these are aspects of the suitability of the site. In considering the suitability of the site for the development, the Commission has had regard to not only the Project site and vicinity, but also to the wider impacts of the Project within the locality.

As addressed within this report, the Commission has considered the compatibility of the Project with the adjoining land uses and nearby operations. The Commission finds that a number of environmental impacts for the purposes of section 79C(1) resulting from the Project are unacceptable due to the proximity of the Project site to the thoroughbred horse operations of Coolmore and Godolphin.

Within this report the Commission found that dust and blast noise from the mine is likely to adversely affect the operations at Coolmore and Godolphin. The incompatibility of the mine would directly impact on the economic performance of Coolmore and Godolphin and on their reputation.

The Commission is persuaded by the evidence provided in submissions. The Commission finds that the site is not suitable for the development due to the negative economic and social impacts likely to arise as a result of the Project on the operations of Coolmore and Godolphin with flow-on impacts to the equine CIC.

4.2.4 79C 1(e) the public interest

In evaluating whether the Project is in the public interest, the Commission has given consideration to both the potential advantages and disadvantages of the Project within the locality. In forming a view on the public interest the Commission considered relevant objectives of the EP&A Act, in particular:

- *Section 5a(i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment; and*
- *(ii) the promotion and co-ordination of the orderly and economic use and development of land.*

In doing so, the Commission considered that the following strategic plans were useful in considering government policy and the public interest:

- *Hunter Regional Plan 2036;*
- *Upper Hunter Strategic Regional Land Use Plan;*
- *Land Use Development Strategy – A guide for Strategic Land Use in the Muswellbrook Shire;*
and
- *Upper Hunter - Land Use Strategy – April 2011.*

The plans provide the following in relation to the future direction of development within the locality:

- *‘Significant and well established agricultural activities need to have confidence that their future in the region is secure and there are opportunities for their industry to develop and grow, particularly as these industries have the potential to continue sustainability well beyond the expected lifespan of most coal mines’ (Upper Hunter Strategic Regional Land Use Plan);*
- *‘A tension exists between the equine and extractive land uses because the aesthetic and visual quality of the surrounding environment is very much a part of a successful equine industry. Mining and other extractive industries have the potential to compromise this and therefore represent a direct threat to the long term sustainability of equine land use activities in the Upper Hunter Valley’ (Land Use Development Strategy – A guide for Strategic Land Use in the Muswellbrook Shire);*
- *‘Protect the Equine Critical Industry Cluster and allow for the expansion of the industry’ (Hunter Regional Plan 2036);*
- *‘This strategy recognises the need to provide opportunities for the expansion of existing facilities and the development of new facilities required for equine industry. Importantly the policy aims to facilitate the establishment of equine uses in areas where opportunities are optimised, and to ensure that these areas are not compromised by the mining industry’ (Land Use Development Strategy – A guide for Strategic Land Use in the Muswellbrook Shire); and*
- *‘The Upper Hunter is recognised for its agricultural diversity and there is growing demand for its beef and other agricultural products. These industries, together with the viticulture and equine sectors, will continue to benefit from the quality of the region’s natural features and systems and the competitive advantages of the Upper Hunter. They will also be able to capitalise on new and emerging opportunities in both the domestic and Asian markets’ (Hunter Regional Plan 2036).*

The Commission finds that the strategic direction for the Hunter Valley, as reflected through the HRP, UHSLURP and local council strategies is that of coexistence and diversification. State and Local Government policies identify the need to balance land use conflict to support the growth of centres, agriculture, viticulture, equine and mining industries. The strategic context for the Hunter Region is that all industries are important, and that no industry should be compromised at the expense of any other.

The Commission noted that the Project would have direct employment benefits estimated at 500 employees and 984 indirect jobs being created within the region. In addition, the NSW Government would receive \$233 million in mining royalty, the Commonwealth Government would receive \$93 million in company tax and Muswellbrook Shire Council would receive \$355,000 annually for local infrastructure and community enhancement. The Project would also deliver economic flow on benefits to a number of associated industries.

Both the coal mining and thoroughbred horse industries have put forward submissions of public benefit of their preferred land use – quantitative and qualitative. Both dispute the other’s submissions on this issue. The Commission agrees that the public benefit of both industries is not insignificant. However, the Commission considers that the public benefit of the equine CIC is sustainable in the long term and is vital to the diversification of the Upper Hunter. The Commission finds that the public benefits of the Project are time limited and not critical to the future of mining in the Upper Hunter.

The Commission is persuaded by the evidence provided in submissions. The Commission finds that the Project has the potential to impact equine health and operations at Coolmore and Godolphin. The Commission finds that these impacts would damage their reputations and business and cause them to relocate, which in turn would have negative flow-on impacts for the sustainability of the equine CIC in the locality.

The Commission has noted the existence of a fine balance between current open cut coal mining and equine operations in the locality. The Commission acknowledges that coal mining and the equine CIC are co-existing at this current point in time. However, the Commission found that the proximity of the Project to Coolmore and Godolphin would tip this relationship out of balance to the detriment, and ultimate decline of the internationally renowned Hunter Valley equine CIC.

The Commission finds that this outcome would be inconsistent with the objectives outlined in strategic plans and policies for the locality (refer **Section 4.2.4**) and is inconsistent with the broader objectives of the EP&A Act.

The Commission finds that on balance the Project is not in the public interest.

5. COMMISSION'S FINDINGS AND DETERMINATION

In exercising the function of determining the application under section 89E of the EP&A Act, the Commission is to undertake such determination by:

- granting consent to the application with such modifications of the proposed development or on such conditions as the Commission may determine; or
- refusing consent to the application.

The Commission has carefully considered matters relevant to the determination of the application. In balancing both the benefits and adverse impacts considered within the report, the Commission determines that:

- the Project would have air quality and blast noise effects on existing land uses in the vicinity of the Project which cannot be avoided or mitigated and for which adaptive management is unsuitable;
- the Project would have unacceptable negative economic and social impacts in the locality;
- in light of these impacts the site is not considered to be suitable for the development as currently proposed; and
- the Project is incompatible with the particular nature, operations and requirements of existing land uses and the medium to long term sustainability of the equine CIC would be detrimentally impacted, with the result that the Project is not in the public interest.

Accordingly, pursuant to section 89E of the EP&A Act, the Commission refuses consent for the Project.



Paul Forward (Chair)
Member of the Commission



Annabelle Pegrum AM
Member of the Commission



John Hann
Member of the Commission

APPENDIX 1

Site chronology:

- November 2012: Anglo American lodges its first project application and environmental assessment to develop the Drayton South Coal Project.
- August 2013: The Department completes its preliminary report recommending approval of the project, subject to strict conditions.
- December 2013: The Commission releases its Review Report concluding that the mine *'should not proceed at the planned scale in this location'*.
- March 2014: Anglo American submits a revised mine plan that removed the Houston Pit and part of the Whynot Pit but does not address all of the Commission's recommendations.
- July 2014: The Department recommends the revised project be approved, subject to strict conditions.
- October 2014: The Commission refuses the original (but revised) project.
- May 2015: Anglo American lodges a second development application and environmental impact statement which included 25% reductions in the mining area, resource size and life of the project. This application addressed the Commission's original recommended setback from Coolmore and Godolphin horse studs.
- August 2015: The Department completes its preliminary Environmental Assessment Report recommending approval of the revised project, subject to conditions.
- November 2015: The Commission releases its Review Report recommending the project does not proceed due to the potential impacts on Coolmore and Godolphin studs and in particular the potential 'reputational' risks to the studs.
- May 2016: Anglo American submits its response to the Commission's Review Report, including an Expert Report by Mr Greg Houston.
- June 2016: The Department commissions Prof Jeff Bennett of the Australian National University to conduct a peer review of the Houston Report.
- July 2016: The Hunter thoroughbred industry provides comments on Anglo American's response.
- August 2016: The Department commissions Prof Bennett to review the Hunter thoroughbred industry's comments.
- September 2016: The Department completes its Final Assessment Report (to be read in conjunction with the August 2015 preliminary Environmental Assessment Report).
- September 2016: The application is referred to the Commission for determination.

APPENDIX 2

Summary of the reviews and determinations undertaken by the Planning Assessment Commission associated with the Project (to be read in conjunction with Appendix 1)

December 2013 Commission Review

On 16 March 2013, the then Minister for Planning and Infrastructure issued a request to the Chair of the Planning Assessment Commission to carry out a review in relation to then Drayton South Coal Project.

The 2013 Commission:

- visited the Applicant's site; the Coolmore and Godolphin Woodlands horse studs;
- met with a range of stakeholders; and
- engaged a number of experts for advice on the equine industry (Mr Terry Short), the visual and landscape impacts (Dr Richard Lamb) and the scope for changes to the proposed mine plan (Mr Richard Jennings and Mr John Janetzki).

These experts advised:

- the significance of the studs to the broader Upper Hunter equine Critical Industry Cluster (CIC) and suggested that they be afforded protection from the impacts of mining and that a buffer distance of several kilometres would be appropriate (Mr Terry Short);
- the combination of physical, aesthetic, cultural and historical values characterise the studs, along with the nature of the rural industry that underpins them, which gives rise to a heightened level of sensitivity to impacts. The proposed visual bund was considered (Dr Lamb) to be highly visible and of little visual benefit; and
- alterations to the mine plan were technically possible but would reduce the available coal reserves with potential viability impacts (Mr Richard Jennings and Mr John Janetzki).

The 2013 Commission concluded that:

- *'the Coolmore and Woodlands studs are critical to the equine Critical Industry Cluster and should be protected'* with a buffer;
- open cut mine should not proceed at the planned scale in the proposed location;
- any future application for a smaller mine should remain north of the natural ridgeline marked yellow in **Figure 4**;
- the setbacks provided are an absolute minimum;
- additional work was need to demonstrate the viability of the Coolmore and Woodlands studs.

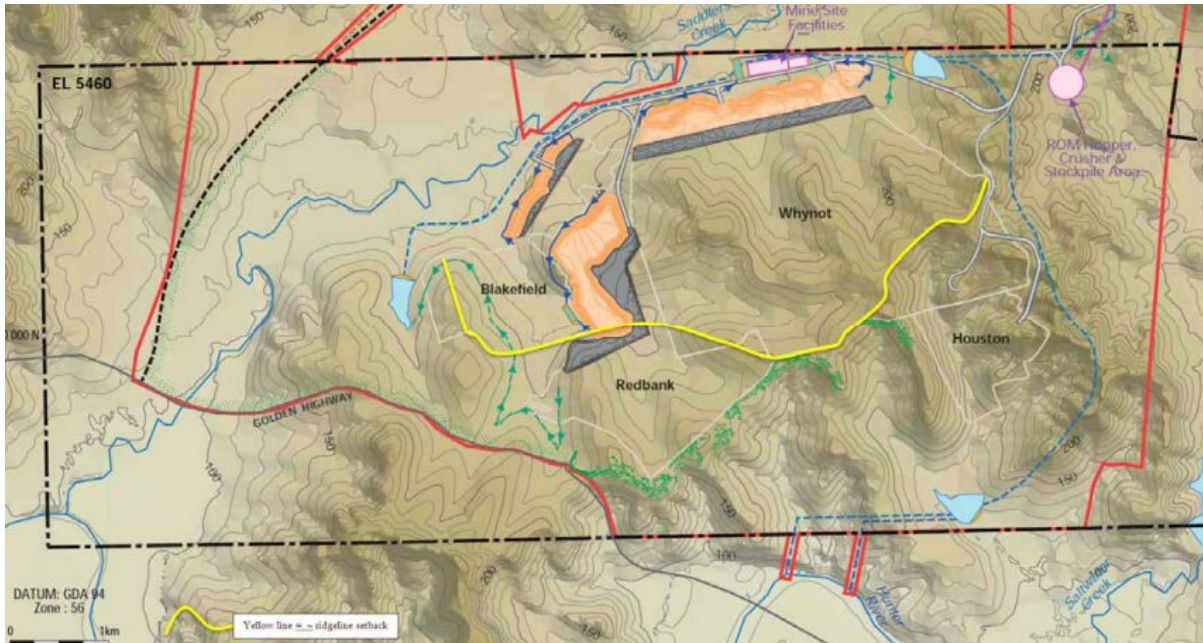


Figure 4: 2013 Commission ridgeline setback recommendation

October 2014 Commission Determination

On 15 July 2014, the Department referred a project application to the Commission for determination.

Having regard to the 2013 Commission Review Report, that application deleted the Houston pit and made minor setbacks to the southern tip of Redbank pit in accordance with the Commission’s recommendations.

The 2014 Commission:

- found that ‘*although the proposal is likely to meet the relevant regulatory environmental criteria*’ there was insufficient evidence to confirm the project would not negatively impact on equine health and the operations of Coolmore and Godolphin;
- considered that the economic benefits of the proposed mine must be weighed against both the economic impacts of Coolmore and Godolphin leaving the region, and the flow on impacts on the viticulture and tourism industries;
- determined that ‘*a precautionary approach should be adopted and...that the application should not be approved as proposed*’.

April 2015 Gateway Review Panel

On 2nd April 2015, the Mining and Petroleum Gateway Panel issued the Applicant a Conditional Gateway Certificate.

The 2015 Gateway Panel:

- recognised that Drayton South is located on Biological Strategic Agricultural Land (BSAL) as identified within the Upper Hunter Strategic Land Use Plan;
- ‘*the verification of BSAL within the Project Disturbance Area is incomplete and this has implications for assessing the full extent of the Project’s impact on BSAL*’;
- recommended a clearer program for proposed reinstatement of BSAL and the final land use of the rehabilitation land-form.

- found that Drayton South is *'likely to [have] no significant direct or indirect impacts on highly productive groundwater'*;
- noted the Applicant will need to update its modelling to provide more accurate water flow and quality information;
- recognised the equine CIC's proximity to the project boundary and that the loss of landscape values and impact on the equine cluster's viability were the most material potential impacts of the mining operation proposal;
- concluded that *'given the significance of potential impacts and uncertainties with regard to mitigation, and the dearth of scientific literature concerning the potential impacts of open cut coal mining on nearby equine breeding enterprises, particularly with respect to environmental stressors such as noise, dust and vibration, the Precautionary Principle should be applied'*.

November 2015 Commission Review

On 13 August 2015, the Minister established terms of reference for a review of the Drayton South Coal Project. The Commission received the Secretary's Environmental Assessment Report on 17 August 2015.

The Applicant made a number of amendments to the proposal that in their view addressed the 2014 Commission determination not to approve that application including:

- moving the mining areas behind the ridgeline to the north of the Golden Highway (reducing coal resource to be exploited by 25%);
- increasing the distance to the studs (1.6km to the primary areas of operations on Godolphin stud and 2.4km to Coolmore stud);
- proposing that blasting noise and dust impacts on the studs be mitigated through a range of design and operational measures (best practice ground vibration, overpressure and combustion gas management for blasting);
- commitment to progressively construct the final landform and ensure overburden would not be visible from its nominated operational areas of Coolmore and Godolphin to mitigate visual impacts of the mine and post-mining rehabilitation;
- micro-relief techniques so that the final landform would reflect a more natural looking topography designed to shed water away from the single final void in the Wynot area.

Supporters noted the significant social and economic benefits of the project and the substantial employment opportunity for the local community associated with the Project.

The 2015 Commission:

- was satisfied that *'the impacts of the project have been minimised and mitigated as far as is feasibly possible for an open cut mine on this site'*;
- noted that the studs are *'highly sensitive to the impacts of open cut mining'*;
- found that land use conflicts do exist when mining and the *'peak horse breeding operations'* are not *'separated by suitable buffers'*;
- found that the two studs play a significant role in Equine Critical Industry Cluster in the Upper Hunter – *'itself world renowned'* - and that approval of the mine could have irrevocable impacts on the equine industry;
- considered the two land uses being vastly different and not compatible in close proximity;
- found that the land use conflict between the two industries could not be overcome and that *'balancing these competing and conflicting land uses is not inherent in the existing planning framework for the region and espousing coexistence does not make it so'*; and

- recommended that the Drayton South open cut coal mine application should not proceed as the Project assessment identified a real risk to another significant industry important to the long-term economic growth of the local community, the Hunter Region and the State of NSW.

APPENDIX 3

Records of Commission Meetings

Notes of meeting with Muswellbrook Shire Council

This meeting is part of the Determination process.		
Meeting note taken by Robert Bisley	Date: 12/10/2016	Time: 1:00pm
Project: Drayton South Coal Project		
Meeting place: Upper Hunter Conservatorium of Music		
Attendees: <u>Commission Members:</u> Paul Forward (chair), Annabelle Pegrum AM, John Hann <u>Commission Secretariat:</u> Robert Bisley, David Koppers <u>Organisation and External attendees:</u> Muswellbrook Shire Council; Martin Rush (Mayor), Steve McDonald (Mayor), Scott Brooks (Contractor), Peter Veneris (Industry liaison), Fiona Plesman (VPAs)		
Meeting notes: Introduction by Chair of the Commission. Council advised that currently there are twelve Councilors and that at the last election, six Councilors had retired and six Councilors were re-elected. Council provided an overview of their views and advised that: <ul style="list-style-type: none">- They are only concerned with issues within Local Government's remit, specifically:- Blasting (handout provided)<ul style="list-style-type: none">o If the mine was approved Council requested consultation on the development of the Blast Management Plan – Condition 14; and,o Council could better inform the community through a centralised blasting calendar hosted on their website and updated by mine management. Council was concerned that often residents contact Council offices after a blast because they are unaware of what is occurring (or mistake the blast for a seismic earthquake or similar event) – this is unsatisfactory, inefficient and wastes resident and Council time.- Roads (handout provided)<ul style="list-style-type: none">o Council is interested in the proposed Edderton Road as it is an important local arterial link and rural collector road:<ul style="list-style-type: none">▪ Council understands that the proposed primary use of Edderton Road would be to service the mine;▪ Council emphasised that the road is of value for local residents of Jerrys Plains to access shopping in Muswellbrook; and,▪ Council also recognises the value of the road for the equine industry particularly in the breeding season.o Council is concerned that open-cut mines have cut off many local roads and has prepared a strategic road network study (the Study). Council does not want local roads across the Local Government area continuing to move further west as a result of the mines.o Council is responsible for implementation of the Roads Act, as a Road Authority and their intent is for any applications to be assessed as per the Study, and is not required to be consistent with any approval.		

- Council does not want Edderton Road realigned as in their view it will reduce the utility of the road, and has requested that any realignment should relate to the entire road (not only the part being realigned as part of this proposal) and after the Drayton South Mine has finished extraction, the road be rebuilt and realigned along the existing alignment.
- Council recognises that the rehabilitation (micro relief) occurring at Drayton is of a compliant and high standard.
- Council supports the Upper Hunter Diversification Strategy 2011/12, of the Upper Hunter Strategic Regional Land Use Plan, that calls for resilience of the economy.
- Council has established a royalty investment committee, comprising representatives from the mines, the community and Council, to provide guidance in the distribution of royalties to assist development in the shire. However, the 12 Councillors have a veto on proposals from the Investment Committee.
- Council is satisfied with the economic contributions from the mine via royalties and the proposed VPA.
- There is a recognition that the thoroughbred industry has made a strong investment in the region resulting in significant growth over the last ten years or so. Council noted:
 - five large studs in Muswellbrook and seven large studs in Upper Hunter;
 - that it is seeing strong equine growth - \$100m in CIC over past few years evident in associated development applications;
 - the Equine industry is also the highest value add agricultural industry (2.5x crop/pasture);
 - loss of the Coolmore or Godolphin studs would have a critical impact on the CIC; and,
 - agriculture is about value add flowing through to the income of the community not just through wages.
- Council noted that the wine industry is doing well and that eco-tourism is a growth industry.
- Council finds the RU1 zone limiting in distinguishing primary production activities (mining vs equine).
- Council is concerned that the CIC does not provide any planning provisions as to where and how it can grow – this should be rectified in the interest of sustaining diversification and industry/community confidence.
- The Chamber of Commerce expects Council to maintain a diversified economy and to that end Council has pursued partnerships with the University of Newcastle related to training in areas such as agri-business; renewable energy from cropping, and mining rehabilitation.
- The Hunter Valley Research Foundation has called for more diversification of the regional economy.
- Council Land Use strategy planning indicates 90% of the shire is designated State Significant
- Council does not have a formal position on the Drayton South mine proposal but believes it will have an impact on the studs and this is of considerable concern.
- Council supports a diversified economy – this is also a community expectation as was evident in a recent community survey 2016. The survey showed that the community considers mines play a role in this economy but that residents believe that while Muswellbrook is a ‘mining town’ with a significant mining history, Drayton South is not considered a mine area given its physical separation.

Documents: Blast handout. Roads handout.

Meeting closed at 2:00pm

Notes of meeting with Hunter Thoroughbred Breeders Association

This meeting is part of the Determination process.		
Meeting note taken by Robert Bisley	Date: 12/10/2016	Time: 2:15pm
Project: Drayton South Coal Project		
Meeting place: Upper Hunter Conservatorium of Music		
<p>Attendees: <u>Commission Members:</u> Paul Forward (chair), Annabelle Pegrum AM, John Hann <u>Commission Secretariat:</u> Robert Bisley, David Koppers <u>Organisation and External attendees:</u> Hunter Thoroughbred Breeders Association; Dr Cameron Collins (President), Paddy Power (Treasurer), Ross Cole (Secretary), Wayne Bedggood (Committee member), Hellen Georgopoulos (Director Policy and Public Affairs)</p>		
<p>Meeting notes:</p> <p>Introduction by Chair of the Commission.</p> <ul style="list-style-type: none"> - Hunter Thoroughbred Breeders Association (HTBA) advised that the Hunter Valley was the ‘Silicon Valley’ of thoroughbred horses in NSW with an international reputation. - HTBA provided an overview of their views regarding the proposed ‘buffer’ zone, the impacts of the mine behind the proposed buffer and the relevant impacts on equine health and the equine industry more generally. - HTBA noted that in their view the mines and the Department continued not to appreciate the complexities of the equine industry and that, in their view, co-existence between the Drayton South mine as proposed (by the applicant and supported by the Department of Planning and Environment) and the thoroughbred industry is not possible. - HTBA explained that the operation of the stallion and broodmare aspects of the industry relate to international statutory (and legal) provisions that expressly exclude artificial insemination for breeding of thoroughbreds. - Horses conceived through artificial insemination are also ineligible to compete as race horses (nationally and internationally) and are therefore unacceptable as breeding stallions or mares within the industry. - The setback line imposed by the first 2013 PAC review was not a representation of the HTBA’s position. It was a recommendation of early visual study findings and even the PAC noted that it was a ‘minimum’ proposed setback. The studs have consistently (in their view) disagreed with the setback on both reputational and environmental grounds (noise, dust, blasting, equine health, visual setting, reputation etc). - HBTA cite the importance of the Kentucky University Study which was appended to the original report from the HBTA. - HBTA believe the process has not become “adversarial” but is due to Anglo American failing to suitably address HTBA issues and a piecemeal delivery of information which requires continual re-evaluation and response by the studs. - HTBA outlined the Industry structure: <ul style="list-style-type: none"> o The industry is built around the key stallion farms; o The industry and the mares follows the stallions; o The cluster has a number of associated skilled industries and agricultural suppliers throughout the Hunter; o A standard Sydney, Randwick race meet would on average feature 35-55% progeny from Coolmore and Godolphin; and, 		

- There are only two stables internationally that have three global stallion operations (the two being Coolmore and Godolphin).
- Barriers to industry entry include:
 - Available and significant finance;
 - Information networks;
 - Historical performance;
 - Advancing the breed; and,
 - Current racing performance.
- HTBA advised that there were some three tiers in the thoroughbred industry and that there are significant difference between barriers to entry at a low tier level verses entering at a level that could replace the existing top tier studs (such as Coolmore).
- HTBA noted that in the last few years thoroughbred breeding investment has moved interstate and that:
 - investment in the Hunter boomed until roughly 4-5 years ago but Chinese, Japanese investment has slowed/stopped in recent years because of uncertainty regarding the mining industry and associated impacts;
 - there is a level of uncertainty because of the Drayton South mine proposal that is stifling major investment; and,
 - a general concern within the industry that if the market leaders move on, no one will be able to replace them or want to move into the area.
- Many mares currently based in Victoria are being sent to the Hunter to be covered before travelling back to Victoria.
- The nature of the thoroughbred industry is such that it takes a minimum of five years from conception before determining whether a horse will be worthwhile for breeding purposes – allowing for the horse to have a proven ‘track’ record, then cover mares who have progeny that are proven to be successful in racing.
- Stallions can be fertile for up to 18-20 years.
- The most expensive stallions are the most in demand. This is contrary to general economic/business models (where demand is lower at higher prices) and this is not reflected in the Bennett report.
- The substitution theory contained in the Houston and Bennet reports is deeply flawed as it assumes that:
 - lower tier studs in the Hunter (or elsewhere) can ‘step-up’ to replace top tier stallions if Godolphin and/or Coolmore were to relocate from the Upper Hunter;
 - that shuttle stallions from overseas or interstate would replace the void (failing to understand that shuttling is a very expensive process and few would risk their stallions in a place that Coolmore or Godolphin had vacated because of health or reputational concerns); and,
 - that top tier new stallions can easily be bred.
- HTBA identified that the Department’s report also negated the importance of the agistment business which contributes 50% of Coolmore’s income.
- The studs are of the view that approval of the Drayton South mine would mean that they would not be able to stay in the Upper Hunter.
- The closest existing mine is 8-10km away, which has been acceptable to the studs, but this buffer cannot be reduced any further without dire consequences to the equine industry in the Hunter.
- In response to Anglo American’s position that the studs were aware of their mining aspirations years before Drayton South was proposed, the HTBA noted that the two key studs had continued to invest over the years because previous approvals relevant to Drayton South had lapsed and that only exploration licenses (ELs) – which exist throughout the Valley had have been a legacy for many years – were in place but not approvals. The HTBA noted that if you didn’t invest where ELs existed it would prevent investment almost everywhere in the Hunter.
- HTBA noted that blasting assessment were based on structures and not human or horses and that the effect on the breeding program and on foals was likely to be significant.
- Water impacts are very important to the equine industry together with the quality of pastures and there is concern that these have not been addressed sufficiently in the Department’s assessment.

- HTBA expressed concern at the proximity of Drayton South on equine health noting that there was no definitive study to disprove that such risks were real and significant – and that the perception of risk would discourage the industry and future investment.
- Upper Hunter Shire Council have completed a position statement on Coal and CSG activities.
- The HTBA represent about 200 businesses in the equine industry.

Documents: 1) Thoroughbred Breeding Industry Overview (12 October 2016).

2) *Time to Protect the Hunter Valley's State Significant Agricultural Lands & Industry* (March 2015)

Agreed Actions:

HTBA to prepare geographical map showing the Stallion and Broodmare locations throughout the Hunter Valley.

Meeting closed at 3:30pm

Notes of meeting with Scone Equine Hospital

This meeting is part of the Determination process.		
Meeting note taken by Robert Bisley	Date: 12/10/2016	Time: 4:00pm
Project: Drayton South Coal Project		
Meeting place: Scone Equine Hospital		
<p>Attendees: <u>Commission Members:</u> Paul Forward (chair), Annabelle Pegrum AM, John Hann <u>Commission Secretariat:</u> Robert Bisley, David Koppers <u>Organisation and External attendees:</u> Scone Equine Hospital; Dr Cameron Collins (Managing Director), Angus Adkins (Director)</p>		
<p>Meeting notes: The PAC toured the hospital as well as the intensive care facility (separate site). Dr Collins and Dr Adkins gave a video and verbal presentation on the work of the hospital.</p> <ul style="list-style-type: none"> - The Scone Equine Hospital (SEH) is the largest equine veterinary operation in Australia and has an international reputation. There are only three veterinary facilities of a similar size in Australia (other two are in Sydney and Victoria). The SEH does 1500 surgeries per year (more than anywhere else in Australia). Employs some 30 equine vets who are specialists in particular fields. There are some 60 equine vets within the Hunter Valley. - The SEH also employs interns and has residents in-training (for up to a month at a time) significantly contributing to the knowledge base of equine veterinary practice in Australia. - SEH has developed in line with the equine industry. As expectations and performance of the equine industry increases the SEH has had to do the same. - The vets advised that if million dollar stallions are to be transported across the world, there needs to be exceptional care available for them – ‘shuttle stallions’ are a relatively new process in the industry that is highly specialised and an expensive venture. - Equine vets cluster in Scone and the Upper Hunter, with some large studs having their own vets. - The SEH has a significant academic and research record and publishes widely on equine health and care. - Operations ‘ramp up’ seasonally during the breeding and the yearling sales seasons. - Hunter horses have a brand value that is recognised internationally. - SEH believe investment is moving elsewhere due to the uncertainty within the Hunter and that if either Coolmore or Godolphin leave there will be a gradual and unstoppable dismantling of the equine cluster within the Hunter. - SEH have delayed investment in a new hospital for the past seven years due to the uncertainty of the cluster and the future of the Drayton South mine. - SEH has already invested in an Equine Hospital in Victoria in part to mitigate risk in their business operations in the Hunter (from the proposed mine). - The Hunter is a better location than Victoria to breed horses due to the natural topography and climate. - SEH is of the professional view that there are equine health issues that warrant consideration with respect to determination of the Drayton South mine. They noted that: <ul style="list-style-type: none"> o Whilst there is relatively limited research on the impact of dusty conditions (particulate matter) on horses. However, horses have a similar respiratory systems as humans and there is boundless evidence to show that humans are effected; o As horses’ heads are close to the ground in pastures when eating, dust settled on the ground is stirred up into their respiratory system; o Foals are most sensitive, particularly with their rapid growth and weight gain over two years; 		

- Exposure to noise and dust are key issues of concern;
- While horses are impacted by thunderstorms that may lead to significant injuries, this is manageable due to BOM forecasting – the same is not necessarily true of blasting in proximity of the horses; and,
- The horse reproductive cycle is influenced by light. It is utilised to advantage (by the studs) at the last stages of the breeding cycle (which is seasonal) but there is no evidence of what effect continual unnatural light (such as the glow from the proposed mine) is likely to have on horse health (and in particular on breeding).

Meeting closed at 4:45pm

Notes of meeting with Coolmore Horse Stud

This meeting is part of the Determination process.		
Meeting note taken by Robert Bisley	Date: 13/10/2016	Time: 8:30am
Project: Drayton South Coal Project		
Meeting place: Coolmore Horse Stud		
<p>Attendees: <u>Commission Members:</u> Paul Forward (chair), Annabelle Pegrum AM, John Hann <u>Commission Secretariat:</u> Robert Bisley, David Koppers <u>Organisation and External attendees:</u> Coolmore Horse Stud; Tom Magnier (Coolmore Principal), Paddy Power (Business Manager); Elizabeth Headon (Group Corporate Affairs)</p>		
<p>Meeting notes:</p> <ul style="list-style-type: none"> - Introduction by Chair of the Commission. - Coolmore provided an overview of their operations and the reasons for its success and international reputation. They noted the specific conditions of the Hunter Valley which were conducive to their industry and, in their view, at risk from the Drayton South mine proposal including: <ul style="list-style-type: none"> o Exceptional terrain with varied topography (including undulating flats as well as hills) that allowed horses and foals at different stages of the breeding and growth cycle to be naturally exercised and build strength; o Soil types and pasture; o 9000 acres of grass; o \$100m capital investment into the stud; and, o Stud farm operated at the site since the 1880s. - Explained the small window available for stallions covers each year and how this related to the racing industry and sales. - Outlined the detailed daily planning schedule of stallion covers and risks of disruption. - Noted that growth and future investment is currently on hold due to uncertainty. - Coolmore has access to 5000ML water license from the Hunter River. - The stud currently has 11 stallions and 470 mares. - Minimum of 100 employees and four full time vets on site (including a pathology laboratory). - 70% of their clients have no association with the Hunter. - Agistment value 50% of income (mares). Noted that the Department's report does not address this source of income. - Quality of the stallions, facility, staff, ability to isolate and quarantine allows Coolmore to charge 15-20% more than equivalent studs. - Noted that the company had not been consulted by Anglo American for some years. - Authors of the two 'new' economic studies did not liaise or consult with the studs. This was of particular concern regarding the independent Department commissioned Bennett review of the Houston report <p>The meeting included a tour to inspect the stallions, veterinary facilities, staff living quarters and views from the hill overlooking the property.</p>		
Documents: <i>Planning Assessment Commission October 2016</i> - Presentation		
Meeting closed at 11:00am		

Notes of meeting with Coolmore Horse Stud head veteran – John Freestone

This meeting is part of the Determination process.		
Meeting note taken by Robert Bisley	Date: 13/10/2016	Time: 11:00
Project: Drayton South Coal Project		
Meeting place: Coolmore Horse Stud		
<p>Attendees: <u>Commission Members:</u> Paul Forward (chair), Annabelle Pegrum AM, John Hann <u>Commission Secretariat:</u> Robert Bisley, David Koppers <u>Organisation and External attendees:</u> John Freestone (Coolmore Veterinarian), Tom Magnier (Coolmore Principal), Paddy Power (Business Manager); Elizabeth Headon (Group Corporate Affairs)</p>		
<p>Meeting notes:</p> <ul style="list-style-type: none"> - John Freestone has been a veterinarian for 34 years. He provided his professional credentials and noted that he is considered an equine expert. - He advised that the Coolmore stud has been designed and built around the safety of the horses. They are most susceptible to impacts as foals and pregnant mares. - Equine health concerns include: <ul style="list-style-type: none"> o Noise: <ul style="list-style-type: none"> ▪ Repetitive background noise is not a problem, but sporadic sounds startle horses and lead them to follow their ‘flight’ instincts – particularly thoroughbreds. ▪ The worst injuries on the stud tend to occur from thunder. ▪ In the mid-1990s, the Williamstown air base redirected flight paths away from the equine industry to reduce the noise impacts on horses. o Air quality: <ul style="list-style-type: none"> ▪ There is a recognition that with such small margins separating winners within the horse racing industry, supreme physiology is extremely important. ▪ There is recent research that confirms that particulate matter has an impact on the respiratory health of horses. <ul style="list-style-type: none"> • Particle matter within the horses respiratory system can lead to the development of allergens (noting that only a small percentage of horses suffer from allergens). ▪ There is a recognition that there is no definitive research confirming or refuting that mines have an impact on equine health. ▪ Dr Hodgeson’s Virginia Tech study is valuable but only defines half of the issue. There are significant equine health gaps that have not yet been qualified – the Hodgeson report considered endotoxins which are only part of the issue. ▪ The Journal of Veterinary Internal Medicine published an article <i>Inflammatory Airway Disease of Horses – Revises Consensus 24 January 2016</i> (handout) recognising that horses and human respiratory systems can be comparable. The article notes that horses exposed to high burdens of particles can develop Inflammatory Airway Disease (which is the equivalent of equine Asthma). ▪ Dr Kannegieter’s conclusion that there is a poor correlation between human & horse respiratory health is therefore not accurate. ▪ Inflammatory Airway Disease can lead to increase mucus production and impact on the performance of horses, but is difficult to detect when the horse is at rest. ▪ Not all horses will necessarily suffer the same impact from the same exposure. 		

- Buyer perception:
 - Stud clients perception of any risk to a stallion or mare's performance would lead to avoidance of that risk.
 - Horses raised in proximity to a coal mine would be subject to such buyer perception.
 - Assurances by the mine operator or Government are very unlikely to be trusted by horse owners.

Documents: *Inflammatory Airway Disease of Horses – Revises Consensus, 24 January 2016*

Meeting closed at 11:45

Notes of meeting with Coolmore Horse Stud – Investors

This meeting is part of the Determination process.		
Meeting note taken by Robert Bisley	Date: 13/10/2016	Time: 11:45am
Project: Drayton South Coal Project		
Meeting place: Coolmore Horse Stud		
<p>Attendees: <u>Commission Members:</u> Paul Forward (chair), Annabelle Pegrum AM, John Hann <u>Commission Secretariat:</u> Robert Bisley, David Koppers <u>Organisation and External attendees:</u> Laurie Macri (Coolmore client and also Chairman of the Australian Turf Club (ATC) - but advised that he was not representing the ATC in this meeting), John Murray and Cath Murray (broodmare owners and Coolmore clients)</p>		
<p>Meeting notes:</p> <ul style="list-style-type: none"> - Introduction by Chair of the Commission - All clients indicated that they had mares stabled with Coolmore. They advised that they had all done their own due diligence and that their reasons for choosing Coolmore included: <ul style="list-style-type: none"> o Stallion quality was superior; o Superior expertise and facilities with an international reputation; and, o The amenity allows ‘horses to be horses’ and enjoy the best quality environment (that is pastures, large paddocks, shelter, air quality, soil composition and tranquil environment) with high standards of safety. - It was emphasised that the reason for selecting Coolmore, over other competitors, was based on sound business principles, with the main aim of making a commercial return on funds invested. Appropriate risk management is considered a key consideration. - Recognition that a number of other businesses are benefiting from the Coolmore knowledge base and expertise. <ul style="list-style-type: none"> o In their view, removal of the big players (Coolmore and Godolphin) would be a significant disruption to the Hunter equine industry and clients would follow Coolmore if they went interstate (or elsewhere); and, o They noted that recently a few large thoroughbred companies had decided not to locate in the Upper Hunter Valley because of the risk and impact of extended coal mining in the Upper Hunter (eg Spendthrift USA) - If Coolmore left, the mares would follow, including to Victoria, within a very short period of time. - This ‘holing out’ of the industry could lead to a weakening of the NSW thoroughbred racing industry. <ul style="list-style-type: none"> o The NSW Government has invested within the industry. o The Golden Slipper is the richest two year old race in the world. o The last two Golden Slipper winners were from Coolmore and Godolphin. o If the industry declines in the Upper Hunter, the prize money may no longer be sustainable. o Victoria could challenge for the competition of the industry and the Blue Diamond could replace the status of the Golder Slipper over time. - There are also broader international investment ramifications that are already being impacted by the uncertainty within the Hunter. The uncertainty regarding the risk of encroachment from coal mining on the horse studs is not conducive to a healthy investment climate. 		
Agreed Actions: Laurie Macri to send through article examples of NSW Government’s commitment to the industry.		
Meeting closed at 12:30pm		

Notes of meeting with Godolphin

This meeting is part of the Determination process.		
Meeting note taken by Robert Bisley	Date: 13/10/2016	Time: 12:45pm
Project: Drayton South Coal Project		
Meeting place: Godolphin Horse Stud		
<p>Attendees: <u>Commission Members:</u> Paul Forward (chair), Annabelle Pegrum AM, John Hann <u>Commission Secretariat:</u> Robert Bisley, David Koppers <u>Organisation and External attendees:</u> Godolphin Horse Stud; Henry Plumptre (Managing Director), Ross Cole, John Sunderland (Operational Manager), Michael Wright (Landscape Architect consultant)</p>		
<p>Meeting notes:</p> <ul style="list-style-type: none"> - Introduction by Chair of the Commission - Godolphin provided an equine industry background and advised that: <ul style="list-style-type: none"> o the Hunter’s equine industry is comparable to Newmarket, UK and Lexington, USA which are considered world class; o mid 90s saw the industry grow on the back of tax breaks; o recently the industry has changed from being hobby based, into a significant investment and commercial business; and, o Newmarket prize money has barely changed since the 80s, Australian prize money has increased by roughly 400% over the same time. - In 2008, Darley bought the property from Ingham for \$466m which included all of the assets (bloodstock, stallions, land and retention of employees – this also included other properties and facilities within NSW and VIC). - In 2014, the stallion market in the Hunter was worth \$100m. - Godolphin invests heavily in industry development and leadership and for a decade has offered twelve international scholarships per year. - The industry is centered on stallions and the mares follow the stallions (not the other way around). Mares are highly mobile. - Godolphin is a nursery driven by superior performance, which relies on its combination of location, high quality water, slope, challenging topography for horses, river flats & shelter, with foals moving through a range of environments. - In response to claims that new entrants could enter the market should Coolmore or Godolphin horse studs leave the Upper Hunter Valley, there are very few, if any, players who could come in (and those with prize stallions would not take the risk). The leavers would take the stallions with them and the new establishments would find it difficult to acquire or develop stallions of similar international high quality. - Studs have the financial resources to move locations, not all support industries do – e.g. farriers, boarding farms, transport companies. - The site location is very important due to slope, rich landscape and access to ancillary equine support industries. - Department’s mapping of the CIC came after the ELs had been issued. - Over the last eight years, Godolphin has had exceptional track performance. - Godolphin is lucky to have access to Dr Adkins and the Scone Equine Hospital as he is the world’s foremost expert on equine pediatric surgery. - The future of Godolphin: <ul style="list-style-type: none"> o Needs more certainty if it is to proceed with investment. 		

- If there were an acceptable buffer between the studs and the coal mines investment would be stimulated.
- New Zealand and Tasmania are already advertising and trying to capitalise on the uncertainty faced within the Hunter.
- Godolphin has already placed two stallions in Victoria and New Zealand.
- Government approval of the mine would signal to the equine industry in the Hunter that it would not be subject to future protection.
- At the moment there is a balance between the mines and the equine industry but Godolphin believes that if Drayton South is approved that would be the tipping point and the equine CIC would decline quite quickly.
- There is a general concern that other studs in the area will be subjected to encroachment of coal mines.
- Brand development takes a long time to grow. The winners over the last ten years have built the Hunter brand
- If a buffer zone of 8 – 10km was agreed between mines and the horse studs there would be a significant increase in investment in the thoroughbred industry. There needs to be a strategic and wholistic approach to the development of mines in the Hunter.

The meeting included a tour of the various pastures showing how horses progress through various life stages, a tour through the personnel village and a tour of the surrounding valley via helicopter providing an aerial view of the studs and the surrounding land uses including the mines.

Documents: One page handout detailing a summary of Godolphin’s activities.

Meeting closed at 3:30pm

Notes of Briefing from Godolphin landscape architect – Michael Wright

This meeting is part of the Determination process.		
Meeting note taken by Robert Bisley	Date: 13/10/2016	Time: 3:45pm
Project: Drayton South Coal Mine		
Meeting place: Godolphin Horse Stud		
<p>Attendees: <u>Commission Members:</u> Paul Forward (chair), Annabelle Pegrum AM, John Hann <u>Commission Secretariat:</u> Robert Bisley, David Koppers <u>Organisation and External attendees:</u> Godolphin Horse Stud; Henry Plumptre (Managing Director), Ross Cole, John Sunderland (Operational Manager), Michael Wright (Landscape Architect consultant); Hellen Georgopoulos (HTBA)</p>		
<p>Meeting notes:</p> <ul style="list-style-type: none"> - The visual assessment is limited and does not recognise direct visual impacts including in the early years of the mine. - There are three elevated view points on the property subject to visual impacts. - After Edderton Road’s relocation four years into the project, there will be limited tree screening from the road for some 5-9 years until trees mature. There are concerns that due to the costly nature of tree screening, it may be done poorly. - Mt Arthur Mine has not met its rehabilitation tree screening obligations. - There will also be a number of indirect visual impacts on Godolphin from orange night sky plumes fires and orange blasts. - The National Trust has made a previous submission on the project, and believe the Jerry’s Plains Muswellbrook area should be declared a conservation area. Reference was first made to the Muswellbrook – Jerrys Plains Visual Conservation Area by the National Trust in 1995 - There are also important landscape issues associated with aboriginal significance that may not have been fully addressed. - Visual impacts are important and include direct, indirect and dynamic. Each of these should be addressed separately. 		
<p>Documents: Scenic and visual values</p> <p>Drayton South Coal Project: <i>Response to the Environmental Impact Statement and the Secretary’s Environmental Assessment Report Scenic and Visual Impacts – October 2015.</i></p> <p>Appendix A – <i>Drayton South Coal Project response to Anglo American’s response to the scenic and visual impact issues raised in the planning assessment Commission’s report – March 2014.</i></p> <p>Appendix C – <i>Response to the Secretary’s environmental assessment report visual and landscape character impacts of the Drayton South Coal project – September 2014.</i></p> <p><i>Mr Wright agreed to provide electronic copies of the above documents to the Commission.</i></p>		
Meeting closed at 4:15pm		

Notes of Briefing from Newgate Stud and Riversdale Farm owners

This meeting is part of the Determination process.		
Meeting note taken by Robert Bisley	Date: 13/10/2016	Time: 4:15pm
Project: Drayton South Coal Project		
Meeting place: Godolphin Horse Stud		
<p>Attendees: <u>Commission Members:</u> Paul Forward (chair), Annabelle Pegrum AM, John Hann <u>Commission Secretariat:</u> Robert Bisley, David Koppers <u>Organisation and External attendees:</u> Newgate Stud and Riversdale Broodmare Farm; Henry Fields (Newgate Stud), Nick Hodges (Riversdale Farm)</p>		
<p>Meeting notes:</p> <ul style="list-style-type: none"> - Introduction by Chair of the Commission - Newgate Stud farm: <ul style="list-style-type: none"> o Fastest growing stud in the Hunter Valley. o Third largest operator/market share with nine stallions, 1200 covers in the current season, with 200 mares permanently boarding. o 60 employees during the peak, 40 non-peak. o 1000 acres owned, leases a further 700 acres . o Several million dollars’ worth of investment into property is on hold pending decision on the future of the Drayton South mine. o Price of first tier stallions is a significant barrier to entry o the industry is driven by the quality not the quantum of stallions - Recognition that the best stallions in the industry are based in the Hunter (at Coolmore and Godolphin) and that this has made the area the ‘market leader’ in Australia. - If Coolmore and Godolphin leave with their stallions, the best supporting industries would follow. Hunter Valley equine industry would be decimated if the two large players left. - Coolmore and Godolphin would not relocated within the Hunter Valley. - The broodmares would then follow the stallions. - If Coolmore and Godolphin leave, Newgate wouldn’t be able to fill the void and replenish the caliber of the stallions lost to the region. - The majority of the top stallions (8/10) are owned by Coolmore and Godolphin. - If the rest of the studs/mare farms within the Hunter don’t follow Coolmore and Godolphin they would lose their business as the broodmares will follow the best quality stallions. Need two things to breed race horses – genetics and environment. - There is a lack of confidence in the direction of the equine industry in the Hunter Valley at present because of the uncertainty over the Drayton South proposal. - Neither Anglo American nor the Department consulted (to his knowledge) with the second and third tier studs (including his own) regarding implications for their business or as part of the recent economic review by Houston or Bennett. - Riversdale Farm: <ul style="list-style-type: none"> o Located 2km north of Scone, roughly 400 acres in size. o The farm has transformed from a seed/wheat farm to being used primarily as an agistment and caring business for mares – this has given his family a new lease of life on the land. o 118 mares on the property with 50% seasonal and 50% permanent. <ul style="list-style-type: none"> ▪ Most of the seasonal horses are from Victoria. 		

- Roughly 50% of the horses on the property are served by either Coolmore or Godolphin, 10% to Newgate.
 - Five full time employees, six additional casuals at peak.
- The high quality veterinary services provided through the Scone Equine Hospital are extremely important to the equine industry.
- The Hunter sees a lot of international clients, with local businesses providing a lot of expertise with client nominations.
- Recognition in the industry that if the two key studs are protected from the Drayton South mine, it will give the industry confidence and provide a lot of opportunity to grow.
- There has been no consultation with the Department or from Anglo American with the allied equine industries regarding the economic studies.
- A definitive 'no' decision on the mine needs to occur for the equine industry to have confidence to invest in the future – not continual decision making.
- A clear legislative planning approach is needed to define where mining can and cannot occur.
- Water quality is vital – both for stock water and crop/pasture irrigation.

Documents: Nil.

Meeting closed at 5:15pm

Notes of Briefing from with Anglo American

This meeting is part of the Determination process.		
Meeting note taken by Robert Bisley	Date: 14/10/2016	Time: 8:30am
Project: Drayton South Coal Project		
Meeting place: Drayton Mine		
<p>Attendees: <u>Commission Members:</u> Paul Forward (chair), Annabelle Pegrum AM, John Hann <u>Commission Secretariat:</u> Robert Bisley, David Koppers <u>Organisation and External attendees:</u> Anglo American ; Rick Fairhurst (Project Director), Darren Piston (GM Operations), Paul O’Laughlin (Technical Services Manager), Karrin Williams (Human Resources), James Bailey (Hansen Bailey), Daniel Sullivan (Hansen Bailey), Greg Houston (HoustonKemp).</p>		
<p>Meeting notes:</p> <ul style="list-style-type: none"> - Introduction by Chair of the Commission. - Anglo American made a powerpoint presentation outlining: <ul style="list-style-type: none"> o Drayton mine key facts; o Training operators, tradesmen and graduates; o Commitment to being part of the community; o Environmental performance record, including development of rehabilitation methods noting: <ul style="list-style-type: none"> ▪ \$61m work of rehabilitation remaining, requiring 50 full time employees. Completed rehabilitation 520Ha, with 468 Ha remaining; ▪ rehabilitation cost is provisioned via a bond; ▪ that if Drayton South was approved, the rehabilitation plan would need to be revised as void formations will be modified; ▪ final rehabilitation would be a combination of forested woodland and grazing (Muswellbrook Council has requested 70% woodland); ▪ approval of Drayton South would have a beneficial outcome for the overall rehabilitation of the Drayton mine area; and, ▪ they have not encountered significant overburden subsidence. o The detailed site history of exploration and approvals at Drayton, where the original EL lapsed in 1994 and was re granted in 1998. - Advised they had conducted a horse program on site (with stock horses) to establish if co-existence could occur. No issues had been encountered with a total of 10 horses observed at the peak of the program. The Commission requested further information and documentation on this program. - Commission requested graphs showing the impact of the downturn in operations from peak operations (expenditure, royalties, wages etc). - Anglo American advised that there are no coal resources between Drayton and Drayton South as they are different coal basins. - Final voids will be saline (c. 5000mg/L). Discussions with Macquarie Generation to use final tailings dam as fly ash storage for Bayswater Power Station. - Anglo American agreed that over the last few years, there has not been consultation with the studs. They advised that during the original application there had been some 31 meetings with the studs which were reasonably congenial with discussions around changes to reduce visual and water impacts. These meetings also included discussions about equine health and presentations were made by Dr Nicholas Kannegieter. Through these meetings Anglo American had sought to establish what the studs wanted addressed in the EIS. 		

- In 2010, the studs were more willing to work towards a balanced outcome. Initially it was only specific aspects of the project that the studs opposed, now it is the whole development.
- Anglo American believe that the studs keep looking for more and more issues – e.g. new visual impact locations.
- After the first 2013 PAC review and the recommendation of a minimum setback line, Anglo American proceeded with the application to determination, as at the time Anglo American believed the setback would make the project unviable. Revision of the plan completely behind the setback line would have required a revised mine project plan to establish the viability
- The current proposal is a completely new application and assessment. All components of the project have been reviewed with a significant reduction in capital expenditure and operating costs.
- Anglo American state that the reduction in capital has enabled the revised project (behind the setback line) to be viable
- The revised mine plan under the current proposal reduces the life of the mine from 27 to 15 years.
- The studs, when making submissions on the Upper Hunter Strategic Land Use Plan, required a 10km buffer.
- No point of the mine will be within 1km of the stud – this is a misunderstanding by the studs.
- All recommendations of Dr Lamb (PAC consultant) relating to visual amenity have been included.
- Trig Hill location (Godolphin) now considered critical to the visual presentation by the studs, actually only has usage limited to cattle)
- Aboriginal heritage located near Edderton Road realignment has been addressed by Anglo American successfully negotiating a land transfer with neighbouring property to avoid potential impacts (of some aboriginal heritage).
- The time delay to travel via Denman if Edderton Road was closed is approximately 3-4 minutes extra.
- Blasting will close Edderton Road for approximately 15min at a time once the mine gets close to the road. Blasting activities can be stopped for emergencies such as a horse needing to be taken to the Scone Equine Hospital.
- Mount Arthur Mine closes Denman Road for blasting which prevents access to Scone.
- Arrangements for the Exploration License extinguishment can be delivered through amendment to the Mining SEPP. This would be pending approval of the mine.
- Greg Houston made a presentation on his report noting that:
 - o The definition for CICs has been taken from the Upper Hunter CIC FAQs;
 - o Owners of broodmares and stallions are the real decision makers – not the studs – and are commonly based outside of the Hunter;
 - o Anglo American believe the owners are the key drivers to what will happen to the CIC if the mine is approved and where it will remain or be re-established in the Hunter;
 - o 23% of the Upper Hunter covers were from shuttle stallions;
 - o Anglo American believe that breeders do not move mares during breeding season, especially over long distances such as from Victoria to the Hunter – more likely to use shuttle stallions;
 - o Godolphin is a self-contained operation (Godolphin broodmares are covered by Godolphin stallions), if reputation risk occurred, it would have very little impact on the stud;
 - Godolphin wouldn't consider moving as it has two operations in the Hunter. It is unlikely to move away from its own stud operation and moving both their mare and their stallion operations would be very difficult.
 - o If the two key studs left the Hunter, it is unlikely that the rest of the industry would follow and the other studs would fill the void left by the two key studs with shuttle stallions. Shuttle stallions can cover the high end of the market left if Coolmore relocated;
 - o There is no CIC that exists within Victoria – only in Waikato in New Zealand;
 - o For Coolmore, the decision makers are the owners. As the clients of the stallions are the broodmares, Coolmore will want to stay near the largest broodmare population to be near its customers;
 - o Coolmore does not have a broodmare operation;

- The ACCC has stated that there are low barriers to entry to the cluster, with flexible supply of stallions;
- If either stud left, the shortage of high end stallions would be filled by shuttled stallions as stallions are highly mobile (and mares are less mobile). Because of this the supporting industries and broodmare farms would not follow. Other operators would buy the studs and stand their own stallions;
- There are no shuttle mares, broodmares travelling interstate to be covered is possible, but not the norm; and,
- Market can absorb the loss of available covers if the studs move by making the remaining stallions more active in doing additional covers than existing.

Rick Fairhurst advised that:

- He recognised that the studs leaving would be a very bad news story for the mine, as the mine has always been interested in and supported co-location. The Houston report showed that the studs were very unlikely to leave the valley and this was supported by the independent Bennett review.
- Underground mining across the site is not a feasible option as it would damage the coal seams and their structure is not suitable for underground mining.
- Globally, Anglo American will focus its future operations on diamonds, platinum and copper while selling off other assets as capital raising. The sale of the Australian Anglo American coal assets will also be used to raise capital. There are already some interested parties subject to a positive Drayton South determination.

James Bailey gave a presentation on the Environmental Impact Statement (EIS) findings noting:

- The broad depth of expertise involved in preparing the EIS which was very comprehensive and had the support of Government agencies.
- Air quality impacts were not considered to be in exceedances of acceptable standards. Prevailing wind patterns would also direct any dust in NW/SE directions and not impact on the studs.
- Noise modeling identified that noise is not an issue and that the highway will generate greater noise than the mine. Trucks are regulated to 108db – 15 truck / day past studs.
- There has not been one recorded cause of blasting leading to a horse injury.
 - Weather is the dominating factor for blasting delays and websites can be updated daily with the blasting schedules. Blasting times are locked down days in advance and blasting variations are usually known well in advance – weather is the biggest impact on blasting schedules.
 - Blasting times can be updated daily via their website.
 - Blasting size will diminish as extraction moves closer to the studs and the blasts can be modelled to suit conditions
 - Anglo American has proposed direct phone contact between mine manager and the studs.
- Lightning strikes are prevalent in the Hunter Valley and would present a much worse impact on the studs (diagram of strikes on studs was presented).
- The noise caused from blasting would be a much smaller grumble, substantially less in impact to a lightning strike.
- Edinglassie Stud north of Mount Arthur mine shows that mining and the equine industries can co-exist. The separation between the two properties is approximately 50m in some places. Stated that strong recent sales prices for Edinglassie confirm lack of impact by nearby coal mines
- The visual impacts are considered to be negligible.
- Water studies have been comprehensive and the water flowing into Saddler's Creek will be better than existing water quality. Saddlers Creek significantly degraded with high saline levels already. Final void is expected to remain dry for hundreds of years. No take or discharge to the river system proposed – water neutral. There would be no impact on productive aquifer.

- With regard to equine health, Dr Kannegieter concluded that organic particulate matter rather than coal dust is the primary problem. Expert advice determined that there will not be any health impact on the equine industry from the South Drayton mine extension.
- There is a recognition that the mine does not fully understand the details of the stud's equine businesses, however this is largely due to the studs not sharing information.

The meeting included a drive through the existing Drayton operations to view the coal pits to the southern extent of the mine and the rehabilitation work being undertaken. The tour also included a drive along the boundaries of the proposed South Drayton site and a walk to view the closest point that the mine would get to the studs - the southern extent of the mine.

Documents: Drayton South Coal Project. Presentation to Planning Assessment Commission 14th October 2016. Several site maps.

Meeting closed at 3:30pm

Notes of Briefing from the Department of Planning and Environment

This meeting is part of the Determination process.		
Meeting note taken by Robert Bisley	Date: 17/10/2016	Time: 3:15pm
Project: South Drayton Coal Mine		
Meeting place: PAC Office, 201 Elizabeth Street		
<p>Attendees: <u>Commission Members:</u> Paul Forward (chair), Annabelle Pegrum AM, John Hann <u>Commission Secretariat:</u> Robert Bisley, David Koppers, David McNamara, <u>Enter Organisation and External attendees:</u> Department of Planning and Environment; Howard Reed and Matthew Sprott.</p>		
<p>Meeting notes: Chair of the Commission provided a briefing on the site inspections.</p> <p>In response to questions from the Commission the Department noted that with respect to:</p> <p>Edderton Road closures:</p> <ul style="list-style-type: none"> - Closures are likely to occur between years 2 and 4. - A proposed Condition requires mandatory closures when blasting is within 500m of the road, however mines can blast closer (subject to prior approval) if they satisfy mitigation arrangements. Liddell Mine blasts within 50m of heritage item and substation. - The mine is committed to one blast a day and having an SMS warning service. - Realignment adds 2 minutes to trip time – assuming a 100kph travel speed. - Proposed stud Consultative Committee would be best placed and able to manage blasting issues obviating the need for specific conditions. - The Conditions requires an SMS notification network for blasting or changes to blasting. <p>Hydrological impacts:</p> <ul style="list-style-type: none"> - Preliminary report addresses water impacts and notes that DPE is satisfied. - Anglo American has yet to acquire the water licenses for the project, however DPI water has advised that sufficient licenses are available. - Following review of the mine plan, if approved, the void formation will be reviewed. - Water quality flowing into Saddler’s Creek will be of higher quality than existing stream 2800mg/L v 6000mg/L. <p>2010 Bickham project</p> <ul style="list-style-type: none"> - Was a unique project in the Upper Hunter. - Although the project was in close proximity to horse studs, the main complexities of the project were related to the impact on waterways. The impact on equine health was not a primary consideration of the former review, with studs located some 15km distant. - Coal seam is located in a major fault line “Peel Thrust” adjacent to the Pages River which is an important fresh water supply to the Hunter Valley. Could not guarantee that excavation would not drain the river. <p>Scope of brief to Bennett:</p> <ul style="list-style-type: none"> - Bennett’s scope was limited to commenting on Houston’s report (handout provided). - All previous reports have been criticised by the equine industry. 		

Environmental impacts on the horse studs:

- No demonstrated impacts of the mine on equine health. The former PAC review report recognised that if the mine was located elsewhere in the valley it could proceed.
- Marginal locality impacts from air, noise and light.
- The impacts meet the relevant criteria. The Department is bound by policy and lack of contrary evidence.
- Horses are not more susceptible to respiratory issues than humans. Not demonstrated to impact equine health.
- No physical limitations should be set to prevent the studs operating in the Hunter.
- No sound economic reasons for the studs to vacate the site.
- The Department did not give specific attention to other businesses such as Edinglassie.
- Material in mine dust is crustal and does not contain microbes. Exception is topsoil which is stripped using low impact methods.

Exploration license termination

- An amendment to the Mining (SEPP) could be made to carry through with the applicant's agreement to give up the exploration license.
- Not been done to date due to a lack of certainty regarding the PAC's determination of the project. No value to surrender without an approval.
- Anglo American has committed to surrender in the Response to Submissions.

Adaptive management

- Anglo American has developed a baseline for how it intends to manage the mine over the life of the project.
- Conditions of consent establish the maximum baseline permitted.
- As the highest impacts of the mine on the studs will be in year 13, Anglo American has agreed to adapt and adopt any practices that could reduce impacts on neighbours that have been developed since commencement of the project.

Growing adversity between mine and studs

- Recognition that within initial submissions, the studs were willing to work with Anglo American.
- Recent submissions by the studs have been in complete opposition to Drayton South.
- Studs claim to have a special case, however, no evidence was provided to the Department that these neighbours should be treated differently to any other neighbor.

Flow on industries

- Department assessed a number of submissions made by associated industries but never met with individuals from associated equine industries.
- Department met with the HBTA as the peak representative body of the equine industry.
- Employment in both (mine and equine) flow on industries were discounted in the Department's assessment as they were equally important.

Coolmore and Godolphin leaving the Hunter

- From everything the Department has considered they see no reason why the two studs would leave the Hunter Valley and conclude that there are suitable alternative stud sites within the Hunter Valley if either stud was to seek an alternative site within the Hunter.
- The studs would not be forced to leave and there is no way to prove that they would move.
- No grounds for compensation as the studs are not considered different to any other neighbours.
- 'Reputation' was not previously a consideration until the second PAC review. Not something that is normally considered as part of the assessment process.
- Studs primary aim is to have an exclusion zone established.
- The Department noted that there are some 10 villages located within 1-2 kms of open cut coal mines in

the Hunter Valley. Some are growing, others are not.

Consultation with Singleton and Upper Hunter Council

- Singleton has made no submission on the previous review.
- Upper Hunter Council:
 - o Made little comment on the previous PAC review and determination.
 - o Position has since changed and Council opposes any mine that impacts on the equine industry.
- Department does not have a policy regarding buffers and believe it is not appropriate to set a specific buffer that would apply to all developments. Many variable factors impact on what is an appropriate separation distance and current policy addresses this. No two sites are the same.

Documents: DPE scope of brief to Bennett.

Meeting closed at 5:15pm

Notes of meeting with Department of Planning and Environment

This meeting is part of the Determination process.		
Meeting note taken by Robert Bisley	Date: 31/10/2016	Time: 11:00am
Project: Drayton South Coal Project		
Meeting place: Planning Assessment Commission office, Level 3, 201 Elizabeth Street.		
<p>Attendees: <u>Commission Members:</u> Paul Forward (chair), Annabelle Pegrum AM, John Hann <u>Commission Secretariat:</u> Robert Bisley, David Koppers, David McNamara <u>Department representative:</u> Monica Gibson (Director Regions – Hunter and Central Coast)</p>		
<p>Meeting notes: <i>The meeting was a phone conference between the Planning Assessment Commissioners and Secretariat located at the Elizabeth Street office and the Department of Planning and Environment Newcastle office.</i></p> <p>Introduction by Chair of the Commission.</p> <p>Monica provided an overview of her role as Director responsible for the delivery of the Hunter and Central Coast Regional Plans and noted that:</p> <ul style="list-style-type: none"> - The <i>Hunter Regional Plan 2036</i> (Regional Plan) was exhibited between November 2015 and March 2016. - The Regional Plan was prepared with: <ul style="list-style-type: none"> o moderate community input; o partnership with other community agencies; o consultation with the inter agency Senior Officers group; o support of the Cabinet Standing Committee on Infrastructure in September/October 2016. - The Regional Plan was released by the Minister for Planning and Environment on 14 October 2016. The release of the Regional Plan was accompanied by amendment of Section 117 Direction 5.1 Regional Planning and is a non-statutory plan. The implementation through a s117 Direction means that the Regional Plan will need to be considered when preparing Planning Proposals - The companion document to the Regional Plan is the <i>Hunter Regional Plan Implementation Plan 2016-2018</i> (Implementation Plan). - The Implementation Plan will be reviewed annually and delivered by the Hunter Development Corporation. - The Hunter Development Corporation role and function is being considered for restructure however any new role or structure will continue to provide for the delivery of the Regional Plan. - The Regional Plan is Government Policy and will be the primary land use document for the Hunter with the Strategic Regional Land Use Plan for the Upper Hunter to remain in place. However, the Regional Plan should be read in conjunction with the rest of the Government’s strategic documents to be presented with a complete picture of the Government’s policy position. - Implementation strategy outlines: <ul style="list-style-type: none"> o Initiatives and strategies; o Responsible/partner agencies; and o Timing. - The Local Government Narratives within the Regional Plan provide directions for Councils to manage their local areas. The ‘regional priorities’ are matters to be considered when prepared planning proposals and local strategies. - The ‘regional priorities’ represent government policy but should be considered in relation to other relevant policies - not in isolation. 		

- The Department of Premiers and Cabinet has been involved in preparation of the Regional Plan. They have been consulted during preparation of the Regional Plan and represented within the Senior Officers Group.
- The draft Upper Hunter Economic Diversification Plan is being prepared by the Department of Premiers and Cabinet.
- A number of submissions were made by key stakeholders on land use conflict during exhibition of the draft Regional Plan. Each of the submissions and a summary of the consultation is available on the Department's website.
- The Department of Industry, Skills and Regional Development have had input on the tourism components of the Regional Plan.
- The Office of Agriculture, Sustainability & Food Security also contributed to the Regional Plan.

Documents: N/A

Meeting closed at 11:45am

Notes of meeting with Office of Environment and Heritage (OEH)

This meeting is part of the Determination process.		
Meeting note taken by Robert Bisley	Date: 29/11/2016	Time: 10:00am
Project: Drayton South Coal Project		
Meeting place: Planning Assessment Commission office, Level 3, 201 Elizabeth Street.		
<p>Attendees: <u>Commission Members:</u> Paul Forward (chair), Annabelle Pegrum AM, John Hann <u>Commission Secretariat:</u> Robert Bisley <u>OEH representatives:</u> Robert Gibson, Richard Bath, Nicole Davis</p>		
<p>Meeting notes:</p> <p><i>The meeting was a phone conference between the Planning Assessment Commissioners and Secretariat located at the Elizabeth Street office and the OEH Newcastle office. The Commission provided OEH with a list of questions prior to the meeting.</i></p> <p>Introduction by Chair of the Commission.</p> <p>Robert Gibson, Richard Bath and Nicole Davis identified their involvement with the Drayton South project and noted that:</p> <ul style="list-style-type: none"> - OEH's recommendation to the Department of Planning and Environment (DPE) was for the issue of standard SEARs for assessing Aboriginal and Cultural Heritage within Drayton South. Non-standard SEARs are issued on a project by project basis and were not issued for this project. - It is OEH's preferred approach for applicants to undertake as little disturbance as possible of Aboriginal and Cultural onsite heritage to avoid disrupting artifacts prior to approval stages. OEH takes a precautionary approach by not requiring subsurface disturbance for projects that have not been approved. - OEH does not request testing or salvage prior to project approval. - If the project is approved, any Aboriginal and Cultural Heritage artifacts will be 'conserved by record' in accordance with site disturbance protocols identified through the SEARs. OEH acknowledged that this meant that with the exception of significant findings such as human remains, the artifacts/sites will be destroyed. - OEH identifies a low likelihood of burials within the South Drayton site. The Commission drew attention to submissions suggesting the project area may have been the site of a massacre. OEH undertook to review this matter and respond. - The Commission alerted OEH to the submission of Dr Tim Owens regarding the Aboriginal Heritage assessment. OEH undertook to review the submission and respond. - The Commission alerted OEH to the submission by Sharon Veale related to non-indigenous heritage in the area. OEH advised that there may not have been consideration given to European heritage in the EIS assessment and undertook to review the submission and respond. - In their view, the Applicant's Aboriginal and Cultural Heritage component of the Environmental Impact Statement (EIS) was comprehensive and thorough when assessing impacts on the site. When reviewing the EIS, OEH did not identify any particular issues of concern. - As an indication of the quality of the assessment, OEH stated that 23 of the 25 registered Aboriginal parties made "signed off" on the project. 		

The Commission asked OEH if the DPE had requested any additional response from OEH in light of queries raised in the PAC Review of November 2015. OEH confirmed that no request was made and that they had not been consulted by DPE on the 2015 PAC review report.

Documents: N/A

Meeting closed at 10:35am

Notes of meeting with Environmental Protection Authority (EPA)

This meeting is part of the Determination process.		
Meeting note taken by Robert Bisley	Date: 29/11/2016	Time: 11:00am
Project: Drayton South Coal Project		
Meeting place: Planning Assessment Commission office, Level 3, 201 Elizabeth Street.		
<p>Attendees: <u>Commission Members:</u> Paul Forward (chair), Annabelle Pegrum AM, John Hann <u>Commission Secretariat:</u> Robert Bisley <u>EPA representative:</u> Michael Howat (Head Regional Operations Unit – Hunter), Bill George (Senior Operations Officer), Anthony Savage (Manager Air Technical Advisory Services Unit), Michael Johnson (Senior Technical Policy Advisor).</p>		
<p>Meeting notes: <i>The meeting was a phone conference between the Planning Assessment Commissioners and Secretariat located at the Elizabeth Street office and the EPA located in Newcastle and Sydney offices. The Commission provided EPA with a list of questions prior to the meeting.</i></p> <p>Michael Howat, Bill George, Anthony Savage and Michael Johnson identified their involvement with the Drayton South project and noted that:</p> <ul style="list-style-type: none"> - When assessing the Drayton South coal mine, the EPA considered that the reduced mine footprint from the former PAC Determination would result in reduced dust impact. - The EPA is satisfied with the sensitive receiver locations identified within the Applicant’s Environmental Impact Statement (EIS) and confirmed it did not consider requiring the applicant to adopt additional sensitive receptors to account for impacts on humans and horses locate outdoors. - When assessing the project, the EPA did not take into consideration the health impacts of dust on horses because they are not qualified to comment on equine health. They noted that the Applicants specialist had said that there was no impact on horses and that DPE had accepted this in its assessment. - By way of example, it would not typically consider additional ‘sensitive receptors’ in an assessment. An exception was consideration of fluoride levels when assessing impacts on stone-fruits because impact can occur at lower levels than for other receptors. - The possible air quality impacts were modelled on the worst case scenario years. It is general industry practice to not model every year. The EIS undertook a contemporaneous assessment. - The EIS found that there would be a number of exceedances above the PM10 24 hour average of 50ug/m3 criteria over the life of the mine. In their opinion the assessment was undertaken appropriately & reasonably. <ul style="list-style-type: none"> o Sensitive receiver 226B, Hollydene Estate, the worst affected receiver, was predicted to receive 4 days of exceedance annually. - The Applicant is always best placed to assess air quality impacts due to access to more detailed onsite knowledge and modelling capabilities. - The EPA undertook to review worst case mine & background levels over the life of the project and respond. - The EIS identifies a number of mitigation measures to reduce the impacts on air quality (including the Dust Stop Program). The EPA agrees that these mitigation measures are achievable, though it assumes the mine plan and associated activities are undertaken as proposed. - Drayton South’s modelling and mitigation measures build in a level of ‘conservatism’. - No exceedances are permissible for PM10 24 hour average of 50ug/m3 under NSW EPA regulations. 		

- The nature of mining and issues with air quality mean that a certainty of ‘no exceedances’ can never be given when assessing dust. This is related to unpredictable events (e.g. unforeseen weather patterns, dust storms, bush fires etc)
- The general practice is that any predicted and ‘accepted’ exceedances are a matter for the Department of Planning (DPE) in their assessment.
- For property acquisition, the DPE, under the Integrated Mining Policy, has a threshold of 5 exceedances per annum.
- When blasting, created blast plumes are an offense, when the fumes leave the property.
- The EIS has modelled the impacts of fumes and identified that the potential worst case impacts would happen when blasting at night, due to meteorological conditions. Blasting at night is not proposed and the potential fume impacts are therefore considered to be manageable.
- It is generally one-off exceptional atmospheric circumstances that cause blast fume exceedances.
- The *National Environment Protection (Ambient Air Quality) Measure* (NEP) has been adopted on a State by State basis across Australia. The EPA have not yet adopted these standards and therefore the standards do not yet impact on the assessment criteria of this site.
- The *Industrial Noise Policy* has a detailed methodology of how an assessment of a project should be undertaken.
- Mitigation measures are only triggered if the noise limit standards are exceeded.
- The EPA’s submission during the Review stage did not identify any issues with noise.
- The Commission drew attention to submissions by Dr Peter Stephenson and Mr Frank Butera of ARUP. EPA and undertook to review these submissions and respond.
- Soil and Biophysical Strategic Agricultural Land mapping is not within the EPA’s remit and are managed by other NSW Government departments.
- In their view, the EIS has adequately addressed water discharges from the proposed Drayton South coal mine. The EIS identifies that all water discharges will be contained on site and mitigated by standard controls.

The Commission asked if the DPE had requested any additional response from EPA in response to issues raised in the PAC Review of November 2015. EPA confirmed that they had not been consulted by DPE on the 2015 PAC review report as part of this assessment.

Documents: N/A

Meeting closed at 12:15pm

APPENDIX 4

Public Meeting Summary

Date and Time: Wednesday 16 and Thursday 17 of November 2016
Meeting place: Muswellbrook Conservatorium of Music
Attendees: <u>Commission Members:</u> Paul Forward (chair), Annabelle Pegrum AM, John Hann <u>Commission Secretariat:</u> David Koppers, Aaron Brown
List of speakers <u>Wednesday 16 of November:</u> Rick Fairhurst & Darren Pisters (Anglo American), Joe Clayton, Cr Kiwa Fisher (Upper Hunter Shire Council), Geoff Stevenson, Nathan Tinkler, Georgina Woods (Lock the Gate Alliance), Shane Davey, Glenn Burge (NSW Trainers Association), Phil Waters, Dr Cameron Collins with Owen Droop (President Hunter Thoroughbred Breeders Association), Tom Magnier and Ken Barry (Coolmore), Jonathan D'Arcy, Dr Brett Tennett-Brown, Bryan Chapman, Bev Smiles (Hunter Communities Network), Rod Carr, Michael White, Anne-Maree McLaughlin, Robert McLaughlin, Tim Buckley (IEEFA), Sam White, Kylie Woodham, Kate Hutch, Charles Jennings (Goldners Horse Transport), Peter Scott, Gus Mather, Dr James Whelan (Environmental Justice Australia), Anthony Cummings, Peter O'Brien (Segenhoe Thoroughbred Champions), Heather Ingram, Dr Pam Hazelton, Peter Hodges, Henry Plumtre (Godolphin), Brian Nutt, Cindy Englebrecht, Nick Hodges, Dr Peter Bacon, Allen Barry, Greg Houston, Angus Adkins (Scone Equine Hospital), Vin Cox, Brad Hinze, Sharon Veale, James Heddo, Daniel Krzanic, Kevin Taggart, Dr Tim Owen, Steve Tilfe and Scott Franks. <u>Thursday 17 of November:</u> Jill Stowe, Catherine Chicken, Grantley Blake, Adam Cook, Brett Keeping (Upper Hunter Wine Makers Association), Tony Williams, Craig Benjamin, Lisa Manning, Katrina Partridge, Michael Wright, Greg Leys, Paddy Oman, Timothy Duddy (NSW Farmers), Dr Peter Stephenson, Mike Kelly (Muswellbrook Chamber of Commerce), Linda Eaton, Verna Metcalfe, Mark Flannagen, Frank Butera, Tom Reilly (Thoroughbred Breeders Australia), Darryl Guihot and Andrew Beatty.
Meeting Notes Mining <ul style="list-style-type: none">• Recognition that mining has been a strong economic driver within the Hunter Community.• There are 400 mining industries in the Hunter Valley area.• Mining is a significant community contributor through sponsorship and royalties.• Drayton South will employ 500 people and contribute to other industries within the region.• The Drayton workers have been forgotten in this process.• Coexistence is extremely important to the mine, but division is being pushed by the equine industry. The mine does not want to see the studs leave.• The rehabilitation bond proposed is inadequate and should be around \$120m.• AngloAmerican will not operate the mine should it be approved. Equine Industry <ul style="list-style-type: none">• Coolmore and Arrowfield created the stallion industry within the Hunter Valley. They play a central role in the cluster. Coolmore and Godolphin have become the epicentre of the cluster. New entrants from the last 5 years are very small or no longer operating.

- Reputational risk of the mine considered negligible when there is enough other bad press within the equine industry (drug use within the industry, betting scandals, etc).
- Reputational risks posed by the project are not believed to be considerable enough to make the studs move or impact on their viability.
- Hunter Valley is the biggest breeding region in Australia and second globally to Kentucky, US. 80-90% of annual Australian yearling sales are from Hunter Valley stallions.
- The environmental impacts of dust and blasting are real and will fatally affect the operations of Coolmore and Godolphin and force them out of the Hunter Valley.
- 640 jobs in the equine industry at risk if Coolmore and Godolphin left the Hunter – it would fragment the cluster.
- The equine industry will continue to develop within the region but will be severely stunted if Coolmore and Godolphin leave. If Coolmore or Godolphin leave, there aren't any other existing studs that could fill the void left by their departure. There is an understanding within the industry that there are no global players large enough to replace Coolmore or Godolphin's departure.
- Coolmore has already started looking for potential properties in Victoria but is committed to the process and seeing a resolution.
- Studs have been consistent in their opposition to the Drayton South proposal since 2012.
- The Australian bloodstock reputation is growing as having a larger presence on the world stage. The reputation of the farms is paramount to the sale and purchasing of horses.
- A number of local broodmare stock farms and adjustment businesses are heavily dependent on the services provided by Coolmore and Godolphin.
- The Drayton South proposal is delivering uncertainty to the industry (thoroughbred and associated industries) and stifling future potential investment.
- The presence of Coolmore and Godolphin within the Hunter Valley has allowed the development of several secondary industries including the Scone Equine Hospital (which is the largest equine hospital in Australia and Southern Hemisphere).

Consultation

- The equine industry has been consulted during preparation of the EIS by the EIS experts.
- Mine is committed to co-existence by minimising and mitigating impacts.
- Supporters of the mine are considered to be the majority. The equine industry is a vocal minority and biased media.
- In August 2015, the Department of Planning wrote that Coolmore and Godolphin are important to the Hunter Valley and should be protected.

Land Use

- Farming and mining are both important primary industry and 'can' co-exist together.
- Edinglassie used as an example of coexistence, however it is owned by BHP and has a clear conflict of interest.
- Clear conflict of land uses between the mine and surrounding land uses.
- Previous reviews and determinations have established that coexistence in such proximity is not possible.
- The viticulture industry is facing similar land use conflict from the mining industry in the Hunter Valley.
- The Hunter Valley's land use conflict has been recognised globally.

Water

- Water impacts cannot be addressed via condition and further consideration requirements.
- Assessment of management scheme and voids have been done based on the most favourable outcomes and not worst case.
- The project has been assessed in isolation.

- Surface and groundwater are integrated and can't be assessed independently.
- Groundwater and spoil assessment are inconsistent and done in isolation and not a combined assessment.
- Salinity will increase beyond reported levels.

Blasting/Noise

- The mining industry has taken steps to mitigate noise concerns in consultation with the equine industry.
- A horse could do significant damage to a human if startled by the sounds that would be emitted from the Drayton South application.
- Horses are highly susceptible to loud noises like lightning strikes. Once a horse has been spooked, flight instincts can lead to it hurting itself or its handler.
- Noise and blast assessment is incomplete and the information available is not adequate to establish impacts so they cannot be relied upon.
- There are potential operational risks for covering horses during blasting.

Dust

- The mining industry has taken steps to mitigate dust concerns in consultation with the equine industry.
- Studs in sandy hollow had mine trains go through it with no evidence of dust impacts on horses.
- There are wider dust impacts that have not been adequately addressed within the proposal. Jerrys Plains and Appletree Flat are also likely to be impacted. Producers of agricultural produce within these areas will also have their product impacted by the proposed increase in coal dust caused by Drayton South.
- Particulates impact both healthy and ill people, and there is no defined level as to when these particulates start to have adverse impacts. Insufficient details to determine if South Drayton will successfully mitigate dust impacts through adaptively managing dust impacts.
- Existing dust impacts within the Hunter has already lead to rainfall roof runoff being too contaminated with dust for drinking.
- The Upper Hunter is at critical air quality levels already. The EIS studies haven't taken into account the cumulative impact from exist air quality issues. The background levels of dust have not been taken into consideration.

Visual

- Mine has been assessed and is not within the view of the studs.
- Perception and visual presentation is extremely important to the equine industry when entertaining clients.
- The two land uses of a stud and mine are completely contrary.
- Scenic values are important to tourism, viticulture and the equine industry.

Environment

- Fragmented woodland areas on the site.
- Only 81% of biodiversity offset credits and 21% of fauna offset credits accounted for.
- The proposal has not indicated how the topsoil will be disturbed without leading to the development of sodic soils. Sodic soils disperse on rainfall and form a floc that does not settle.
- 3% of NSW's Biophysical Strategic Agricultural Land was formerly located within the footprint of the mine. This was 218ha when the Mining and Petroleum Gateway Panel approved the project, reduced to 78ha by May 2015 and since reduced to zero.
- Scenic value of the hunter is important and should be protected.
- Cultural landscape has not given consideration to the historical cultural landscape. The heritage assessment is expected to be undertaken after consent has been issued – this is not best practice.

- There has been limited aboriginal culture values, physical and non-physical, assessment undertaken for Drayton South. There is a significant aboriginal cultural history for the site that was not taken into consideration when assessing the project.
- The local river systems no longer have aquatic life due to the impact of mining.

Economic

- Under current coal market prices, the project would pay itself off within 2 years.
- Mining is important to the NSW economy.
- If the mine was to proceed and coal stays above \$70/tn, the mine would contribute more tax and royalties than Coolmore and Godolphin combined.
- Approval of the mine is considered short term economic gain for long term damage to the equine industry.
- Regional economies need economic diversification however the approval of the mine could decimate the equine industry within the Hunter.
- Hunter Valley vendors made up 56% of the Magic Millions listed sellers and 63% of sales were from the Hunter Valley.
- Houston's report:
 - The reasons outlined within the report for stud's departure are incorrect.
 - Statements within the Houston and Bennett reports need further investigation. The reports were made based on assumptions with no consultation. The conclusions are not reflective of what happens on the ground.
 - The thoroughbred industry is not a transient industry as expressed within the report.
 - A fundamental flaw was the industry clustering around the mares and not the stallions – this is incorrect.
 - The report doesn't represent the fundamentals of the industry. The report represents sound general economic theory but does not reflect the realities of the industry thoroughbred model.
 - Houston and Bennett state that stallions are substitutable whereas premium stallions are extremely rare and expensive.
- Development of the critical industry cluster relies on research and development, pools of world class talent, capital investment and customers who recognise the importance of the equine cluster. Compromising the cluster by approving the development could end this development.
- It is not in the equine industry's interest to leave on economic grounds, as the Critical Industry Cluster would survive and not collapse in Coolmore and Godolphin were to depart.

Planning Process

- The community deserves an outcome based on planning outcomes.
- There has been limited strategic process by Government to control the impacts being mining and equine industry. Need for a limit to the expansion of mining otherwise there will no longer be the ability to coexist.
- The Strategic Regional Land Use Plan and Hunter Regional Plan have done nothing to prevent land use conflict.
- As the equine industry within the region is identified as a Critical Industry Cluster, additional protection is required through buffers. The Planning Assessment Commission should be responsible for enforcing the protection of the Critical Industry Cluster.
- Minister and Premier have previously stated that 'mines cannot go everywhere'.
- If the decision is to not proceed, the decision needs to be a definitive to avoid the project being resubmitted. The planning process needs to provide certainty to the area.
- The Department's report:
 - Is not considered to be objective and has not equally weighed statements from Coolmore with those of Anglo America.

- Frustrated with the Department's assessment of the project and limited assessment of cumulative impacts.
- Does not adequately address why the consent was allowed to lapse in 1991. This sent a message to primary producers and local residents that the mine would not be proceeding.
- SEPP Rural lands introduced the protection of state significant agricultural land. It is believed that the South Drayton, Coolmore and Godolphin sites are of a high enough standard that they could be included within this protection.

Equine Health

- Kannigeiter's report ignored dust impacts from coal on horses. In addition, the report ignored a number of relevant sources on human and equine health. Fine particles, such as coal dust, can enter the lower airway tract of horses and cause airway disease (IAD).
- There is insufficient evidence to definitively state that there will not be health impacts on the horses from the Drayton South coal project. Cumulative impacts have also not considered when assessing the health impacts on horses.

APPENDIX 5

Noise and vibration, dust and lighting impact mitigation measures proposed by the Applicant (Source: EIS):

Visual

- Mine planning and design to ensure that the PAC (2013) recommended ridgeline was maintained and that all OEAs are developed and shaped so that they remain shielded behind this ridgeline from receptors in the southern and western sectors;
- Tree screens have been planned (and are well advanced) along the Golden Highway, along the ridgelines and the Edderton Road realignment to improve amenity and minimise views of the Project from various vantage points;
- Progressive rehabilitation of OEAs and disturbed areas;
- Use of compatible tones for building and cladding colours;
- Use of low lux lamps and direction of fixed lights towards the ground, where practical;
- Implementation of work procedures related to the use of mobile lighting plants to avoid potential for adverse off site lighting impacts.

Noise and vibration

- Fitting mobile plant with leading practice exhaust silencers and sound attenuation devices;
- Operator training and careful control of machine speed to avoid dozer track noise during the night or when track noise is likely to be audible at any sensitive receptor;
- Blasting should not occur closer than 500m to any occupied or sensitive building or structure unless adequate controls are implemented to minimise the risk of fly rock;
- A blast monitoring program which representative of the closest sensitive receptors to ensure compliance with the relevant blast criteria;
- Coordination of blasting schedules with adjoining mines to avoid any potential for simultaneous blast events;
- Notification of blast events to sensitive receptors upon request and on the Anglo American website prior to the blast event and establishment of appropriate signage, if required;
- Blast events will be designed and conducted at a time of day to meet the relevant overpressure and ground vibration criteria;
- Prior to commencement of mining operations of a dilapidation assessment will be undertaken for all identified heritage items listed in table 7-17.

Air quality:

- Implement available measures to keep visible dust as low as possible from offsite at all times;
- In known or suspected high dust area, production processes will be modified to ensure effective management of visible dust levels;
- Topsoil clearing restricted to a single strip ahead of mining, where practical and water spraying applied;
- Water tankers and road maintenance equipment to be utilized to minimise dust emissions from roads and work areas;
- Blasting is carried out using gravel stemming or crushed coal, which contains blast within the ground and minimises dust;
- Rehabilitation of mined areas is progressively achieved;
- Major haul roads to be maintained with chemical dust suppressant;
- Real time monitoring of air quality emissions;
- Overburden drills are equipped with equipment to minimise dust generation;
- The dragline is operated to minimise dumping height so there is minimal free-fall of material;

- Overburden is dumped in low level lifts, with outer berms maintained by dozers;
- Water application on haul circuits when dumping overburden from trucks;
- Three sided enclosure from ROM bin;
- The CHPP is operated with dust suppression sprays at the dump hopper and transfer points as well as coal stockpiles;
- Vegetative wind breaks from coal stockpiles;
- All conveyors will be enclosed with walls and water sprays used at transfer points;
- Real time meteorological monitoring station with predictive software capabilities;
- A network of real time monitors recording PM10 and PM2.5 along with TSP units and dust deposition gauges.

Communication:

- Anglo American also proposed to develop and implement a horse stud management and communication protocol. This protocol would be established to ensure that all environmental monitoring and reporting is effectively coordinated and communicated to the horse studs. The main objective of this protocol will be to maintain confidence in the operation of the Project by confirming that all environmental criteria are being met as predicted in [the] EIS.