



Planning &
Environment

**STATE SIGNIFICANT
DEVELOPMENT ASSESSMENT
Drayton South Coal Project
(SSD 6875)**



Final Assessment Report
Section 89E of the
Environmental Planning and Assessment Act 1979
September 2016

Cover Photo:

Photo of stock horse mare and foal on rehabilitated mined land at Drayton Mine, with the mine and Bayswater Power Station in the background (source: *Drayton South Coal Project Environmental Impact Statement 2015*)

© Crown copyright 2016
Published September 2016

NSW Department of Planning and Environment

www.planning.nsw.gov.au

Disclaimer:

While every reasonable effort has been made to ensure that this document is correct at the time of publication, the State of New South Wales, its agents and employees, disclaim any and all liability to any person in respect of anything or the consequences of anything done or omitted to be done in reliance upon the whole or any part of this document.

EXECUTIVE SUMMARY

This final assessment report for the Drayton South Coal Project has been prepared by the Department of Planning and Environment (the Department) for consideration by the Planning Assessment Commission (the Commission). It should be read in conjunction with the Department's preliminary Environmental Assessment Report dated August 2015.

On 12 May 2015, Anglo American Metallurgical Coal Pty Ltd (Anglo) lodged a development application and Environmental Impact Statement for the Drayton South Coal Project (the project). This proposal is the second application lodged by Anglo seeking approval to develop a mine within its Drayton South coal exploration licence and follows the refusal of a previous application in October 2014. The current project involves substantial changes from the original project including adopting the key recommendations from the Commission's previous review and determination.

On 13 August 2015, the Minister for Planning requested the Commission to carry out a review of the project. The Department's preliminary Environmental Assessment Report recommended that the project be approved, subject to strict conditions. The Commission completed its Review Report in November 2015. It recommended that the project not proceed due to the reputational risks posed by the project for the neighbouring Coolmore and Woodlands thoroughbred studs and the risk that the two studs would leave the Upper Hunter region, thereby resulting in real risks to the region's Equine Critical Industry Cluster (CIC) that outweigh the short term benefits of the project.

The Commission's Review Report made seven recommendations in total. Three of these related to the project and essentially recommended that the proposed open cut mining on the Drayton South site should not proceed. The remaining four recommendations relate to the NSW planning framework and provide the Commission's views on ways to improve current NSW Government policies and decision making processes.

Anglo responded to the Commission's Review Report in May 2016. This response included an expert report from Dr Greg Houston, which sought to analyse the likelihood that the studs would leave the Upper Hunter and the resulting economic impact on the Equine CIC if they did. The Department provided the Hunter Thoroughbred Breeding Association (HTBA) and Coolmore and Woodlands studs with an opportunity to comment on the Commission's Review Report and Anglo's response (including Dr Houston's report). The Department also commissioned its own independent reviews of Dr Houston's report and the information contained in responses from the HTBA and Coolmore and Woodlands studs, which were undertaken by Professor Jeff Bennett of the Australian National University.

This Final Assessment Report outlines and considers the history of the Drayton South proposal, the seven recommendations and other matters identified in the Commission's *Drayton South Coal Project Review Report* of November 2015, Anglo's response to that report, the thoroughbred industry's further responses and the independent reviews of key information inputs undertaken by Prof Jeff Bennett. The assessment also considers the large number of submissions both for and against the project (over 4,300 received during exhibition and by the Department's count, over 18,000 received by the Commission), which were made by Government authorities, members of the public and special interest groups.

The Department considers that the assessment process for the project has been extensive, detailed and informed by numerous experts in a range of fields. The Department has consulted widely with the local community and industry (both for and against the project). The Department has paid careful consideration to the opinions of the local and broader community and key stakeholders in the thoroughbred industry. It has also considered the advice and extensive technical analysis of relevant Government agencies and the recommendations made by the Commission.

Overall, the Department's position remains that, subject to implementation of mitigation and management measures proposed either by Anglo or the Department's assessment, the project meets all relevant NSW Government policies and assessment criteria. The Department considers that the proposed mine plan provides an appropriate balance between the efficient recovery of a significant State resource and the protection of an important agricultural industry.

The Department recommends that the Commission considers the project having regard to all evidence presented to date and in consideration of the overall merits of the proposal, the matters identified in the relevant legislation and current Government policies that govern assessment of development proposals in New South Wales.

1.0 INTRODUCTION

This Final Assessment Report (the report) for the Drayton South Coal Project (SSD 6875) (the project) has been produced for the consideration of the Planning Assessment Commission (the Commission). It should be read in conjunction with the Department's preliminary Environmental Assessment Report (preliminary report) dated August 2015.

Together, these two reports comprise the Department's environmental assessment of the project and have been prepared to satisfy the requirements of both the *Environmental Planning and Assessment Act 1979* (EP&A Act) and, in line with the Commonwealth's accreditation of the State assessment process, the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act).

This report considers the:

- recommendations made in the Commission's *Drayton South Open Cut Coal Project Review Report* dated November 2015 (the Commission's Review Report);
- additional information received from Anglo American Metallurgical Coal Pty Limited (Anglo) in response to the Commission's Review Report and the Department's proposed conditions of consent, including an Expert Report by Dr Greg Houston dated 29 March 2016;
- a peer review of Dr 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;
- all public, special interest group and agency submissions made on the project, including supplementary submissions made by the Hunter Thoroughbred Breeders Association (HTBA), Coolmore Australia and Darley Australia following Anglo's response to the Commission's Review Report; and
- a further peer review of the HTBA, Coolmore Australia and Darley Australia supplementary submissions, undertaken for the Department by Prof Jeff Bennett and dated 21 August 2016.

2.0 BACKGROUND

Both the preliminary report and the Commission's Review Report express confidence that the project can be carried out generally in accordance with all relevant environmental impact assessment criteria. That is, the standards and practices established by NSW Government policies for the regulation and control of noise, air quality and blasting impacts from open cut coal mining can be met by the project.

The Commission's Review Report gives considerable attention to examining the likelihood that the project would meet current NSW Government policies and relevant assessment criteria, but concludes:

The Commission has found that the impacts of the mine would generally be accepted in another location in the Hunter Valley. The mine is largely predicted to meet standard blasting and noise criteria and would not exceed the air emission criteria at the surrounding residential receivers sufficiently often to warrant granting acquisition options for those dwellings.¹

Therefore, the key remaining consideration for the project is the extent to which the project would result in unacceptable impacts on the neighbouring Coolmore and Woodlands studs. In essence, the proposal comes down to the compatibility of these two important industries in this location and whether the project would result in real impacts to the viability of the studs and broader equine industry in the Upper Hunter region.

Both Anglo and the two neighbouring studs have provided detailed descriptions of the history of their industries in the local area during the assessment process. This history provides useful context for the final assessment of the project, given that land use compatibility remains the key outstanding issue. A summary of the key details of this extensive history is provided in Sections 2.1 and 2.2.

¹ Commission's Review Report, p. 47.

2.1 History of Mining and Equine Operations in the Drayton South Area

Both the coal mining and equine industries are highly important industries for the Hunter region. The Hunter thoroughbred industry is one of the largest and most important thoroughbred breeding clusters in the world, along with Newmarket in the United Kingdom and Kentucky in the USA. The region produces around half of all thoroughbred horses in Australia, and around 70% of Australia's thoroughbred horse exports. The industry generates around \$300 million in income each year, including horse exports estimated at over \$100 million. The industry is also a significant employer, directly providing jobs for around 1,100 people in the region. Coolmore alone employs up to 150 people during the breeding season.

Horse breeding has been recorded at Coolmore as early as 1824, shortly after European settlement of the area, and at Woodlands since the 1880s. Since those dates, breeding and the sale of horses from the Coolmore and Woodlands properties has continued under different owners and at different scales. However, it was with the purchase of Woodlands by the Ingham brothers in 1985 and Arrowfield (now Coolmore) by John Messara in 1986 which commenced the development of these two studs into the world class operations that they are today.

Darley (Sheikh Mohammed bin Rashid Al Maktoum's international thoroughbred breeding business) merged with the Sheikh's Godolphin thoroughbred racing business in January 2016, resulting in a single united Godolphin thoroughbred breeding and racing empire. However, the Darley brand will continue to be used to promote the business's breeding stallions. For the purposes of continuity, this report continues to refer to 'Darley' to describe the operations at Woodlands and Kelvinside studs.

Society is heavily reliant on coal to meet its basic energy needs, both at the domestic and international level, with coal currently providing around 90% of NSW's electricity needs, 75% of Australia's electricity needs and 40% of the world's electricity needs. At present, the Hunter Valley Coalfield is the largest and most significant coalfield in NSW, producing around 60% of the State's coal. The Hunter Coalfield accounts for around half of the mining jobs in NSW (ie about 11,000 full time jobs). The proposed 500 employee workforce at the Drayton South mine would therefore represent around 5% of the jobs in the Hunter Coalfield.

The Hunter Valley coal industry has likewise had a long and prosperous history. Coal mining commenced in the Hunter Valley near Nobbys Head in Newcastle in the 1790s. Mining in the Muswellbrook area commenced in the early 1900s, at Muswellbrook Colliery. Exploration of the Drayton South area occurred as early as 1951. With the exception of a small period of time in the late 1990s, the area has been subject to ongoing coal exploration and/or approval for coal production ever since.

The key dates and activities associated with the equine and coal mining industries in the area are set out in **Table 1** below:

Table 1: Key Dates for Equine and Coal Mining Industries in the Drayton South Area

Equine History		Coal Mining History
Early records of horse breeding at Arrowfield (now Coolmore) stud	1824	
Early records of horse breeding at Woodlands stud	1880s	
	Early 1900s	Mining commenced in Muswellbrook area
Woodlands becomes one of the pre-eminent commercial horse studs (1946)	Mid 1900s	Coal exploration carried out at Drayton Mine site (1951) and Drayton South site (1940 and 1960)
	1979-1980	Further exploration of Drayton South site by ELCOM and Mount Arthur South Coal
	Early 1980s	Drayton Mine development consent granted (1980) and mining commences (1983)
Ingham brothers purchase Woodlands (1985). John Messara purchases Arrowfield (now Coolmore) (1986). Both properties start to be developed into world class stud breeding operations	Mid 1980s	Development consent granted to Mount Arthur South Coal for Drayton South site (September 1986)
	1989	Mining lease granted over the Drayton South site for the Mount Arthur South project
Coolmore makes initial investment in Arrowfield property (now Coolmore Stud)	1991	Mount Arthur South development consent lapses

	1994	Mount Arthur South mining lease lapses
	1998	Shell Coal, operator of the Drayton Mine, purchases the Drayton South site and is granted Exploration Licence 5460 (which includes part of the Woodlands property)
	2000	Anglo purchases Shell Coal's NSW assets
	2005	Anglo commences stakeholder consultation for Drayton South Coal Project
Darley buys Woodlands Stud	2008	
	Nov 2012	Anglo lodges application for the original Drayton South Coal Project (see Table 2)
Development consent obtained for tourist cabins, function centres and chapels on Hollydene Estate (former Arrowfield vineyard)	March 2013	
	August 2013	Department completes preliminary report recommending approval of the original Drayton South Coal Project (see Table 2)
Coolmore expands through the purchase of the adjacent Hollydene Estate for \$4 million	Late 2013	

2.2 Growth and Co-existence of Two Industries for Many Years

The longevity of the equine and coal mining industries in the area around Drayton South provides useful context for this assessment. Both the equine and mining industries have co-existed in the Hunter Valley for many years. The area between Jerrys Plains and Denman has had a long history of agistment and horse breeding, dating back to the early days of European settlement, and coal mining has been present in the Muswellbrook area since the early 1900s.

While horse and 'pioneer' thoroughbred breeders have been established in the Jerrys Plains area since the region was first settled, it was not until the mid-1980s, after coal reserves and a prospective mine site was identified at the Drayton South site, that serious investment was made in 'world class' equine breeding operations.

The Ingham brothers purchased the Woodlands Stud as recently as 1985, and it was this purchase and investment that turned the stud into a large and successful breeding operation. John Messara purchased Arrowfield (now Coolmore) in 1986 and cleared the majority of the vineyard that previously operated on the property. Both properties were then developed into world class stud breeding operations. It is worth noting that these two major investments came some 45 years after the Bureau of Mineral Resources first surveyed the coal resources of the Drayton South site, and 6 years after an exploration licence for coal had been granted over the adjacent Drayton South lease area.

Since the first investment by the current owners in the Coolmore Stud in 1991 and Darley's purchase of the Woodlands Stud in 2008, both businesses have invested significant time and money in improving these properties and have consequently grown in reputation and standing amongst the thoroughbred breeding community. The HTBA and other industry members have stated that it is the bloodstock, reputation and influence of the two current owner-operators that places additional importance on the need to protect the Coolmore and Woodlands studs.

However, reviewing the history of these two industries also highlights that the growth in stature of these two key studs amongst the equine industry has occurred despite public knowledge that the adjacent landholdings were approved (at that time) to be developed for the Mount Arthur South coal mine and that a new exploration licence had been subsequently granted over the site in 1998. Since the Ingham brothers first developed the Woodlands stud in 1985, there has only been one period of four years when there has been no form of exploration licence or mining lease over the Drayton South site.

The first key observation from the history of the two industries is that a number of very significant investments have been made at both the Coolmore and Woodlands studs while development consent and/or a mining lease for coal were held over the Drayton South area, or were under application (see **Table 1**). Coolmore's submission indicates that the current owners of the stud were aware at the time of their initial investment and land purchases that the Drayton South site had been previously earmarked and surveyed for coal mining and that the potential existed for the development of a coal mine on the site. Likewise, at the time of Darley's purchase of the Woodlands Stud in 2008, there was public information readily available concerning the presence of a coal exploration licence over the neighbouring Drayton South area.

While Coolmore has argued that its investments have come at times when the development of a coal mine has seemed less likely and Darley has stated that *'no reasonable person would choose to acquire, invest in, upgrade or operate a thoroughbred breeding business in close proximity to a coal mine'*, the Department must take note of the fact that both studs purchased land and have continued to make significant investments in the improvement of their properties since Anglo first obtained an exploration licence over the Drayton South area in 1998. In fact, Coolmore has continued to invest substantial amounts into its property, including through a \$4 million expansion of its stud farm as recently as 2013.

The second key observation is that the perception of significant land use conflicts between the two industries appears to have become more intractable and adversarial in recent times. This is exemplified by the changing nature of submissions made between the original and revised projects. The thoroughbred industry's submissions on the original project included several recommendations for alternative measures and mine designs that would allow for improved management and reductions in the potential impacts on the studs. This is shown in Coolmore's initial submission on the original project, which sought to address the potential for direct visual impacts on its operations by proposing a *'feasible and less visually intrusive alternative'* for the Houston Visual Bund (Option 4). While Coolmore maintained that it *'would still object to the project in the strongest terms'*, it acknowledged that *'if the project was to proceed, in Coolmore's view the implementation of Option 4 would operate to address (better than Option 3) the adverse visual impacts on Coolmore's operations.'*

In contrast, Anglo's first Environmental Assessment (EA) and its responses to the issues raised by the thoroughbred industry maintained a firm position on its proposed mine plan and focused on adaptive management measures to address potential impacts on the nearby studs. The Commission's original review report supported several of the thoroughbred industry's suggestions regarding the management of potential impacts and recommended that any open cut mining remain behind two prominent ridgelines on the site. This effectively removed the potential for direct visual impacts and significantly reduced the potential amenity and environmental impacts of the project on the nearby studs.

Throughout the current assessment process and in direct response to the recommendations of the Commission's review of the first project, Anglo has incorporated several material changes to its proposed mine plans, proposed a range of additional management measures and made a number of additional commitments that directly respond to the issues raised by the thoroughbred industry. Anglo's incremental and material reductions to its proposed mine plans now restrict all open cut mining to the north of two ridgelines on the site and comply with the setback proposed in the Commission's first review. This 46.5 million tonne (Mt) reduction in the coal resource proposed to be recovered by the project is a 40% reduction and increases the total open cut coal resource sterilised in response to land use conflicts to around 100 Mt (with an estimated market value of at least \$5 billion). Together, these setbacks and the additional management measures offered by Anglo address both potential amenity impacts on the studs and potential visual impacts.

However, the thoroughbred industry's submissions on the current project no longer seek to improve the management of potential impacts. Instead they focus on reinforcing the position that these neighbouring land uses are inherently incompatible and that the project poses an unacceptable risk to the studs' reputations, which may cause the Coolmore and Darley studs to consider leaving the Hunter Valley and result in the terminal decline of the Upper Hunter Equine CIC.

The Department acknowledges that the potential for land use conflicts in the Hunter Valley have intensified in recent years, due in part to the growth and expansion of both the mining and equine industries. The Department also recognises that by bringing the two industries closer together, the project has become a key focus of the land use conflict debate and poses unique challenges for the management of interactions between differing land uses. However, given the well-established history of co-existence between the two industries and the constructive input provided during the early stages of the original project, the Department believes that these industries could again work together to manage potential interactions and provide for the ongoing future of both industries in the Hunter Valley.

2.3 History of Assessment of the Drayton South Coal Project

The project (and its predecessor) have been subject to extensive environmental impact assessment processes since the first project application was lodged with the Department in 2012. A detailed description of the application and assessment processes since that date was included in the Department's preliminary report. The key details are provided in **Table 2** and further details on the Commission's review processes are contained in Section 2.4.

Table 2: Key Details of the Assessment Processes for Drayton South

Date	Activity
November 2012	Anglo lodged its first project application and EA to develop the Drayton South Coal Project. The project sought to extract around 120 million tonnes (Mt) of Run-of-Mine (ROM) coal, at a rate of up to 7 Mt a year, from four open cut pits. The Department received 71 submissions, including 58 submissions from the public and special interest groups, of which all but 3 were objections
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 ' <i>should not proceed at the planned scale in this location</i> '
March 2014	Anglo submits a revised mine plan that removed the Houston Pit and part of the Wynot 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 lodges a second development application and Environmental Impact Statement (EIS) which included further 25% reductions in the mining area, resource size and life of the project (equivalent to a 40% reduction in the resource size from the original November 2012 application). This application fully adhered to the Commission's original recommended setback from the Coolmore and Woodlands horse studs. The Department received over 4,300 community and special interest group submissions of which 98% were in support of the project, while 83 objected.
August 2015	The Department completes its preliminary report recommending approval of the revised project, subject to strict conditions
November 2015	The Commission releases its Review Report recommending the project does not proceed due to the potential impacts on Coolmore and Woodlands studs and in particular the potential 'reputational' risks
May 2016	Anglo submits its response to the Commission's Review Report, including an Expert Report by Dr Greg Houston (see Appendix A)
June 2016	The Department commissions Prof Jeff Bennett of the Australian National University to conduct a peer review of the Houston report (see Appendix C)
July 2016	The Hunter thoroughbred industry provides comments on Anglo's response (see Appendix B)
August 2016	The Department commissions Prof Bennett to review the Hunter thoroughbred industry's comments (see Appendix C)
September 2016	The Department completes this Final Assessment Report

This report presents the Department's final assessment of the project having considered all information provided to date, and particularly the Commission's Review Report, Anglo's response to this report, the Hunter thoroughbred industry's comments and Prof Bennett's reviews.

2.4 Overview of the Commission's Merit Assessment and Determination Processes

In order to understand the background and history of the current proposal, the Department considers that it is important to consider the influences that the Commission's previous merit assessment and determination processes have had in relation to the current development application.

To build upon the overview of the assessment processes set out in Section 2.3 above, further details of the Commission's previous merit assessment and approval processes are set out below.

2.4.1 Original Commission Review

Anglo lodged a project application and supporting EA in November 2012. In March 2013, the then Minister for Planning and Infrastructure asked the Commission to review the project. However, this review was suspended while the Department commissioned a review of the mine plan and a later request for the Commission to undertake its review was issued in August 2013.

The Commission's review panel was comprised of Ms Gabrielle Kibble AO (chair), Mr Garry West and Mr Joe Woodward. The Commission sought the expert advice of Mr Terry Short on equine issues, Dr Richard Lamb on visual and landscape impacts and Mr Richard Jennings and Mr John Janetzki in relation to the mine plan.

The terms of reference for the Commission's 2013 review were to:

- consider the EA for the project, the issues raised in submissions, the formal response to submissions, Anglo's Preferred Project Report, the review of the mine plan by Runge Pincock Minarco and any other information provided on the project during the course of the review;
- assess the potential impacts of the project on the operations for the Coolmore and Woodlands horse studs; and
- recommend any additional measures required to avoid and/or minimise the potential impacts of the project on the horse studs.

The Commission's Review Report focused on the impacts on Coolmore and Woodlands studs, and the rural cultural landscape. The Commission concluded that the project as proposed could cause the Coolmore and Woodlands horse studs to leave the Hunter Valley, and that this would have a significant effect on the region's Equine CIC as a whole. It also concluded that the project could have a significant impact on the landscape in the area, which has cultural significance due to its scenic, historic and agricultural values and continuing land use patterns.

The Commission completed its Review Report in December 2013, concluding that the mine '*should not proceed at the planned scale in this location*', due to the potential impacts on the studs. It noted that if the project were to proceed, it would require '*substantial changes*' including further setbacks from the horse studs' operations (including a minimum setback for open cut mining behind the second ridgeline on the site, identified by a yellow line in the Commission's report).

The Commission's report also accepted that a much smaller mine may well be achievable on the northern portion of the site, providing that it could be demonstrated that the impacts on Coolmore and Woodlands studs could be managed.

2.4.2 Original Commission Determination

After first lodging an initial response to the Commission's review in February 2014, Anglo then submitted a reduced mine plan for the project in March 2014. The reduced mine plan made a number of substantial changes to address the Commission's recommendations but did not fully comply with all of the Commission's recommendations. However, it did not comply with the Commission's 'yellow line' but rather sought to address what it understood to be the intent of the Commission's comments by containing all project components behind the first and highest ridgeline, thereby providing an additional buffer while still seeking to maximise the project's economic considerations and coal recovery.

While acknowledging that the revised mine plan did not address all of the Commission's recommendations, the Department considered that the amendments to the proposed mine plan made in Anglo's response were sufficient to address the Commission's key concerns, including direct visual impacts to the Coolmore stud. Consequently, the Department recommended that the project be approved, subject to strict conditions.

In July 2014, the Minister for Planning referred the application to the Commission for determination. The Commission established a panel of its members to determine the application, comprising Mr Garry Payne AM (chair), Mr Gordon Kirkby and Mr David Johnson.

The key focus of the Commission, as with the previous Commission, was potential impacts to the two neighbouring studs; including equine health, impacts on the Upper Hunter Equine CIC should Coolmore and Woodlands leave the Hunter Valley, and the scenic quality and rural cultural landscape.

On 17 October 2014, the Commission refused the project on the grounds that the:

- project did not provide sufficient buffers to protect Coolmore and Woodlands horse studs as recommended in the Commission's review (ie the mine had not been set back behind the second ridgeline);
- project had not demonstrated that it would not adversely impact equine health and the operations of the studs;
- approach of monitoring the response of thoroughbreds to mining operations to address uncertainty was not acceptable;
- project's economic benefits did not outweigh the risk of losing Coolmore and Woodlands studs, and potential impacts on the thoroughbred and viticulture industry; and
- project was not in the public interest.

The Commission's first refusal was consistent with the minimum setback requirements established in the original Commission review, as first recommended to the Commission by Dr Lamb.

2.4.3 Current Commission Review

Following the refusal of its original project application, in May 2015 Anglo lodged a new development application for an amended project that included changes to the mine plan and adhered to the minimum setback recommended by both the 2013 and 2014 Commissions. The revised application resulted in reduced environmental impacts and removed direct views of the mine from the studs' operational areas. Anglo also proposed to relinquish any rights to seek future potential expansions beyond the southern and western extents of the currently proposed open cut mine and to surrender any underground mining rights associated with the exploration licence to the south of the Golden Highway, including any areas beneath the studs.

The Department's preliminary report assessing the current project concluded that the retracted mine plan and other project changes provided an appropriate balance between mitigating potential impacts to the neighbouring horse studs and realising the economic benefits of the project. Therefore the Department recommended that the current project be approved, subject to strict conditions.

On 13 August 2015, the Minister for Planning requested that the Commission carry out a review of the current project and conduct public hearings during the review. The Commission established to review the current development application comprised Ms Lynelle Briggs AO (chair), Mr Ross Carter and Ms Abigail Goldberg. The terms of reference for the Commission were to:

- carry out a review of the Drayton South Coal Project;
- consider the EIS for the project, the issues raised in submissions, the formal response to submissions, and any other information provided on the project during the course of the review;
- assess the merits of the project as a whole having regard to all relevant NSW Government policies, and paying particular attention to the potential impacts on the operations of the Coolmore and Woodlands horse studs; and if necessary
- recommend further measures to avoid, minimise, and/or manage the potential impacts of the project.

The Commission held public hearings on 10 - 11 September 2015 in Denman Memorial Hall, and heard 96 verbal submissions from individuals, special interest groups, local businesses and Drayton employees. The Commission also identified that it received well over 17,000 written submissions on the proposal. By the Department's count this figure is actually just over 18,000 submissions, and comprises 74 objections to the project, 8 submissions that present a neutral position and 17,943 submissions in support of the project. Of the 99.5% of submissions that supported the project, some 17,765 were sent by email from the 'Voice for Mining' website. The Commission has identified that 11,037 of the 'Voice for Mining' submissions contained written comments on the proposal.

The Commission released its Review Report in November 2015. The focus of the report was similar to previous considerations by the Commission, being the impacts on the studs. However, the Review Report had an increased focus on potential for damage to the studs' reputation, image and brand that could cause the studs to leave the Hunter Valley, resulting in decline of the Upper Hunter Equine CIC.

The Commission's report examined the economic benefits of the thoroughbred breeding industry and the associated thoroughbred racing industry. It considered that Coolmore and Woodlands are pivotal to the sustainability of the Equine CIC (which is itself significant regionally, at the State level, nationally and internationally) and concluded that any decline in the CIC would result in a State-wide decline.

The Commission described how the local landscape setting in the Hunter Valley is of central importance to the two studs' operations, making them highly sensitive to amenity impacts. As reputation is of paramount importance, any project impacts (including indirect and dynamic visual impacts) represent a real risk to the brand and image of the studs and the 'perception' of risks to horse health. While the Commission acknowledged that blasting, visible dust and noise impacts had been demonstrated to meet relevant assessment criteria, it noted that they still posed a potential 'reputational' risk for the two studs.

The Commission stated that the scenario of the studs leaving the Hunter Valley is the critical issue in deciding whether or not to approve the Drayton South project. It considered that there is a broader public interest imperative in maintaining diversity within the region's economy, by ensuring the long term viability of the Equine CIC. It felt that Coolmore and Darley are key to the sustainability of the CIC and that the CIC would enter a potential terminal decline if they leave the valley, with it being unlikely that other studs of similar standing would take their place in the short term. While accepting that the assessment demonstrated that any residual impacts of the project could be managed to meet current NSW Government policies and all relevant assessment criteria, the Commission found that the potential

reputation risks were such that the studs may still choose to leave and that if they did, the CIC would potentially suffer terminal decline.

The Commission therefore recommended the application for the current project should not proceed, due to the following:

- Coolmore and Woodlands studs being highly sensitive to the impacts of open cut mining, including:
 - business interruption and reputational risks associated with blasting;
 - impact on the studs' business image and branding due to particulate and gas emissions;
 - reputational risk to the studs image and brand damage of mining in close proximity as evident from noise that may sometimes be audible and views of the mine from elevated parts of the studs and surrounding roads, as well as from aerial and satellite imagery;
- risk that the studs would leave the Hunter Valley and the resulting impact to the region's broader Equine CIC;
- uncertainties in relation to the project benefits;
- risks to the equine industry outweighing the short-term benefits of the proposal;
- need for further assessment of the cultural landscape values (both Aboriginal and historic); and
- the potential for further improvements to final landform and rehabilitation outcomes and the acceptability of the final void and associated risks to water resources.

In broad terms, the Commission recommended that the project not proceed due to the reputational risks that it poses to the studs and the risk that the two studs would leave the Upper Hunter, resulting in real risks to the Equine CIC that outweigh the short term benefits of the project.

In making this recommendation, the Commission acknowledged that Anglo had demonstrated that the project would lead to substantial economic benefits to NSW, albeit that these may have been overstated by Anglo. The Commission also found that the part of the development application relating directly to the operations of the existing Drayton Mine is approvable and should progress as it would provide some short-term extension of the current employment on the mine. The Commission also found that the Drayton's Mine's conditions of consent relating to rehabilitation should be strengthened.

In addition to directly considering the project and its potential impacts, the Commission also made a number of recommendations on broader planning policy relating to land use planning and buffers, strategic management of Aboriginal cultural heritage, and the Government's policy on final voids.

The Department acknowledges that the Commission's recommendations reflect its assessment and consideration of contested positions and outcomes associated with the potential impacts of the project and the business investment decisions of the thoroughbred industry. The Department notes that the Commission has considered possible outcomes in a conservative manner, in order to provide for the equitable treatment of land users and the maintenance of a strong and diverse economy in the Upper Hunter. The Department agrees that these matters are of the importance in considering the project's merits and has afforded them substantial weight in this report.

The Department has therefore sought additional information from Anglo and the thoroughbred industry, with a specific focus on responding to the matters raised in the Commission's Review Report. To provide greater certainty to the Commission and to address any disputes about information provided by or on behalf of the key parties, the Department has commissioned an experienced and respected environmental economics professor, Prof Jeff Bennett of the Australian National University, to provide an arms-length, impartial review of the key matters of contention concerning the project.

The Department believes that the substantial amount of new information provided by Anglo and the thoroughbred industry helps to contextualise the likelihood and significance of the potential impacts associated with the project. Further, the arm's length review of this information by Prof Bennett provides additional evidence on the likely implications of the project, which should significantly assist the Commission in its final examination of the critical residual merit-based issues for the project.

3.0 RESPONSES TO THE COMMISSION'S REVIEW REPORT

3.1 Anglo's Response to the Commission's Review Report

On 9 May 2016, Anglo provided a response to the Commission's review (see **Appendix A**). Anglo's response sought to address the basis for the Commission's recommended refusal and included an expert economic assessment, undertaken by Dr Greg Houston, of the potential impacts and implications of the project on the Upper Hunter Equine CIC. In summary, Anglo argued that the Commission's Review Report was premised on the consideration of unsubstantiated claims made by parties with vested interests, contained material factual errors, overlooked probative evidence, did not provide adequate consideration to approved Government policies and made recommendations that extend beyond the Commission's terms of reference. Anglo also argued that the Commission failed to carry out a proper assessment and reach a logical, evidence-based decision.

Anglo was critical of the comparison of the project by both the HTBA and the Commission with the entire NSW thoroughbred breeding and racing industry, claiming it was an unfair comparison used to bias the argument of the value of one industry compared with the other. Anglo considered that the application of a similar approach to the mining industry would see the end users of its products also included, as was done by including racing value with the value of production at the studs. This would include power stations and steel mills, as well as various support industries to both the coal project (in the Hunter region) and its end users (elsewhere in NSW and/or overseas).

Anglo also claimed that the comparative analysis of statistics undertaken by the Commission about the importance of the project in the context of the broader coal mining industry unfairly downplayed the project's importance and contributions, including in relation to mining-generated employment. Anglo also defended its economic assessment, and in particular the coal price forecasts used, as being based on the best information available at the time the assessment was completed. Anglo graphically illustrated that the coal price used was in the middle range of the forecasts then available, not the upper end of the spectrum as concluded by the Commission.

However, most importantly, Anglo refuted the studs' claims (and the Commission's acceptance of these claims) that the project would create reputational impacts sufficient to cause the two keys studs to leave the Upper Hunter and for the Equine CIC to suffer a consequential terminal decline.

Anglo stated that its EIS contained peer-reviewed, independent expert reports and extensive quantitative investigations to demonstrate there would be no significant impacts on the studs' operations. The project would comply with NSW Government policies, not affect the physical capability or suitability of the studs for horse breeding and result in no material impacts to horse health and very low risk to landscape values.

Anglo described how it adopted the setback behind the second ridge that had been determined by Dr Lamb and the first Commission review (and its subsequent determination of the earlier project). Anglo claimed that the studs were supportive of the Commission's proposed setback, as a better way to mitigate the project's direct visual impacts on their operations, as opposed to Anglo's proposed Houston Visual Bund. Anglo considered that the remaining direct views of the project are so limited that it is unreasonable to conclude they represent a real risk to the studs, particularly given the existing visibility of other mines and Bayswater Power Station from areas on the studs' properties and existing dynamic views of mining activities in the Upper Hunter for all persons travelling along the Golden Highway and Edderton Road.

Anglo stated that both Coolmore and Darley made their investment decisions with clear awareness of the existence of coal mining in the area and presumably assessed the reputational, image and branding risks at that time as being acceptable. Anglo also claims that it directly engaged with Darley on its acquisition of Woodlands to ensure it was well aware of the intended development of the project.

Anglo considered that the studs have done more damage to their reputation, brand and image by 'talking up' misleading and incorrect perceptions of impacts, instead of relying on the objective assessments provided in the EIS. Overall, Anglo felt that the Commission had disregarded the objective assessments provided with respect to blasting, air quality and noise impacts in reaching its conclusion that the project represents a risk to the reputation, image and branding of the studs.

Anglo also highlighted that reputational damage is not an impact that has any proper standing under the EP&A Act. The consent authority must weigh up social, environmental and economic factors and consider what is in the overriding public interest. Anglo claims that the Commission failed to properly

interrogate the quality, relevance and factual accuracy of the evidence provided by the studs, or consider further management options to deal with any perceived impacts.

Anglo also claimed that the Commission went beyond its powers by drawing conclusions and making recommendations in relation to Government policy (ie the Commission's recommendations 4 – 7, as discussed in Section 4.2 below). It considered that the Commission's conclusions were driven by an 'aspirational' policy regime rather than by applying existing policy as it is required to do, and that it had placed undue weight on perceived rather than actual impacts.

3.1.1 Expert Report by Dr Greg Houston

As noted above, Anglo commissioned an expert review of the implications of the project on the studs and the Upper Hunter Equine CIC from Dr Greg Houston of HoustonKemp Economists. Dr Houston's report is appended to the Anglo response (see **Appendix A**).

Dr Houston is an economist with 25 years' experience in economic analysis of markets and the provision of expert advice in litigation, business strategy and policy contexts across a broad range of industries, including the thoroughbred racing industry. Dr Houston also serves on the Competition and Consumer Committee of the Law Council of Australia. Dr Houston has completed a number of engagements for the Australian Competition and Consumer Commission, State government departments and other government bodies, in addition to other clients. He has previously prepared advice for the Australian Jockey Club, Victorian Racing Club Ltd, Australian Turf Club and Australian Racing Board Limited that involved a detailed analysis of the structure and essential economic characteristics of the thoroughbred breeding industry.

In his review, Dr Houston analysed the likelihood that either Darley or Coolmore would leave the Upper Hunter if the project proceeded and the economic impact on the Upper Hunter Equine CIC if either or both of Darley and Coolmore were to leave. In his analysis, Dr Houston assumed that Coolmore and Darley are rational economic decision makers that act in a way that maximises their profits.

Dr Houston described the characteristics of the Upper Hunter that make it attractive for the thoroughbred breeding industry as being that it is close to major ports and markets, has the best reputation of any thoroughbred breeding area in the Southern Hemisphere, has a large number of high quality service providers and is the ideal environment for breeding thoroughbred horses.

Dr Houston applied fundamental principles of economic analysis (ie that decision makers make rational decisions to maximise their economic utility and therefore their profits) to the question of whether the studs would move from their present locations if the project was to be approved. His primary conclusion was that it would not be in either Darley's or Coolmore's best interests to leave the Upper Hunter. His second key conclusion was that, if they were to leave their present locations, then it would be more likely that they would move to another location in the Upper Hunter rather than leave the area entirely.

The key points raised by Dr Houston that led to these two critical conclusions included that:

- the real assets of the studs are the stallions, and it is the make-up of their pools of breeding stallions which have the greatest influence on their reputation;
- other broodmare farms operate in close proximity to coal mines, for example Edinglassie, which achieved sale prices comparable to Darley in 2015;
- as Darley's Kelvinside stallion stud (located northeast of Aberdeen) would be unaffected, it would be more likely that Darley would move its Woodlands broodmare farm to another location in the Upper Hunter, since it remains the best location in the Southern Hemisphere for the reasons described above;
- for Darley or Coolmore to leave the Upper Hunter entirely would involve substantial moving costs, as well as a significant risk to an important source of revenue (ie stallion fees) due to the presence of a high number of broodmares in the Upper Hunter;
- by relocating out of the Upper Hunter, the studs would also risk losing key staff, would require new suppliers and would lose customers, many of which would stay in the Upper Hunter;
- analysis of covering fees demonstrates that broodmare owners in Victoria appear to be less willing to pay high stallion fees than those in the Upper Hunter;
- coal mining in the Upper Hunter is already readily apparent to visitors travelling to the studs and the project does not increase the visibility of coal mining (apart from at Trig Hill) from either the Coolmore and Woodlands properties; and
- even if Coolmore and Darley left the Upper Hunter, the Equine CIC would continue to be successful because:
 - the many attractive features of the Upper Hunter would remain; and

- new stud farms would enter the market and existing farms would expand their services to fill the market opportunities voided by the departing studs (for example existing broodmare farms could enter the stallion stud business and some stallion owners currently using Coolmore would move their stallions to other broodmare farms); and
- in consequence, the CIC would remain the largest in Australia and New Zealand.

Dr Houston's report concluded that the thoroughbred industry is '*dynamic, with ownership of stallions and studs changing hands without affecting the underlying economics of the [Equine CIC]*'. He asserts that it is in the interests of stallion owners to remain in the Upper Hunter where they can earn their greatest revenue. Dr Houston therefore argues that if the studs decided to move, this would likely be to another location in the Upper Hunter, in order to remain close to the concentration of broodmare farms.

Dr Houston also concludes that if only one of the Coolmore or Darley studs were to choose to leave the Upper Hunter, and the other stud choose to stay, then the remaining stud would stand to reap major benefits from any temporary shortfall in the supply of quality stallion covers.

3.2 Independent Peer Review of the Houston Report

Because of the significance of the Houston Report and the importance of its conclusions in respect to the central issue governing determination of the project, the Department commissioned an independent peer review of that report (see **Appendix C**).

This independent peer review was undertaken by Professor Jeff Bennett from the Australian National University. Prof Bennett has 30 years' experience researching, consulting and teaching in the fields of environmental economics, natural resource economics, agricultural economics and applied micro-economics. Prof Bennett has also previously been a casual member of the Commission (being involved in the merit review of the Bulli Seam Operations project in 2010). Prof Bennett is a Fellow of the Academy of Social Sciences in Australia and a Distinguished Fellow of the Australian Agricultural and Resource Economics Society. He is a member of the Academic Advisory Councils of the Centre for Independent Studies and the Menzies Research Centre. In 2014 he was elected to the Board of the Mont Pelerin Society, an international body of economists (including eight winners of the Nobel Prize in Economic Sciences) and others committed to an understanding of personal and political freedom.

Prof Bennett examined the findings of the Houston report regarding the impacts of the project on the operations, branding and reputation of the studs; the likelihood of the studs relocating; and the likely impacts to the Equine CIC if one or both the studs left. The assumptions used by Prof Bennett in drawing his conclusions are that Coolmore and Darley are '*rational economic decision makers*' as opposed to being driven by '*utility maximisation*' (ie other non-profit goals). Further, that any decision which is made by the studs would be driven by their response to the project, rather than any broader consideration of the increase in mines in the Upper Hunter or the prospect of future mining developments in that area.

Prof Bennett describes the concepts of '*central place theory*', which is the advantages to business of '*locational agglomeration*', ie how cost savings to sellers and buyers result in incentives to agglomerate in a location that is central to the market. Sellers gain advantage by locating close to buyers. He also explores how competition and market structure may influence the studs' decision to stay or leave if the project was approved, and how the principle of substitution may apply within the Equine CIC.

Prof Bennett considers that the existing extent of the cluster of studs and broodmare farms in the Upper Hunter demonstrates the benefits of locational agglomeration. He says '*the extent of the market that is the source of the agglomeration is the broodmare farms which are the buyers in the market. Given the requirements for mares to be covered by stallions, then it is the transportation costs of mares to stallions and vice versa that is a key component of the locational decision*'. Further, '*proximity to the proposed mine is not an issue for the majority of broodmare farms as they are predominantly located away from the proposed mine site*.' Consequently, Prof Bennett considers that the project would not be considered to reduce the existing and ongoing benefits of locational agglomeration, which is the underpinning economic theory which explains the very existence of the Equine CIC.

Prof Bennett then goes on to explore the matter of industry structure and substitution, including barriers to entry for the provision of stallion services, which are confirmed by the ACCC as being low, as is exemplified by the growth in the use of international shuttle stallions. From this he states that '*stallion services, even of very high breeding quality, are readily substitutable, mobile and can be established in a location at relatively low cost*'. He concludes that the Equine CIC '*will continue to be an attractive source of business for stallion suppliers even with the proposed mine in operation*' and, crucially, '*that a profit motivated operator would choose not to move location*'.

Notwithstanding, Prof Bennett acknowledges that the '*marginal utility of money (profit) to high wealth individuals can be diminished to the point where other factors become more prominent*' and that the owners of the studs may choose to relocate for '*scenic*' or other '*lifestyle*' reasons. In this regard, Prof Bennett agrees with Dr Houston's conclusion that, even if one or both of the key studs did decide to relocate in '*the pursuit of non-profit objectives*', then they would be more likely to move elsewhere within the Upper Hunter Equine CIC due to the lower re-establishment costs and existing locational agglomeration compared with other options.

Prof Bennett goes on to describe how the ease of entry into the industry and the benefits of agglomeration that exist means that even if Coolmore and Woodlands did leave the Upper Hunter, substitute suppliers of stallion services would quickly emerge. These conclusions are consistent with those drawn by Dr Houston. He further considers that, due to the competitive potential in supplying stallion services, the exit of one or two of the studs would be unlikely to trigger an exodus of broodmare farms and therefore would not result in any 'terminal decline' of the CIC. To the contrary, it would open up the market for the entry of substitutes in a relatively short period of time, including the potential for growth in the supply of stallion shuttle services.

The Department notes that the approach used by Prof Bennett to analyse the key questions differs from that used by Dr Houston. Nonetheless, Prof Bennett has fundamentally come to the same conclusions as Dr Houston. That is, bloodlines and covering fees are likely to be of more importance to a broodmare owners' decision about which stallion and stud to use, than the proximity of coal mining. Prof Bennett's review concludes that the fundamental principles of economic theory indicate that the Coolmore and Woodland studs would be unlikely to leave, even if the project were to proceed. Further, he notes that if either stud did decide to leave its present location for '*non-profit goals*', they would be more likely to relocate elsewhere within the Upper Hunter Equine CIC, rather than leave the Hunter Valley for a different location in New South Wales, Victoria, New Zealand or elsewhere. Finally he concludes that even if both studs chose to leave the Upper Hunter, the principles of substitution (especially from international shuttle stallions) indicate that the CIC would not suffer a terminal decline.

3.3 Hunter Thoroughbred Industry's Response

The Department provided the HTBA and the two studs with a further opportunity to respond to the Commission's Review Report and Anglo's response.

Responses were received from Coolmore (29 June 2016), Darley (4 July 2016) and the HTBA (4 July 2016). A further submission was also received from Darryl Guihot, a member of the public and long term financial investor in the thoroughbred breeding industry. An overview of these responses is provided below. They are included in full in **Appendix B**.

3.3.1 HTBA Response

The HTBA's response re-emphasises a number of concerns raised in its previous submission and argues that a mine at Drayton South is '*unacceptably risky, uneconomical, non-compliant with Government policies and standards, and not in the public interest.*' The HTBA holds the view that coal mining and thoroughbred breeding are incompatible land uses which cannot occur in close proximity, that Coolmore and Darley are the critical central players of the Upper Hunter Equine CIC, and that the CIC should be protected to ensure its long-term sustainability and a diverse economy.

In relation to Anglo's response and the report of Dr Houston, the HTBA claims it presents '*incorrect and flawed arguments*' demonstrating a misunderstanding of the structure and nature of the industry and Coolmore and Darley's critical importance to the Equine CIC and the Australian thoroughbred industry more broadly, given these two studs represent over 50% of young bloodstock sold at auction and competing on the race track, as well as over 40% of the top stallion sires in Australia. The HTBA rejects Dr Houston's conclusion that Coolmore and Darley are likely to remain in the Upper Hunter and argues that if the project were approved, the studs would need to reconsider their future in the Hunter Valley.

The key points raised by the HTBA to support its position include that:

- the production of elite athletes such as thoroughbred horses is fundamentally reliant on lung capacity, bone strength and stamina. This statement is reinforced by the submission from Mr Darryl Guihot (see Section 3.3.4), who noted that the difference between a horse winning and placing second is so fine that any impairment to racing performance can be significant;
- no international scale thoroughbred breeding operation of the calibre of Coolmore and Darley is currently located, or would chose to be located, within one kilometre of a coal mine, due to the potential impacts on its operations and reputation;

- premier stallions are highly valuable and mobile assets that can be easily relocated, and that broodmares would follow the stallions to be covered, not the reverse as predicted in the Houston report;
- alternative land of a suitable size and pasture quality for relocation in the Upper Hunter is not readily available and, even if it was, the risk of future mining encroachment would reduce the likelihood that the owners of the studs would choose to move elsewhere in the Upper Hunter;
- if Coolmore and Darley moved to Victoria, a number of broodmare farms would likely follow and this area would become the dominant centre for thoroughbred breeding in Australia;
- new entrants would be unable to expand or fill the market gap if Coolmore and Darley leave; as existing premium stallions have a limited operating capacity, sufficient additional stallions of the same quality are not readily available and, even if they were, few players in the industry (other than Coolmore and Darley) would have the capital needed to purchase them; and
- the result of Coolmore and Darley leaving the Upper Hunter would be an immediate decline and possible long term demise of the Equine CIC.

The HTBA response also raises its previously identified issues with the impact assessments completed for air quality, noise, blasting, visual impacts and Aboriginal heritage, all of which have been previously considered by the Department and the Commission.

The HTBA also challenges the economic impact assessment and viability of the project, by way of reference to a review of Anglo's response conducted for Darley by Marsden Jacob Associates (July 2016), which details what it considers to be errors and overestimations in Anglo's economic analysis of the project's value such that a recalculation results in a net negative value.

The HTBA also notes the recent announcements by Anglo that it is divesting its coal assets in Australia and ceasing operations at Drayton mine in late 2016. The HTBA considered that this has bearing both on Anglo's economic assessment of the project and the determination of the project more broadly. The HTBA argues that a new owner would have different cost structures and the efficiencies attributable to integration with the currently operating Drayton mine would no longer be realised.

Finally, the HTBA also stated that it considered that the Commission's terms of reference for the merit review were broad and that the Commission operated within its brief. Specifically, it considered that reputational risks for the studs were, and still are, relevant matters for the Commission's consideration.

3.3.2 Coolmore's Response

Coolmore's response discusses several NSW Government policies (at the State, regional and local level) that are relevant considerations for the project and relate to the need for careful management of competing land uses and for *'equal footing'* for valuable agricultural and mining industries. Coolmore claims that an approval of the project would run counter to the aims of these policies.

Coolmore again emphasises the direct and indirect impacts that it believes the project would have on its operations and business viability in its present location. Coolmore has also provided further justification for why impacts to its reputation would be likely to result in real impacts to its business, including by reference to a study on the impacts of reputation on market value. This argument was accompanied by a survey Coolmore conducted amongst 1809 of its clients, with some 463 clients providing responses (approximately 26% of the total surveyed). Of the clients that answered the survey, 94% responded stating that an approval of the project would be damaging to the reputation of the Hunter Valley as the prime location for thoroughbred breeding. Some 210 (approximately 45%) of survey respondents added comments, with 26 (approximately 6% of respondents) indicating that they would consider moving their horses elsewhere if the project was approved.

In response to Anglo's position that the project meets all relevant criteria and assessment standards, Coolmore rejects the claims made in Anglo's technical assessments and states that there are no established technical standards to assess impacts on large-scale thoroughbred breeding operations.

Specifically in response to the Houston report, Coolmore expresses and reinforces many of the concerns raised by the HTBA (as discussed above). In addition, Coolmore argues that Houston's lack of understanding about the different business models of Coolmore and Darley has resulted in him misinterpreting some of the data upon which he bases his conclusions.

Coolmore restates its long held stance that NSW does not have an appropriate alternative location for an Equine CIC that could rival the Upper Hunter. To this end, Coolmore discusses the ease with which it could move its business to Victoria, noting in particular that many of its most important clients and

suppliers have bases in Victoria; the *'ten hour journey from Scone and Nagambie, Victoria'*; the Hunter Valley's *'many attractive physical characteristics for thoroughbred breeding ... are not so dramatically superior to the qualities in Victoria or New Zealand'*; and the allure of additional incentives offered by the Victoria Government to breed horses in Victoria. Coolmore also discusses how broodmares are often transported long distances to be serviced by premier stallions, noting that *'70% of Coolmore's clients have no connection whatsoever with the Hunter Valley'* and that therefore the distance to Victoria would not be an obstacle for broodmare owners who choose to stay in the Upper Hunter in the event that Coolmore and Darley leave.

Overall, Coolmore argues that the Houston report is *'flawed and mistaken in relation to facts and interpretation of Coolmore's business, such that it is not a reliable source for the Department in its deliberations.'* Coolmore notes that, during the 2015 breeding season, Coolmore and Darley Hunter Valley stallions together serviced 3,126 of the 19,282 thoroughbred mares covered in Australia. Coolmore argues that Dr Houston fails to consider that this 16% of Australian thoroughbred stallion services comprises a higher market value and that if Coolmore and Darley were to shift their operations to Victoria, the market value of stallion covers in Victoria would increase substantially to around \$190 million, leaving the Hunter Valley with a materially reduced market value for stallion covers of around \$153 million.

3.3.3 Darley's Response

Like Coolmore, Darley raised concerns about the lack of understanding by Anglo and its consultants (including Dr Houston) of the Coolmore and Darley business models, the structure and function of the industry and the resulting inaccurate conclusions. Darley explains its business model, which involves breeding horses to race at the highest level, with the best performers then retired to improve and replenish its breeding stock. It describes how its Woodlands and Kelvinside properties are inherently linked, and that while the Kelvinside property would not be directly impacted by the project, the whole Darley business in the Upper Hunter is at risk, should the project be approved. Darley, like Coolmore and the HTBA, restates that in the equine industry it is the broodmares that follow the best stallions, not the stallions that move to where the broodmares are. So any relocation of Coolmore and Darley would result in a large number of broodmares also leaving the Hunter Valley. Darley already has established breeding and training operations in Victoria and the cost of moving to Victoria would not be significant compared to the stallion's value and the value of Darley's global reputation.

Darley's response also refers to two recent media articles that indicate that concerns about mining has deterred international breeding investment in the Hunter Valley. These are that one of Kentucky's leading thoroughbred operators, Spendthrift Farm, has located its Australian operations in Victoria and Sheikh Fahad Al Thani's bloodstock advisor David Redvers has decided to take the Hunter Valley *'off the shopping list'* because *'pollution and environmental destruction causes huge concern.'*

In response to Dr Houston suggesting that existing broodmare farms could expand to enter the stud farm business, Darley states *'that broodmare and stud farms require different skill sets, different infrastructure, provide different services and have very different horse handling and management methods'*. According to Darley, these differences are not substitutable. In a similar vein to Coolmore and the HTBA, Darley states that even if new players choose to enter the stud business, high quality stallions of the standard demanded by broodmare owners are not readily available and require significant capital outlay to purchase.

The Darley response includes a review completed by Marsden Jacobs (July 2016) of the Anglo response which includes a specific analysis of the economic assessment of the project. In summary, the Marsden Jacobs review concludes that:

- the findings of the Houston report are based on flawed assumptions;
- Anglo's recent announcement that it is exiting the coal industry in Australia highlights that Anglo is only proceeding with the project to increase its value by selling it with a development approval, should it be approved;
- the potential sale of the mine is an important consideration for the economic assessment because a number of key assumptions, such as capital and operating costs, would almost certainly vary with new owners;
- the Benefit Cost Analysis provided by Anglo overestimates a number of project benefits and underestimates the costs, which if recalculated would equate to a net social loss of \$80 million, even before impacts on the studs are taken into account; and
- Anglo's economic analysis does not comply with the SEARs or NSW guidelines.

Darley's response reiterates and supports the majority of concerns raised in the HTBA and Coolmore responses. In summary, Darley claims that there are significant and unacceptable uncertainties presented by the project in terms of its uncertain future and operation, its purported benefits and the risks that it poses to the entire Equine CIC in the Hunter Valley. Consequently, Darley advocates that a precautionary approach should be taken and the project should be refused.

3.3.4 Submission by Mr Guihot

A submission was also received from an investor in the equine industry, Mr Darryl Guihot. Mr Guihot previously provided a submission to the Commission which objected to the project.

In his current submission, Mr Guihot sought to correct what he states is inaccurate paraphrasing by Dr Houston of information in Mr Guihot's submission to the Commission and to reinforce his view that if approved, there is a 85-90% probability of Coolmore and Darley relocating which would result in a significant financial loss to the Hunter Valley and NSW.

Mr Guihot's submission presents a detailed discussion of the dominance and importance of Coolmore and Darley to the Upper Hunter Equine CIC and the Australian thoroughbred breeding industry more broadly, noting that they are the two top stallion farms in Australia by a sizeable margin. He discusses the operation of each stud and the reasons why the tranquil, unspoilt environment and reputation is critical to their continued success. Mr Guihot presents a detailed analysis of the history of the industry in the area, highlighting that it is due to Coolmore and Darley that the industry has the standing that it currently enjoys. He argues that Coolmore and Darley would have little option but to relocate if the project is approved and that this would result in the subsequent relocation of an estimated 3000 broodmares shortly thereafter, with more to follow in the longer term. Mr Guihot presents his assessment of why it would not be possible to replace Coolmore and Darley, primarily due to the availability and cost of stallions of the quality of those owned by Coolmore and Darley.

Mr Guihot notes his 45 years of experience in the thoroughbred breeding industry and 35 years of corporate and finance experience and rejects the arguments and conclusions drawn by Dr Houston.

3.4 Independent Review of Thoroughbred Industry Responses

Following receipt of the HTBA, Coolmore and Darley's responses to the Commission's Review Report and Anglo's response, the Department engaged Prof Bennett to independently review the information in them (see **Appendix C**). This review built on Prof Bennett's review of the Houston Report and enabled him to provide a consolidated position on the economic arguments presented by both Anglo and the thoroughbred industry. Given that the thoroughbred industry's responses were highly critical of the Houston report, the Department considered that an independent review by Prof Bennett would assist in establishing an arms-length, impartial position concerning the key matters of contention.

Prof Bennett's view is that the two core issues in the objections put forward in the thoroughbred industry's responses relate to the prospects for the thoroughbred industry in the Upper Hunter should the project go ahead, and criticisms of the accuracy of the project's benefit-cost analysis (BCA). These matters are separately considered below.

3.4.1 Implications of the Project for the Equine CIC

In relation to the prospects of the thoroughbred industry in the Upper Hunter, Prof Bennett discusses the opposing views held by Anglo and the thoroughbred industry. He describes how the veracity of the opposing positions on the future of the Equine CIC rests on the question of whether the studs would leave the Hunter Valley, including whether mares would follow stallions or the reverse, and the '*substitutability*' of the Coolmore and Darley operations.

Prof Bennett describes how suppliers seek to locate where they can satisfy the greatest segment of overall demand, which is generally central to their customers' locations. To this end, Prof Bennett notes that the Upper Hunter has proven its '*comparative advantage as a location for keeping broodmares and raising foals*', a position supported by Coolmore's submission, which acknowledges the likely continued presence of broodmare farms in the region even if Coolmore and Darley choose to relocate.

While acknowledging that some mares may choose to follow Coolmore and Darley's stallions if they moved and that '*it is not disputed that mares, in the short run, are brought to stallions for servicing*', Prof Bennett argues that the mobility of stallions, a fact recognised by the thoroughbred industry and evidenced by the strength of the international shuttle stallion segment, means that '*in the longer run, stallions have the locational flexibility to move to areas where broodmares are concentrated*'.

Consequently, Prof Bennett concludes that *'with broodmares being retained in the Upper Hunter, it is likely that stallions will locate there'*, in order to maximise their potential market share.

Prof Bennett describes that, if the project were to proceed and one or both studs chose to leave the Hunter Valley, there would likely be some changes to the structure and composition of the local thoroughbred industry. Prof Bennett notes that *'financial performance may not be the sole driver of decisions made by the two studs'* and that the owners of the studs may choose to leave the Upper Hunter, despite the economic arguments to remain in their current locations or relocate elsewhere in the region. Should this occur, Prof Bennett agrees to some extent with the thoroughbred industry's claims that *'there may be some short run shortage of stallions given that the assumptions regarding covers made for the Houston calculations are overly optimistic'*. However, he argues that the short run market supply gap left by the studs' departure would be able to be filled in the medium to long term.

Prof Bennett recognises that presently, Coolmore and Darley have *'immediate market power'* due to *'their ownership of specific highly sought after stallions'* and agrees that the immediate substitution of stallion covering services would be difficult if both studs choose to leave the Hunter Valley. However, he highlights the dichotomy between the studs' claims of operating in a highly competitive industry, a concept which *'implies the existence of ample substitutes for the services they supply'*, and their position that stallion substitution is impossible. Prof Bennett asserts that both points cannot be true. Furthermore, given that the two studs *'do not constitute a monopoly supplier'* and considering the competitiveness of the international stallion market, Prof Bennett concludes that *'there are substitutes even for the most prized stallion ... at the right price'* and that the market for stallion services within the Equine CIC would be able to recover through substitution in the medium to longer term.

The Department believes that Prof Bennett's independent peer review provides important insights into the likely implications of the project for the thoroughbred industry. Prof Bennett's review highlights the relative merits and shortcomings of the positions put forward by both parties, and provides a consolidated position on the likely real economic implications of the project for the studs' business decisions and associated implications for the broader Equine CIC.

3.4.2 Project Economics and Benefit Cost Assessment

To provide context to the second core issue considered in Prof Bennett's review, the Department notes that the EIS included a BCA for the project, completed by Gillespie Economics. This BCA was peer reviewed by BDA Group (commissioned by Anglo) and Deloitte Access Economics (DAE, commissioned by the Department). Both peer reviews found that, despite some minor issues with the BCA, it could be concluded that the project would result in a net social benefit to the community. Conversely, a third peer review of the BCA, undertaken by Marsden Jacob Associates (MJA) on behalf of the thoroughbred industry, identified several material faults with the BCA that it claims are sufficiently significant that proper recalculation would indicate that the project results in a net social loss.

This debate over the project's economics and the value of project benefits was also a key consideration of the Commission's Review Report. Ultimately, the Commission found that despite the *'optimistic'* nature of the project benefits, Anglo had adequately demonstrated that the project would still generate substantial positive benefits to NSW. Notwithstanding this finding, the Commission questioned whether the short term benefits of the project outweighed the potential risks to the Equine CIC.

Given the importance of the BCA in quantifying the impacts of the project on the ongoing viability of the Equine CIC, Prof Bennett provided a further, impartial view on the positions presented by Anglo and thoroughbred industry. In particular, Prof Bennett focused on the five specific points of criticism made in the MJA review. These included the price of coal, benefits of employment, costs of greenhouse gas emissions, jurisdictional limits of the BCA and adjustment costs to the thoroughbred industry.

Price of Coal

Prof Bennett identifies that the BCA should be based on an assessment of the long run price of coal, coupled with a sensitivity analysis of the forecast price, as was undertaken by Gillespie Economics. While recognising that the short term price of coal had fallen at the time the thoroughbred industry made its submissions, Prof Bennett states that the recent recovery of coal prices demonstrates why MJA's assessment of the short term spot-price is not appropriate for calculating the project BCA. Rather, Prof Bennett supports Gillespie Economics' consideration of forecast long-run coal prices and notes that Anglo has substantially greater economic incentive to ensure that the project is appropriately valued.

Prof Bennett also notes that the level of scrutiny given to the long run coal price fluctuations should be equally applied to the assessment of costs borne by the thoroughbred industry. Prof Bennett notes that

as with coal prices, the cost and revenue streams for the studs would also fluctuate over time (as a result of changes in stallion fees, government regulations, etc), meaning that any statements regarding the potential economic losses to the studs should also be subject to sensitivity testing.

Overall, Prof Bennett concludes that MJA's suggestion that the application of the current spot price for coal demonstrates that the project would not earn a profit (as distinct from providing a net social benefit) is poorly founded and notes the studs' assertions that Anglo would attempt to inflate the project valuation in order to sell the mine are ungrounded, especially given the fact that any prospective buyer would have a financial incentive to ensure the asset is appropriately valued.

Benefits of Employment

Prof Bennett also responded to MJA's criticism that Gillespie Economics has included the non-market benefits of employment in the BCA (ie the social benefits that employment generation provides for the broader community). Importantly, Prof Bennett notes that the inclusion of these benefits in the project BCA is based on the same arguments used by the studs to stress the importance and contribution of the broader thoroughbred industry to employment in the Upper Hunter region. To address this apparent inconsistency, Prof Bennett argues that *'to the extent that the non-market value of employment in the Project should be excluded from any BCA of the Project, so too should consideration of the employment impacts of the thoroughbred industry be taken out of the arguments put by the submissions.'*

In essence, Prof Bennett recommends that the non-market benefits of employment be treated equally in economic assessment of both industries. This means that if the mining industry cannot count the indirect value created by the employment benefits of the project, then neither should the studs promote the social benefits created by the thoroughbred industry's contribution to employment in the Valley.

To address this issue, Prof Bennett argues that the sensitivity modelling undertaken by Gillespie Economics showing net project benefits without employment is the most appropriate for decision making. This is consistent with the advice provided in the peer reviews completed by BDA and DAE.

Greenhouse Gas Emissions

Prof Bennett reviewed MJA's approach to costing the project's potential greenhouse gas emissions. Prof Bennett did not support MJA's use of the Gillard Government's former \$23/tonne tax as a surrogate measure for costing emissions, as it did not reflect the resource cost of emissions to the people of NSW. Prof Bennett identifies that this resource cost to the people of NSW is the relevant consideration for the BCA and concludes that once this cost is apportioned to the people of NSW, the marginal social costs of greenhouse gas emissions would be an inconsequential aspect of the BCA.

Jurisdictional Limits

Prof Bennett also considered the importance of clearly defining the jurisdictional limits of a BCA. Put simply, this consideration relates to the identification of which costs and benefits should be considered in BCA calculations. Prof Bennett agrees with MJA's statements that the BCA should include a NSW state-based approach. He acknowledges that while Gillespie Economics based its BCA on a national approach, it then sought to break down these figures to provide a further state-based BCA calculation.

However, Prof Bennett was critical of the thoroughbred industry's use of metrics associated with the overall Australian horse racing industry, which he considers is clearly not at threat from the project. He was equally critical of the thoroughbred industry's assertions regarding the industry's sustainability and the application of the precautionary principle to inform their position about net social benefits.

Further, Prof Bennett considers that both MJA and Gillespie Economics failed to adequately address the issue of foreign ownership in their distribution of costs and benefits. In stating this, Prof Bennett stresses the need to apply appropriate logic consistently. Anglo should have only considered project benefits accruing to the people of NSW. On the other hand, any losses incurred by the thoroughbred studs should have been excluded from its BCA, where these losses would accrue to foreign parties.

Thoroughbred Industry Adjustment Costs

The final point considered by Prof Bennett relates to MJA's claims relating to the adjustment costs that the thoroughbred industry would face if the project were to proceed. In summary, Prof Bennett found that MJA failed to adequately consider that the magnitude of these costs would likely be moderated by supplier substitution and consideration of foreign ownership structures.

Prof Bennett did not specifically address the likely costs associated with other matters such as heritage, noise and dust impacts, but supported the approach taken by Gillespie Economics, being that these costs would be internalised as a result of mitigation and management actions.

Project Economics and Viability

Prof Bennett notes the thoroughbred industry's concerns over Anglo's valuation of the project and the inputs used in the BCA, and acknowledges that future coal prices are subject to some degree of risk and uncertainty. However, Prof Bennett confirms that Gillespie Economics has adopted the correct approach to the BCA, by forecasting the *'long run price of coal'* and incorporating *'sensitivity analysis of alternative price projections'*. Further, Prof Bennett notes that any *'external studies that suggest the Project will not earn a profit (as distinct from generate a net social benefit) are poorly founded'*.

Prof Bennett also emphasises that the economic viability of the project has been significantly reinforced by a *'30%+ increase'* in coal prices over the past two months. Further, Prof Bennett recognises that Anglo has continued to express *'confidence in the viability of the project and hence the long run price of coal'*, and that considering the *'considerable amount of their shareholders' funds on the line'*, Anglo is both *'best placed'* and financially incentivised to ensure the veracity and viability of the project economics.

In summary, Prof Bennett's review acknowledges the extensive nature of the economic assessments undertaken for the project and supports the overall conclusions reached by Gillespie Economics and reinforced by previous economic peer reviews commissioned by Anglo and the Department, namely that the economic costs and benefits of the project *'would generate a net social benefit to the community'*.

3.4.3 Prof Bennett's Findings

Having regard to the two core issues that underpin the current debate over the implications of the project, Prof Bennett's final review reinforced his earlier findings that, if the project was to proceed, it is in the economic interests of both Coolmore and Darley studs to remain in their current locations, or at least to relocate within the Upper Hunter Equine CIC. While Prof Bennett recognises that the studs may leave the Upper Hunter for other *'non-profit'* related goals, he concludes that this temporary impact would not jeopardise the long term viability, nor trigger the terminal decline, of the Upper Hunter Equine CIC.

With respect to the project's BCA and the 5 key criticisms raised by MJA, Prof Bennett concluded that while *'the assessment of the project by the Proponent, as presented through the GE BCA, is overly optimistic in its support'*, likewise *'there is little doubt that the [thoroughbred industry's] submissions exaggerate the likely impacts of the project on the thoroughbred industry in the Upper Hunter'*.

Overall and despite having identified some limitations with both Anglo's BCA and the thoroughbred industry's alternative BCA, Prof Bennett concluded that *'the recommendation made by [Gillespie Economics], and supported by peer reviews of both BDA and DAE, remains appropriate: the benefits of the Project will exceed its costs.'* This conclusion is consistent with the findings of the Department's preliminary report and the Commission's Review Report.

4.0 DETAILED CONSIDERATION OF THE COMMISSION'S REVIEW REPORT

4.1 Recommendations Relating to the Current Project

The Commission made three recommendations that directly relate to the project, including that the project's elements on the Drayton South site should not proceed, and four further recommendations relating to NSW planning policies (see Section 4.2). Recommendations 1 to 3 are reproduced below:

1. *The application for the Drayton South open cut coal mine should not proceed.*
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.*
3. *The proposed conditions of consent relating to the existing Drayton Mine's rehabilitation should be strengthened to take into account the outcomes of any review of the NSW Government's current policy on final voids, should those additions to the mine proceed.*

4.1.1 Recommendation 1 – Project Should Not Proceed

As outlined in Section 2.4.3, the key reasons for the Commission's recommendation that the project should not proceed were the potential reputational risks to the nearby Coolmore and Woodlands studs and the risk that these studs would leave the Upper Hunter. The Commission found that should this occur, the real risks to the Upper Hunter Equine CIC would outweigh the project's short term benefits.

Having completed a rigorous review of the project, the Commission acknowledged that it *'has not found any conclusive evidence of horse health impacts'* and that Anglo *'has gone to great lengths to hide the mine behind ridgelines, establish tree screens and provide buffers, and offers to relinquish any open cut mining options on areas of its site beyond that proposed in this application. In this regard, the Commission is 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.'*

The Commission also considered that the *'sensitivity of the visual impact at each of the three areas (on the slopes around Trig Hill [ie on the studs' landholdings] and along Edderton Road and the Golden Highway) is debatable.'* The Commission acknowledged that mining is already visible from areas on the studs' properties, but found that the proximity of the project made these views harder to ignore.

Despite recognising the significant concessions that Anglo had incorporated into its revised mine plan in order to comply with relevant NSW Government policies and assessment criteria, the Commission considered that *'the impacts of a mine, regardless of their severity'*, pose a significant threat to the carefully cultivated image of the Coolmore and Darley studs and that these impacts *'real or perceived'*, could affect the success and ongoing operation of the studs. Specifically, the Commission identified that even with Anglo's proposed mitigation measures, residual risks include:

- residual visual impacts on limited areas of the studs (which are outside of their regularly-frequented operational areas);
- indirect visual impacts caused by visible dust, blast fumes and night lighting;
- dynamic visual impacts experienced during travel close to other mines by visitors not otherwise familiar with the mining landscapes of the Hunter Valley; and
- impacts of viewing digital imagery online of mining landscapes close to the studs.

The Commission adopted a conservative approach to the resolution of any uncertainty relating to the project's overall costs and benefits and the likelihood of impacts on the nearby thoroughbred studs. Ultimately, the Commission identified that the potential and perceived impacts of the project posed real and sufficient risks to the studs' reputations, images and brands, such that the studs may choose to leave the Upper Hunter, which in turn could have flow on effects for the Upper Hunter Equine CIC. Consequently, the Commission recommended that the project should not proceed.

Department's Consideration

The Department considers that a critical matter for the present Commission to take into account in determining the project is that Anglo has adopted the recommendations of the Commission's first two previous assessments by restricting its operations to remain behind the minimum buffer distance established in the Commission's review of the original project (the Commission's 'yellow line'). This buffer would ensure that all open cut mining operations remain behind two prominent ridge lines on the site, thereby significantly reducing the risks associated with visual and other impacts.

The Department acknowledges that the Houston Visual Bund (as proposed in Anglo's previous development application), would have been directly visible from the main areas of operation at the Coolmore Stud and would have had far greater potential for impacts on the operation and reputation of both the Coolmore and Woodlands studs.

However, this is no longer the case. As discussed in the Department's preliminary Environmental Assessment Report, Anglo has written to the Minister for Planning offering to voluntarily relinquish any rights to seek future potential expansions beyond the southern and western extents of the currently proposed open cut mine and also to surrender any underground mining rights within the exploration licence that it holds to the south of the Golden Highway, including any areas beneath the studs. This offer seeks to provide reasonable assurances to the equine industry by establishing a legally enforceable minimum buffer distance between open cut mining and neighbouring land uses (as requested by the studs).

While the equine industry may dispute the volunteered buffer distance, given that it conforms to the recommendations contained within the Commission's original review, the Department believes the

buffer would provide an appropriate outcome and address the equine industry's concerns about the risk of incremental mine creep on their future investment decisions.

This volunteered buffer is also relevant with respect to the Commission's Review recommendations. As highlighted in the Department's preliminary report, the overwhelming burden of scientific evidence indicates that the currently proposed mine could be developed and managed to comply with relevant NSW Government policies and related assessment criteria, including criteria for the assessment of amenity impacts on nearby residential and agricultural lands. By precluding any further incremental creep towards the studs, this legally enforceable buffer provides surety to the thoroughbred industry that the project does not also entail further future risk to the studs. By dispelling this uncertainty and concern over future impacts, this guaranteed buffer provides greater confidence that the project could be managed to remain compliant with relevant NSW Government policies and criteria over the entire mine life, which should in turn minimise the potential for impacts to the reputation and branding of the studs.

This position also seems to be inherent in the Commission's recommendations, which primarily relate to uncertainties and risks associated with the potential for impacts to the studs' reputations. The analysis undertaken by Dr Houston and the responses provided by the thoroughbred industry provide new material for both the Department and the Commission to consider with regard to these reputation risks and the likelihood that Coolmore and Woodlands would leave the Upper Hunter as a result of the project.

Dr Houston presents a strong argument that it would not be in the interest of either stud to leave their current location and that, if they did, it would be to their benefit to relocate to another site in the Upper Hunter. Dr Houston also concluded that, even if Coolmore and Woodlands did move out of the Upper Hunter, this would not result in the decline of the CIC. The responses provided by the thoroughbred breeding industry and the submission from Mr Guihot argue the alternate view. However, Prof Bennett's independent review of the Houston report arrived at the same conclusions as Dr Houston. The line of reasoning advanced by both Dr Houston and Prof Bennett is that fundamental economic theory leads to the conclusion that the interests of both Coolmore and Darley are best served by remaining in their current locations. However, Prof Bennett (in particular) leaves open the possibility that the studs may relocate, noting that the highly wealthy owners of the studs may relocate for utility, lifestyle or other 'well-being' reasons, regardless of the overall economic cost of relocation and the impact on market share.

One of the benefits of the Bennett reviews lies in independently clarifying the kinds of reasons that the studs may choose to relocate and the likely locations that they may relocate to. The Bennett reviews also help to provide additional clarity around the likely ramifications for the broader Hunter Valley thoroughbred industry, should the studs choose to leave the Valley.

The information presented in Anglo's response to the Commission's Review Report details a number of economic barriers that should act to reduce the likelihood of either Coolmore or Woodlands from leaving the Hunter Valley. These factors include the reduced life of the project (now 15 years, rather than 20 years) and Anglo's commitment to relinquish its rights to any future expansion towards the studs.

Coolmore has itself identified that it has put *'considerable time into assessing alternative locations in New South Wales'* and that no locations are currently available in NSW that meet their requirements, particularly in relation to scale, landscape variability and water. Coolmore notes that *'even for land of the quality of the current farm, it takes as long as eight years to bring pasture up to Coolmore's required standard for pasture, fencing and improvements'*. Further, the studs have not confirmed the existence or location of an existing stud outside of NSW that is currently available for purchase and would meet their requirements for scale and environmental attributes. Given these requirements, it is quite plausible that neither stud would be in a position to relocate their operations in a seamless fashion in the short term. As such, by the time the studs find, purchase and develop alternative properties to meet their exacting standards, there is a possibility that the project would already be half-way complete. If the studs already have an alternative location or locations identified, it may be possible to relocate in a shorter timeframe.

The Department also considers that the primary factor influencing the reputation of the studs is the quality of their bloodstock. This position is supported by Dr Houston's review, as well as a number of submissions from the thoroughbred industry. It is therefore important to note that, having considered the numerous studies commissioned by both Anglo and the thoroughbred breeding industry, the Commission's Review Report states that it *'has not found any conclusive evidence of horse health impacts'* that would arise as a result of the project.

Further and contrary to the thoroughbred breeders' claim that there are no appropriate criteria to assess impacts on their industry, the Department 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. These criteria have been established to protect a range of health requirements for the people of NSW and protect industry sectors, including agricultural sectors, from the amenity and health-related impacts of proposals.

The Department also notes that the key initial investments in Woodlands (2008) and Coolmore (1991) which have underpinned the continual growth that has made them the outstanding successes that they are today, were made at times when there were active mining approvals (both development consent and mining lease) over the Drayton South area. Anglo also claims to have consulted with Darley about its plans for Drayton South, at the time of Darley's purchase of Woodlands in 2008. If true, this indicates that Darley assessed the 'reputational' risk to its capital investment and ongoing operations as being acceptable at that time. Further, Coolmore states that it *'has invested more than \$100 million in infrastructure on the farm in the past 20 years'*. Certainly this ongoing investment and Coolmore's purchase of land to expand its stud operations in 2013 would have been undertaken in the full knowledge of the potential for a viable open cut mining operation in close proximity to the stud.

Finally, with respect to the broader Equine CIC, the Department agrees with the Commission's conclusion that the Hunter Valley thoroughbred industry is significant at the regional, State, national and international level. This is one of the fundamental reasons the equine industry is recognised as a critical industry cluster in the Department's *Upper Hunter Strategic Regional Land Use Plan* (September 2012) (the Upper Hunter SRLUP).

However, the Department contends that even if Coolmore and Darley choose to relocate (which these privately owned operations could choose to do regardless of the project), this would not necessarily result in the terminal decline of the Equine CIC. Rather, as indicated by Coolmore, the Hunter Valley would continue to retain a number of thoroughbred studs and would still generate some \$151 million in stallion covers, even subject to the full loss of Coolmore and Darley's combined fees for stallion covers (circa \$130 million). Further, the studs' submissions note 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. Therefore it is possible for many broodmares to continue to be located in the Upper Hunter even in the event that Coolmore and Darley choose to leave.

This ability of broodmares to remain in the Hunter Valley and travel to be covered by stallions is an important consideration with respect to the longevity of the Upper Hunter thoroughbred industry. Prof Bennett argues that even if Coolmore and Darley should leave the Hunter Valley (despite the economic reasons for both, and especially one, of the studs to remain), other owners would still locate their mares and raise foals in this area, due to the equine industry's recognition that the Hunter Valley has a strategic advantage in landscape, water and other environmental resources. With this continued concentration of mares, Prof Bennett argues that any temporary market gap created by the exit of key players with *'immediate market power'* could be filled through substitution in the medium to long run.

Economic Costs and Benefits of the Project

In weighing up the project's costs and benefits, the Commission interrogated Anglo's BCA, giving consideration to the thoroughbred industry's criticisms of how those costs and benefits were calculated. The Commission ultimately was satisfied with Anglo's claims that the project would provide substantial economic benefits to NSW but considered that a number of coal price forecast assumptions were at the upper end of the spectrum. The Commission's Review Report noted that the BCA used assumptions favourable to Anglo while excluding potential costs of impacts on the horse industry, environment, Aboriginal cultural heritage, and landscape values/tourism. While acknowledging the substantial economic benefits to NSW, the Commission therefore considered the project's economic benefits are likely to be overstated.

The Commission's position is supported by Prof Bennett's review, which stated *'there is clear evidence arising from that process that the Project will generate significant net social benefits to the people of NSW under a wide range of scenarios. However, it is acknowledged that the original BCA conducted by [Gillespie Economics] erred by not including any costs to the thoroughbred industry in the region that would arise because of the Project. As such, the extent of the Project's net social benefits is over-stated by the GE analysis.'* The costs and benefits of the project were also weighed up by the Commission in formulating its key recommendation. The Commission concluded that there were uncertainties in relation to the project benefits and that the risks to the Equine CIC are real and likely to outweigh the relatively short term benefits of the project. The Commission's review presented a detailed description

of the economics of the NSW thoroughbred and racing industry, the Upper Hunter Equine CIC and the Coolmore and Woodlands studs. It concluded that the industry and CIC is significant regionally, and at the State, national and international level, and that Coolmore and Darley are core pillars of that industry.

Anglo was critical of the Commission 'downplaying' the benefits of the project while, in its view, making unfair comparisons to the thoroughbred breeding and racing industry contributions. Anglo claimed that, if the studs are permitted to count the value of all downstream benefits from the breeding and racing industries in their operations, a fair comparison would be the consideration of all end users of the coal industry's products (such as the electricity and steel markets). Anglo also responded to the Commission's other criticisms regarding the assumptions used in the BCA claiming that the coal price forecast used in the BCA was the best estimate available at the time of the analysis and within the middle of the range of the sensitivity assessment.

Prof Bennett likewise addressed this issue in his reviews, noting that *'it is unhelpful of the Submissions to make mention of the overall size of the Australian horse racing industry (with a contribution to GDP of over \$5b) in support of their case.'* Prof Bennett argues that if this approach were taken, it could be concluded that the project would have no cost impact on the thoroughbred industry, as *'the Project in no way poses a threat to the national horse breeding/racing industry'*. Likewise, Prof Bennett argues that *'should the proponent of the Project choose to follow the same pattern of argument, they could equally invoke the value of the industries that use the electricity generated from the coal that would be mined as supporting evidence.'* Prof Bennett notes that neither piece of information relates to the incremental costs and benefits of the project and as such, *'neither contention is useful to the decision making process'*.

Further, it is noted that the conclusions drawn in the most recent MJA review of the costs and benefits of the project (July 2016) are consistent with those previously presented on behalf of the studs to both the Department and the Commission. Having considered these comments in its previous review, the Commission concluded that while *'the net economic benefits of the project are optimistic and are likely to have been overstated the project is still likely to deliver substantial economic benefits to NSW in the form of royalties from the extraction of coal, and from the flow-on benefits of the economic activity from the operation of the mine over a period of 15 years, should it proceed.'*

The Commission's Review Report also stated that *'the continued employment and community benefits that the project would provide during that time would also be important to the mine workers, proprietors and employees of mine support businesses and the towns of Muswellbrook and Singleton, especially considering the high levels of unemployment in these council areas.'*

The Department notes that there has been considerable review of the BCA undertaken for the project by Anglo, the studs, the Commission, the Department and experts commissioned by all parties. Despite this, there still remains conjecture about the value of the project. As discussed above and stated by Prof Bennett *'There is little doubt that the [thoroughbred industry's] submissions exaggerate the likely impacts of the Project on the thoroughbred industry in the Upper Hunter. However, it is also the case that the assessment of the Project by the proponent ... is overly optimistic in its support'*. Ultimately, Prof Bennett concludes that (in BCA terms) *'the benefits of the project will exceed its costs'*. This is consistent with the positions of the Department, two additional peer reviewers and the review Commission, who each state that the project would provide substantial economic benefits to NSW.

Matters to be Considered by the Commission in Determining the Project

Anglo's response to the Commission's Review Report was highly critical of the Commission and raised a number of arguments that challenge the validity of information relied upon by the Commission in formulating its position that the project should not proceed. This includes Anglo's claims of a number of errors and misrepresentations, primarily in relation to the comparison of project costs and benefits.

Anglo also claimed that the Commission did not give proper consideration to the objects of the EP&A Act or the requirements of the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* (Mining SEPP) in relying on potential reputational damage as the key driver for recommending that the project be refused. Anglo claims the Commission has placed undue weight on perceived impacts (which are subjective and/or have not been verified) rather than actual tangible impacts.

Both the Department and the Commission now have access to a range of additional information. This information includes further analysis contained in Anglo's response to the Review Report (namely the Expert Report by Dr Houston); material contained in the thoroughbred industry's responses (in support

of the Commission's review report and in response to the Houston report); and two independent reviews of Dr Houston's report and the thoroughbred industry's responses, commissioned by the Department and undertaken by Prof Jeff Bennett.

While acknowledging that the Commission can always apply a precautionary approach when faced with uncertainty (as it did in the Review Report), the Department considers that it is unlikely that the 'precautionary principle' has application in the current case. The 'precautionary principle' is one of the four key principles that is to be applied in achieving ecologically sustainable development (ESD). ESD 'requires the effective integration of economic and environmental considerations in decision-making processes'. The precautionary principle must only be applied to achieve ESD where there is a 'threat' of 'serious or irreversible environmental damage'. The Department does not consider that the issues identified by the studs amount to this type of 'threat'.

However, the Department does consider that intragenerational equity is a matter for the Commission's consideration. The Commission Review *'found that the impacts of the mine would generally be accepted in another location in the Hunter Valley'* and *'the mine is largely predicted to meet standard blasting and noise criteria and would not exceed the air emission criteria at the surrounding residential receivers'*. The Department is concerned that the provision of the protections that the studs are seeking, essentially on the basis of their perceptions as to their brand and image, could increase uncertainty in the planning system. The planning system is based on the equitable application of established policies and guidelines, informed by the best available current scientific knowledge. All neighbouring residents and land uses are afforded equal footing through protection and mitigation measures established in the Government's policies and guidelines. Decision-making precedents that are not firmly based on these foundations could lead to other requests for exceptions based on individual perceptions.

The Department understands that the Commission always seeks to take into account the scientific evidence, prevailing policy environment and community views when exercising its role as the Minister's delegate in determining State significant development projects. The Department acknowledges the importance of these three foundations to the Commission's decision making.

The Department's view is that no significant scientific evidence has been presented that would warrant the refusal of the project. Further, the project has been redesigned so as to be consistent with the criteria contained in all applicable policies adopted by the NSW Government, as well as meeting the minimum setback requirements for the project established in the Commission's review of the original proposal. Finally, while important sections of the community maintain entrenched objections to the project (ie the studs and their local representative association), an overwhelming proportion of the submissions received support approval of the project.

The composition of community submissions received by both the Department and the Commission is shown in **Table 3** below. The table clearly demonstrates that 99% of all public and special interest submissions support the project, including 98% of the 4,363 submissions received by the Department and over 99% of the 18,025 submissions received by the Commission. In making this observation, the Department recognises that a number of the 18,025 submissions received by the Commission were sent by email from the *Voice for Mining* website. The Department has therefore included a further comparison in the far right column, which only considers the 'unique' *Voice for Mining* submissions that contain specific comments and which were uploaded to the Commission's website. Under both scenarios, over 99% of submissions received by the Commission during its review support the project.

Table 3: Public and Special Interest Group submissions on the Project

Nature of Submission	EIS Exhibition Period	Commission Review (incl all Voice for Mining submissions)	Commission Review (incl only 'unique' Voice for Mining submissions)
Support (%)	4,279 (98.1%)	17,943 (99.5%)	11,215 (99.3%)
Object (%)	84 (1.9%)	74 (0.4%)	74 (0.7%)
Neutral (%)		8 (0.0%)	8 (0.1%)
Total	4,363	18,025	11,297

While these figures do not have any direct application to issues raised by the studs, they do provide important context in assessing the overall net effects of the project on the broader community.

Industries working together

It is clear enough that at present there is very limited trust or co-operation between the two key neighbouring studs and Anglo. However, it would appear that the current low ebb of relationship and co-operation between these parties has not always been the case for the two industries that they represent.

The history of the equine and coal mining industries discussed in Sections 2.1 - 2.2 and **Table 1** demonstrates this to be the case. The Department believes it is possible that previous relationships can be restored if both sides offer mutual goodwill and are open to working co-operatively.

Nonetheless, the strength of the current positions (particularly those held by the studs) needs to be recognised and a process developed through which relationship and co-operation can be restored. In this respect, the Department considers that its previous proposal for a Community Consultative Committee (CCC), which would include representation from each of the key neighbouring studs, is simply not sufficient to underpin this restoration of relationship.

For this reason, the Department has proposed an additional consultative committee, to be focussed simply on the mine and the two studs, with an independent chair. The Department proposes conditions requiring that Anglo use its best endeavours to establish a Thoroughbred Studs Consultative Committee (TSCC) to facilitate ongoing consultation with the owners of both Coolmore and Woodlands. The Department proposes that the TSCC must be established and operated to the satisfaction of the Secretary and that it must:

- (a) be chaired by an independent chairperson whose appointment has been approved by the Secretary;
- (b) include two representatives of each of the Coolmore and Woodlands studs and representatives of Anglo;
- (c) meet at least every four months over the life of the development but more frequently if mining operations systemically exceed any relevant air quality, noise or blasting criteria at the Coolmore and Woodlands studs;
- (d) agree at each meeting to a list of pre-planned events and activities that are scheduled to occur at the Coolmore and Woodlands studs prior to the next meeting, and which require specific consideration the noise or blasting operating conditions;
- (e) be consulted during preparation of the Noise, Blast, Air Quality and Visual Impact Management Plans for the project;
- (f) review implementation of the Noise, Blast, Air Quality and Visual Impact Management Plans, as they relate to impacts on the Coolmore and Woodlands studs;
- (g) recommend any reasonable and feasible improvements to the proactive and reactive measures in place to manage the approved noise, blasting, air quality and visual impacts of the development on the Coolmore and Woodlands studs; and
- (h) have clear procedures for handling any disputes.

If there is any dispute about the reasonableness and/or feasibility of management measures proposed within the TSCC, timeframes required to implement the TSCC's recommendations or actual implementation of TSCC recommendations, then the dispute would be referred to the Secretary for resolution. The Secretary's decision on any dispute would be final. If the owners of both Coolmore and Woodlands refuse to be involved the TSCC, then the proposed condition would not be binding on Anglo. In such a case, the studs would still be represented on the broader CCC.

Conclusion

The Department has rigorously and comprehensively assessed the potential impacts of developing an open cut coal mine on the Drayton South site.

The Department considers that following a number of material reductions to the original mine plan and subject to the mitigation and management measures proposed either by Anglo or in its preliminary report, the currently proposed coal mine can be developed without impacting the ability of either the Coolmore or Woodlands studs to continue to operate successfully. While sectoral submissions disagree about the likelihood and degree of reputational impacts on the studs, the overwhelming burden of scientific evidence points to the fact that the mine could be developed and managed to comply with relevant NSW Government policies and assessment criteria. This indicates that the revisions made to its original mine plan made by Anglo provide appropriate and sufficient protection from the potential mining impacts. In its Review Report, the Commission recognised that *'the Applicant has made its best efforts to minimise impacts on the neighbouring studs, and that the impacts would generally be considered acceptable in another location in the Hunter Valley.'*

Given the significant economic incentives for both, and especially one, of the studs to maintain their stallion covering services near the largest concentration of broodmares in the Southern Hemisphere, the Department considers that the risks to the long term viability of the broader Upper Hunter Equine CIC are less than previously assessed by the Commission.

Considering the further analysis provided by Dr Houston and the independent review conducted by Prof Bennett, the Department reaffirms its view that Coolmore and Woodlands would be unlikely to leave the Upper Hunter if the project is approved. In the Department's view, the residual risks posed by the current project are not substantial enough to represent real or reasonable threats to the reputation of the studs such that they would choose to spend many millions of dollars to leave the Upper Hunter. Having considered all arguments presented, the Department is also of the view that the CIC would not suffer a long term terminal decline, should one or both studs choose to relocate away from the Upper Hunter, against their economic interest.

4.1.2 Recommendations 2 and 3 – Approval for Minor Expansion of Drayton Mine

With respect to Recommendations 2 and 3, the Department notes that the minor extension areas at the existing Drayton Mine only contain around 1.4 Mt of coal. Anglo has previously identified that it would be mining these areas in order to provide continuity of operations between Drayton and the Drayton South extension area. This raises the risk that these areas would not be mined in the absence of approved mining activities at Drayton South.

The Department has sought clarification from Anglo on whether it wishes to proceed to mine these small areas. Anglo has not provided a clear 'yes or no' answer. Nonetheless, it has not lodged a modification application to access these areas, it has announced that it will close the existing Drayton Mine in late 2016 (in the absence of approval for Drayton South) and is seeking to sell its Australian coal assets.

In these circumstances, the Department judges that it is unlikely that Anglo would seek to commence any new development at Drayton mine (under either a modification to its existing consent or via the grant of the Drayton South development application in a manner limited to resources on the Drayton Mine site) while ever current market conditions prevail. In the Department's opinion, this outcome is all the more likely if either a new consent or a modification imposes rehabilitation, closure and final landform requirements that are additional to those in the existing consent.

4.2 Planning Policy Recommendations

The Commission's Review Report made four recommendations (recommendations 4-7), which relate to the NSW planning system, relevant considerations for major development assessments, the operation of NSW Government organisations and the NSW Government's existing legislative and policy frameworks. Overall, these recommendations represent the Commission's views on how the NSW Government could improve or enhance the existing NSW planning framework.

The Department notes that while these four recommendations relate to the broader NSW Government planning framework, the fact that these recommendations are part of the Commission's review of the project imply that they are pertinent to assessment of the proposal. Consequently, the Department's response to recommendations 4-7 seeks to address both NSW Government policy and specific considerations for the current proposal.

4.2.1 Recommendation 4 – Strategic Land Use Planning

The Commission made the following recommendation relating to strategic land use planning:

Greater clarity and planning certainty needs to be provided to the mining industry, the community and other industries that exist within mining regions. NSW Planning and Environment, NSW Department of Industry's Division of Resources and Energy and other relevant government agencies need to collaborate to develop a strategic framework for the coordinated release of exploration licences and a suite of effective planning tools to provide reasonable exclusion zones or buffers to protect other industries and sensitive land uses within those parts of the state that are rich in coal, gas and/or mineral reserves. In particular,

- a. resources need to be allocated to allow relevant Departments to undertake the work required to:*
 - i. identify sensitive land uses and resources (such as important agricultural land, water resources, places of special Aboriginal cultural significance or of significant conservation value) that warrant protection from mining; and*
 - ii. to determine appropriate buffers, exclusionary zones or preservation measures for those land uses and areas of other significant value;*
- b. the Gateway process needs to be strengthened and its remit widened to ensure it has the capacity to identify and prevent significant land use conflicts from progressing.*

The *Upper Hunter Strategic Regional Land Use Plan* (September 2012) (the Upper Hunter SRLUP) is the current Government policy that provides the framework for managing competing land uses in the

Upper Hunter. The Upper Hunter SRLUP specifically aims to support growth, protect the environment and respond to competing land uses while preserving key regional values. The Upper Hunter SRLUP identifies agricultural land that has strategic significance because of its land capability, productivity or other economic or social value to the region. Areas of significance are identified by mapping as either Biophysical Strategic Agricultural Land (BSAL) or Critical Industry Cluster (CIC), as is the case with the Upper Hunter Equine CIC. The strategic consideration of places of special Aboriginal cultural significance is being addressed through the process outlined in Section 4.2.4.

The Department considers that the Upper Hunter SRLUP, together with other legislation and Government policy provides an appropriate process for the assessment and management of potential land use conflicts in the Upper Hunter. Importantly, the Department has already given consideration to the potential for a linear buffer around CIC land during the development of the Upper Hunter SRLUP.

With the exception of specific exclusion zones for coal seam gas proposals, the NSW Government has generally avoided applying standardised buffer distances between industries and neighbouring land uses. Under the current planning system setbacks or buffers can be imposed between a project and other land uses following full assessment of the likely impacts of the project on surrounding land uses and residents. This case by case approach provides decision makers with greater flexibility to ensure that any setbacks are tailored to address the particular circumstances of the project, site characteristics the nature of impacts and the nature of surrounding land uses, without unnecessarily sterilising productive land or land use. Both the Department and the Commission have recognised this need for a tailored approach to the development of buffers and acknowledged that minimum setback distances can vary greatly between locations depending on a range of factors such as the local topography, climate and background environment. Further, the extent and nature of potential buffers between land uses is highly dependent on the type, nature and scale of the developments that are potentially in conflict.

Of specific relevance to the project, the economic implications of imposing a linear buffer distance around the Equine CIC presents unique challenges. For instance, if a prescribed 'buffer distance' was to be enforced around existing stud farms, any new farms outside or close to the boundary of this area would be afforded less protection from potential impacts, which could cause disparate valuations of various studs and potentially restrict the future expansion of the CIC. Conversely, if new studs were afforded the same buffer distance on establishment, this would unduly and unreasonably bias one industry over another, allowing the strategic establishment and expansion of mining exclusion areas, which would hinder rather than support the economic diversification of the Upper Hunter Region. Such an outcome would impose undue restrictions on the ability of the Upper Hunter to support both the mining and equine industries, and threaten the economic diversification of the Upper Hunter economy.

Further, the Commission acknowledges that the potential impacts of mining developments are largely influenced by site specific constraints. As such, while a prescribed buffer around the CIC may provide adequate protection from one project, it may not provide adequate protection from another. This need for site specific considerations is a key reason why the Upper Hunter SRLUP and the Mining and Petroleum Gateway process are based on the consideration of site specific factors.

The Mining and Petroleum Gateway Panel is one of the key elements of the NSW Government's SRLUP, a suite of initiatives to better protect the State's agricultural and water resources from the potential impacts of mining and coal seam gas activities and strengthen consideration of potential land use conflicts. The Gateway Panel is an independent body of experts constituted under the Mining SEPP and was established in October 2013.

The Gateway Panel applies the following criteria to determine whether any State significant mining proposal would lead to a significant impact on a CIC:

- any impacts on the land through surface area disturbance or subsidence;
- reduced access to, or impacts on, water resources and agricultural resources;
- reduced access to support services and infrastructure;
- reduced access to transport routes; and
- loss of scenic and landscape values.

Where these criteria are not met, the Panel issues a Gateway certificate containing stringent conditions that must be addressed in the applicant's environmental impact statement and the consequent assessment stages. The determining authority must be satisfied that these conditions have been adequately addressed prior to granting an approval.

Further to the SRLUP and Gateway process, the Mining SEPP also seeks to address the issue of land use conflict by specifically requiring it to be considered by consent authorities in relation to mining, petroleum production or extractive industry proposals. Clause 12 of the Mining SEPP sets out the matters that need to be considered by the consent authority in relation to the compatibility of the project with existing and approved land uses. This includes whether the project is likely to have a significant impact on preferred uses, the respective public benefits of the land uses, and the measures proposed to avoid or minimise any incompatibility.

With respect to the Commission's comments regarding the need for greater clarity and certainty in the co-ordinated allocation of mineral resources and development of planning assessment tools, the NSW Government is already undertaking a range of reviews that relate to these issues. Chief amongst these is the development of the Strategic Release Framework, which will allow for the controlled, strategic release and competitive allocation of coal and petroleum exploration titles across New South Wales. This new framework is being designed to provide greater clarity and transparency around decision making processes that determine where exploration activities may take place, and expands existing competitive processes for determining who may undertake these activities. The new framework will be further supported through the Department's development of the Hunter Regional Plan, which aims to provide a balanced approach to and support for continued growth and diversification of the Hunter economy, protection of the environment and development of regional communities. The current draft plan recognises the importance of the region's rural and resource sectors and seeks to incorporate aspects of the Upper Hunter SRLUP that guide the management of competing land uses.

The Department considers that the current approach of considering these matters on a case by case basis during the Gateway and development assessment processes remains the most appropriate way of achieving the correct level of protection, without unnecessarily limiting or restricting other land uses.

4.2.2 Recommendation 5 – Equine Critical Industry Cluster

The Commission made the following recommendation relating to the Upper Hunter Equine Critical Industry Cluster:

The importance of the Equine Critical Industry Cluster, its sensitivities to intensive development and the landscape character of its central operators, including the Coolmore and Woodlands studs, needs to be acknowledged with the development and enforcement of appropriate buffers, exclusionary zones or preservation measures to safeguard this important industry.

The Commission notes that the Strategic Regional Land Use Plan for the Hunter prepared in 2012 identified and highlighted the importance of the Upper Hunter's Equine and Viticulture Critical Industry Clusters. Further strategic planning work is needed to address current conflicts and deliver planning protections to safeguard both of these Critical Industry Clusters from incompatible land uses, thereby providing greater certainty for all sectors and potential land uses in the region and providing greater certainty for further investment in these Critical Industry Clusters.

The overwhelming scientific evidence provided to date indicates that the project could operate to meet all relevant NSW Government policies and impact assessment criteria. While recognising the importance and unique attributes of the thoroughbred industry, the Department notes that the Government has already implemented a range of existing protection measures to address potential impacts on agricultural enterprises and livestock and human health. The Department's position on the implementation of arbitrary buffers around particularly land uses is discussed in Section 4.2.1.

Further, the Department notes that Anglo has already offered to relinquish part of its exploration licence to the south of its proposed project, thereby eliminating any potential for future mine creep. This outcome provides the degree of certainty that the equine industry has sought from the NSW Government, while appropriately balancing the consideration of the scientific evidence provided in relation to the likelihood and significance of the site specific impacts of mining on the nearby studs.

4.2.3 Recommendation 6 – Final Voids

The Commission made the following recommendation relating to final voids:

Work underway in Government to establish a policy on mining voids should include:

- a. consideration of whether, and if so, under what circumstances final voids would be acceptable in the rehabilitation plans for open cut mine design in NSW;*

- b. criteria to guide the level of landscape (both landform and land capability) and water impact legacies the State is willing to accept in exchange for the various economic and employment returns provided by mining; and*
- c. guidance on how these should be factored into the mine's cost benefit analysis and wider public benefit considerations for decision makers.*

The NSW Government is currently preparing a policy on post-mining landforms and rehabilitation, which will include consideration of mining voids. This policy is being prepared jointly by the Department and the Department of Industry's Division of Resources and Energy (DRE). The aim of the policy is to enhance the Government's management of progressive rehabilitation and post-mining landform outcomes. The policy will include principles for determining the acceptability of rehabilitation proposals, including proposed post-mining landforms and final voids. The initial stages of the policy development are underway.

Notwithstanding, the Department has been working for several years to improve final landform outcomes. This work includes detailed consideration of final void outcomes during the assessment of all development applications for major mining projects, including a specific focus on requiring the applicant to appropriately consider reasonable and feasible ways to reduce the number, scale and visual impact of final voids.

Throughout the assessment process for the project, the Department and DRE have liaised with Anglo to maximise the opportunities for the elimination of final voids across the existing Drayton mine and Drayton South. The rehabilitation objectives that would apply to the project include providing a safe, stable and non-polluting landform that sustains its intended final use. Landforms are to be consistent with and complement the topography of the surrounding region and incorporate relief patterns that are consistent with natural drainage. The quality of retained water is to be fit for the intended land use and consistent with the regional catchment management strategy. Any water discharged is to be consistent with baseline conditions of the waterways prior to mining disturbance.

Under the original Drayton South proposal, the Department identified that it was not satisfied with the proposed final landform and final void designs for the Drayton South site and commissioned an expert mine planner to review and identify any practicable improvements to the proposed designs. In direct response to the commissioned review, Anglo reviewed its proposed designs and presented a revised final landform for the Drayton South site that significantly reduced the size and depth of the final void, while incorporating contemporary best-practice standards for macro-relief, micro-relief, naturalistic visual features, reinstated surface water catchments and drainage contours.

Further to this, the preliminary report for the current project identified that Anglo had sought some minor changes to the previously proposed final landform at Drayton Mine. Consequently, during the assessment process, the Department requested further information on ways that Anglo could improve the final landform outcomes at Drayton Mine. This resulted in Anglo providing a fourth 'optimised' scenario for the Drayton Mine final landform, which backfilled one of the four existing approved final voids, significantly reduced the size of a second final void and consolidated all remaining void space adjacent to AGL Macquarie's Liddell fly-ash dam, thus providing the greatest potential for a future beneficial use for these voids. The Department recommended in its preliminary report that this option be required through the conditions of any consent.

The Department and DRE are of the view that the design of the final voids for the project, including final voids to be retained at Drayton Mine, have been comprehensively reviewed. The planned Drayton South mine rehabilitation and final void includes contemporary leading practice standards for macro-relief, micro-relief, naturalistic visual features, reinstated surface water catchments and drainage contours. The scale of the proposed Drayton South final void has been minimised; an outcome which the Department and DRE both support. Existing voids associated with the existing Drayton mine have also undergone design changes to final high walls which have the potential to create greater landform stability into the longer-term future.

Taking into consideration the significant number of engineering reviews and revisions to final landforms undertaken as part of the original and current assessment processes, the Department is of the view that the currently proposed project has incorporated all likely reasonable and feasible measures to reduce the size, scale and number of final voids to the greatest extent practicable. The proposed final landform outcomes for both Drayton South and Drayton now present more beneficial and foreseeable long-term final landform outcomes for the Muswellbrook LGA than a number of other mining proposals approved over the past 10 years.

4.2.4 Recommendation 7 – Aboriginal Cultural Heritage

The Commission made the following recommendation relating to Aboriginal cultural heritage:

Within areas of significant open cut mining activity strategic consideration of Aboriginal cultural heritage landscapes and places is needed, to consider cumulative landscape changes and impacts and identify priority areas for protection. This should provide for more comprehensive consideration of the significance of Aboriginal cultural heritage values, not only the physical artefacts that have tended to form the focus of mining assessments, but also the wider cultural landscape connections and the interplay between these elements.

The Department understands that the Commission's recommendation arises from its consideration of a confidential submission provided to the Commission by the thoroughbred industry on behalf of an Aboriginal organisation active in the Upper Hunter. The Department has not been made aware of the detailed content of this submission. It therefore has a limited ability to comment on its proposals.

However, the Department does reiterate that a Cultural Heritage Impact Assessment was completed for the project in accordance with all relevant guidelines. Overall, the Office of Environment and Heritage (OEH) and the Department were satisfied with the assessment and the measures proposed by Anglo to avoid, salvage, protect and build on the existing cultural knowledge of Aboriginal heritage on the site. The Department is unaware of any matter related to Aboriginal heritage which stands in the way of approving the Drayton South project.

The Department also notes that it established the Upper Hunter Aboriginal Cultural Heritage Trust in 2001 for the purposes of funding regional Aboriginal heritage studies in the Upper Hunter and to provide a framework for Aboriginal cultural heritage management. The Trust also sought to benefit the Aboriginal community through skills development programs. The Trust was established following extensive consultation with Government agencies, Aboriginal groups and mining representatives, and was funded through contributions made by mining companies under their conditions of consent. The Trust's final round of funding was granted in early 2016. To date, these funds have been used for:

- the preparation of a baseline heritage study of the Upper Hunter in 2004, which reviewed existing studies on Aboriginal cultural heritage in the region and recommended future work to enhance cultural heritage activities;
- the Upper Hunter Skills Development Centre in 2007, which trained indigenous people to secure jobs in the mining industry. The majority of people trained found jobs in the industry and the Centre still operates and has ongoing partnerships with mining companies;
- an Aboriginal Employment and Enterprise Development initiative in 2014, which aims to improve Aboriginal training and employment outcomes in the Upper Hunter through educational support for Aboriginal students, including scholarships, mentoring, traineeships and tuition;
- an Aboriginal Owner Registration project in 2014, to conduct anthropological, historical and genealogical research to allow Aboriginal people who assert a cultural association with the Upper Hunter to have their names entered on the Register of Aboriginal Owners; and
- an Aboriginal cultural values mapping program in April 2016, to supplement the baseline heritage study undertaken in 2004.

As can be seen, the Upper Hunter Aboriginal Cultural Heritage Trust has funded a number of projects that contribute to the knowledge and understanding of Aboriginal cultural heritage across the Upper Hunter, as well as providing tangible benefits to Aboriginal people through skills development, educational support and job opportunities. The knowledge gained through the heritage studies funded by the Trust also provides for improved Aboriginal heritage assessments and assists in facilitating more strategic consideration of Aboriginal cultural heritage management in the Upper Hunter.

At the broader State level, the NSW Government is currently in the process of developing legislative reforms in relation to the protection and management of Aboriginal cultural heritage. The protection and management of Aboriginal cultural heritage is currently managed under Part 6 of the *National Parks and Wildlife Act 1974* (NPW Act). The reforms aim to remove the provisions from the NPW Act and create improved arrangements within new stand-alone legislation.

While these reforms are still being developed, the Department understands that they contain proposals to expand the current statutory consideration of Aboriginal cultural heritage, including:

- improved protection for Aboriginal cultural heritage, backed by strong penalties, to address concerns about continuing loss of significant items of Aboriginal cultural heritage and current difficulties in prosecution for breaches;

- a broader approach to identifying objects, places and other items of significance in order to reflect a more mature and contemporary understanding of Aboriginal cultural heritage;
- a stronger voice for Aboriginal people through Aboriginal community responsibility, at local levels, for consultation, planning and decision making on matters of cultural heritage;
- better integration between Aboriginal cultural heritage processes and local, regional and State planning processes to ensure appropriate Aboriginal community input into development decisions, and reduce duplication, unnecessary delays and red tape;
- consistency of processes at local, regional and State levels with greater regulatory flexibility to ensure that local plans can be adapted to local conditions and purposes; and
- provide Government oversight and support at local, regional and State levels informed by advice and expertise from a State-wide Aboriginal advisory committee. This will ensure that, when the new legislation is implemented, it delivers the required level of protection and the expected social, environmental, cultural and economic benefits for NSW.

Specifically addressing the points raised by the Commission, the new legislative framework will include a broader approach to the identification of objects, places and other items of significance than has been able to be applied in the past. The reforms will also seek to ensure that strategic planning processes are able to integrate Aboriginal cultural heritage information with other environmental information when conservation areas are being identified and assessed.

As detailed in the preliminary report, the Department and OEH acknowledge that the project would disturb a number of Aboriginal artefact sites/complexes, including 13 moderately and three highly significant sites. Given that most of these sites are located within the proposed open cut footprint, there are limited opportunities for further avoidance. It is also noted that, relative to the original proposal, the revised project would avoid a number of sites, and would provide for the ongoing protection of a highly significant stone quarry site, located within biodiversity offset areas along Saddlers Creek.

Overall, both the Department and OEH are satisfied with the measures proposed by Anglo to salvage, protect, and build on the existing cultural knowledge of Aboriginal heritage sites identified on the site. The Department is also satisfied that the concerns raised by the Commission can be adequately addressed through the application of the recommended conditions of consent, the completion of the programs funded by the Trust and the proposed State-wide reforms to the protection and management of Aboriginal heritage.

6.0 BILATERAL ASSESSMENT

In accordance with the bilateral agreement between the Commonwealth and NSW Governments, the Department's preliminary Environmental Assessment Report provided substantial information required by the Commonwealth Minister in deciding whether or not to approve a proposal under the EPBC Act (see Appendix L of that report). Since the date of that report, OEH has provided further technical assessment of the impacts of the project on Matters of National Environmental Significance (MNES). This additional information has been included in a further assessment of MNES set out in **Appendix D**.

The Department believes that **Appendix D** (together with Appendix L of the preliminary Environmental Assessment Report) contains sufficient information to enable the Commonwealth Minister to consider and reach a determination on the separate development application under the EPBC Act.

7.0 RECOMMENDED CONDITIONS

Recommended conditions of consent were provided with the Department's preliminary Environmental Assessment Report. Revisions have been made to the Department's recommended conditions of consent to reflect the Department's further assessment of the merits of the project, the Commission's Review Report, consideration of public comments regarding key aspects of the project, final input from agencies and comments from Anglo. In particular, these conditions provide for the establishment of the TSCC. They also provide for a significant number of minor amendments to the Department's standard conditions for open cut coal mines, which are constantly under review.

Overall, the Department is satisfied that its recommended conditions provide a comprehensive, contemporary and precautionary approach to the management of the project and include strict

compliance with relevant performance measures and standards, to ensure the predicted residual impacts of the project are effectively minimised and mitigated. The Department is of the view that these conditions represent current best practice for the regulation of open cut mining projects in NSW, provide an appropriate level of protection for the local environment and the amenity of the local community and promote the orderly development of the region's important resources.

These conditions have been reviewed and accepted by Anglo.

8.0 CONCLUSION

The current application will be determined by a new panel of Commission members, having regard to the recent Commission's Review Report, Anglo's response, the Hunter thoroughbred industry's responses and this report. While the current application is a new application for a revised project, the findings of the two earlier assessments by the Commission and the responses by Anglo and the Hunter thoroughbred industry to these earlier processes, are also of direct relevance to the current determination.

The two earlier Commission assessments provided recommendations which have been substantially addressed by Anglo in its current application. This has resulted in a significant reduction in the coal resource proposed to be extracted and a shortening of the proposed mine life. DRE has stated that the project remains significant to the State of NSW due to the significant export earnings that are important to the balance of trade and Gross Domestic Profit for the State and Australia as a whole. The Commission's Review Report also recognised that the project would provide employment and community benefits to the Hunter region, made more significant by the recent increase in unemployment rates in this region, and would *'deliver substantial economic benefits to NSW in the form of royalties from the extraction of coal, and from the flow-on benefits of the economic activity from the operation of the mine'*. These benefits, together with the efficient recovery of the State's resources, must be considered by the Commission as part of its balanced assessment and final determination of the project.

The environmental, social and economic costs of the project are equally significant matters to be considered in the Commission's determination. The Department's assessment of the project provides a considered and weighted analysis of the environmental, social and economic costs and benefits to the local area, region and State of NSW, giving weight to scientific evidence and quantified analysis of the reasonably foreseeable and tangible impacts. Notwithstanding that the vast majority of submissions received were in support of the project, the Department recognises the strong and material concerns of the thoroughbred breeding industry, and has given thorough consideration to matters raised in the submissions and responses that remain opposed to the mine. On balance, and having considered all issues raised, the Department is satisfied that Anglo has demonstrated that the impacts of the project have been minimised such that they meet the NSW Government criteria by which all mining development is currently assessed in NSW.

The Department agrees with the Commission's findings that the equine industry in the Upper Hunter is an industry of significance to the local area, region and State. Coolmore and Woodlands studs have been recognised by industry and Government as core components of the Upper Hunter Equine CIC. Should the project be approved, the interaction between Drayton South and the studs will undoubtedly require careful management. The Department is of the opinion that the coexistence of the two industries in this location is achievable with the co-operation of all parties expressed through the proposed TSCC and with the implementation of the measures proposed to minimise the impacts from the project.

The Department acknowledges that the Commission's recommendations reflect its assessment and consideration of contested positions and outcomes associated with the potential impacts of the project and the business investment decisions of the thoroughbred industry. The Department agrees that these matters are of the importance in considering the project's merits and has afforded them substantial weight in this report. To help inform its consideration of these matters and the Commission's determination process, the Department sought additional information from both Anglo and the thoroughbred industry in relation to the matters raised by the Commission Review Report, and commissioned an independent, arms-length peer reviewer to provide an impartial position on the likely implications of the project for the Equine CIC.

In the Department's view, the Commission in its determination should give careful consideration to the weight of scientific analysis presented, the consistent application of the Government's policy framework

for the management of the coal mining industry in rural areas of the State, the support of the community for the project and the important economic contribution that the project would make to the local area, region and State, while nonetheless weighing up the potential impacts to the reputation, image and branding of the studs and the possibility of the studs leaving the Hunter Valley as a result of these potential impacts.

The Department has carefully considered all relevant matters, the Commission's Review Report and its recommendations, Anglo's response to the Commission's recommendations, the thoroughbred industry's responses, advice from Government agencies, submissions from the general public and key stakeholders, and the outcomes of an independent review of the economic analysis of the project impacts on the Equine CIC. The Department has given particular attention to the key sources of additional information now available to it and the Commission, being Dr Houston's expert report, the thoroughbred industry's responses to this report and Prof Bennett's independent reviews of the economic arguments and rationales presented by both Anglo and the thoroughbred industry.

The Department has carefully considered the Commission's recommendation that the project should not proceed. The Department's position is 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 studs. Given the Department continues to consider that the project could be approved subject to conditions, it has included an updated list of recommended conditions of consent at **Appendix E**, for the Commission's consideration. The Department has consulted with Anglo and key agencies regarding the recommended conditions.

The Department has also attempted to respond to the Commission's recommendations concerning the NSW planning framework and wider Government policies. The Department believes that these responses provide appropriate details regarding the status of existing and proposed policies, projects or initiatives and current best practice standards in the mining industry, and also address how these matters have been considered in the Department's assessment of the current proposal.

9.0 RECOMMENDATION

It is **RECOMMENDED** that the Planning Assessment Commission exercise the powers and functions delegated to it in the Minister for Planning's Instrument of Delegation, dated 14 September 2011, and:

- **considers** the findings and recommendations of this report;
- **approves** the development application, subject to conditions; and
- **signs** the attached instrument of approval (**Appendix E**).



15.09.2016

Matthew Sprott
A/Director
Resource Assessments



Howard Reed 15.09.16
A/Executive Director
Resource Assessments & Compliance

APPENDIX A: ANGLO'S RESPONSE (INCLUDING THE HOUSTON REPORT) TO THE COMMISSION'S REVIEW REPORT

APPENDIX B: THOROUGHbred INDUSTRY COMMENTS ON ANGLO'S RESPONSE

APPENDIX C: INDEPENDENT REVIEWS BY PROF JEFF BENNETT OF THE HOUSTON REPORT AND THOROUGHBRED INDUSTRY SUBMISSIONS

APPENDIX D: MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE UNDER THE EPBC ACT

The Drayton South Coal Project (the project) was declared to be a 'controlled action' under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), given the likely significant impacts on listed threatened species and communities and water resources. In making this determination, the delegate for the Commonwealth Minister for the Environment determined that the project would be assessed under the assessment bilateral between the Commonwealth and NSW Governments. Consequently, the potential impacts on EPBC Act controlling provisions have been assessed under Part 4 of the EP&A Act.

In accordance with the bilateral agreement between the Commonwealth and NSW Governments, the Department provides the following additional information for the Commonwealth Minister in deciding whether or not to approve a proposal under the EPBC Act.

The Department's assessment has been prepared in consideration of the information contained in Sections 7.8 and 7.9 and Appendix M of the Environmental Impact Statement (EIS) for the project, Anglo's Response to Submissions, public and agency submissions and advice provided by the NSW Office of Environment and Heritage (OEH).

This assessment is supplementary to, and should be read in conjunction with, the assessment included in Section 6.4 and Appendix L of the Department's Preliminary Assessment Report (the preliminary report). Accordingly, the Commonwealth Minister should have regard to those parts of the preliminary report.

D.1 Overview of impacts on Matters of National Environmental Significance (MNES)

As discussed in detail in Section 6.4.1 of the preliminary report, the project would involve the disturbance of approximately 1,447 ha of native vegetation, including around 22 ha of the EPBC Act listed *White Box-Yellow Box-Blakely's Red Gum Woodland and Derived Native Grasslands Critically Endangered Ecological Community* (White-box Grassy Woodland CEEC), as shown in **Table D1**.

Table D1: Extent of White-box Grassy Woodland CEEC proposed to be impacted

EPBC listed community	NSW Plant Community Type (PCT) [and formation]	Condition	Area (ha)
White Box-Yellow Box-Blakely's Red Gum Woodland and Derived Native Grassland CEEC	Hunter Floodplain Red Gum Woodland (HU599) [Forested Wetlands]	Moderate/Good	10.9
	Upper Hunter White Box – Ironbark Grassy Woodland (HU820) [Dry Sclerophyll Forests (shrubby)]	Moderate/Good	3.8
	DNG – Hunter Floodplain Red Gum (HU599) [Forested Wetlands]	Low	4.3
	DNG – Upper Hunter White Box – Ironbark Grassy Woodland (HU820) [Dry Sclerophyll Forests (shrubby)]	Low	2.7
TOTAL			21.7

In addition, the EIS considered that in the absence of appropriate mitigation and offset measures, the project could have adverse impacts on one other EPBC Act listed CEEC and 11 threatened species, as shown in **Table D2**. During the referral process two additional threatened plants (Illawarra Greenhood and Austral Toadflax) were identified as being relevant for consideration for this project.

Table D2: Summary of likely direct impacts on EPBC Act listed threatened species

EPBC listed species	EPBC Act Status	Potential Area (ha)	Impact
Regent Honeyeater (<i>Anthochaera Phrygia</i>)	Critically Endangered	291	Clearance of potential foraging habitat
Swift Parrot (<i>Lathamus discolor</i>)	Endangered		
Spotted-tail Quoll (<i>Dasyurus maculatus</i> subsp. <i>Maculatus</i>)	Endangered		
Tiger Quoll: southeastern mainland population			
Leek orchid (<i>Prasophyllum</i> sp. <i>Wybong</i>)	Critically Endangered	1,438	Potential clearing of habitat
Slaty Red Gum (<i>Eucalyptus glaucina</i>)	Vulnerable	291	Not present
Rufous Pomaderris (<i>Pomaderris brunnea</i>)	Vulnerable	0	
Koala (<i>Phascolarctos cinereus</i>): combined populations of Qld, NSW and the ACT	Vulnerable	291	Unlikely to be on site

Green and Golden Bell Frog (<i>Litoria aurea</i>)	Vulnerable	0	Unsuitable habitat
Grey-headed Flying-fox (<i>Pteropus poliocephalus</i>)	Vulnerable	286	Clearance of potential foraging / roosting habitat
Large-eared Pied Bat (<i>Chalinolobus dwyeri</i>)	Vulnerable		
South-eastern Long-eared Bat (<i>Nyctophilus corbeni</i>)	Vulnerable		
Weeping Myall Shrubland in the Hunter Valley CEEC	Critically Endangered	0	Not present on site
Illawarra Greenhood (<i>Pterostylis gibbosa</i>)	Endangered	0	
Austral Toadflax (<i>Thesium australe</i>)	Vulnerable	1,438	

The EPBC Act Referral Decision Brief of 22 January 2015 determined the project to be a controlled action due to its likely significant impacts on White-box Grassy Woodland, Regent Honeyeater, Swift Parrot and Spotted-tailed Quoll. Having considered the likely impacts of the project, the Department concurs that in the absence of appropriate offsetting and mitigation measures, the project has the potential to significantly impact these threatened species and CEEC, as well as the Greater Long-eared Bat and the Large-eared Pied Bat as identified by Anglo and discussed in Tables A.4 - A.6 in Appendix A to Appendix M of the EIS. Consequently, these six MNES form the focus of the following assessment. It is also noted that the project would remove approximately 274 ha of *Central Hunter Eucalypt Forest and Woodland* CEEC. However, given that this CEEC was listed on 7 May 2015, after the date of the EPBC Act decision, this CEEC does not need to be considered for this project.

Impacts on water resources, in relation to coal seam gas and large coal mining developments, have also been identified as a controlling provision under the EPBC Act. Accordingly, the Department and the Commonwealth Department of the Environment (DoE) made a joint referral to the IESC. Anglo provided a response to the advice from the IESC and this was considered in the Department's assessment. A detailed assessment of potential impacts from the project on water resources is contained in Section 6.5 of the Department's preliminary report. Following its assessment, the Department was satisfied that the project could be managed to avoid significant impacts on water resources. Furthermore, the Department notes that DPI Water is satisfied that Anglo could obtain any additional licences required to account for the predicted maximum water take from relevant water sources and has advised that the project would meet the Level 1 impact assessment criteria under the AIP and is unlikely to result in a distinguishable change to the water quality within the Saddlers Creek and Hunter River alluvial aquifers. Given that the assessment of potential impacts on water resources was addressed in detail in the preliminary report, it has not been reiterated in detail in this Appendix.

D.2 Impacts to listed threatened species and communities

The assessment of significance for MNES has been undertaken by Anglo and is contained in Tables A.4 - A.6 in Appendix A to Appendix M of the EIS. This assessment concluded that, in the absence of suitable mitigation and compensation measures, the project would likely have a significant impact on three of the four threatened entities identified in the Commonwealth's Referral Decision Brief (being the White-box Grassy Woodland, Regent Honeyeater and Swift Parrot) as well as on the Greater Long-eared Bat and the Large-eared Pied Bat. OEH's advice on the project agreed that Anglo's conclusions were reasonable and that the project could result in impacts on these species and CEEC.

However, the EIS argued that the project would be unlikely to significantly impact the Spotted-tailed Quoll, the fourth species listed in the Commonwealth's Referral Decision Brief. In consideration of additional information provided by Anglo and the DoE, the Department supports DoE's position that, in the absence of appropriate avoidance and mitigation measures, the project would be likely to cause significant impacts to the Spotted-tailed Quoll. This is discussed further in the preliminary report.

D.3 Proposed Offset Package

Anglo proposes to compensate any residual impacts to MNES through a biodiversity offset package and a range of mitigation measures. A detailed description of the proposed biodiversity offsets is contained in Section 7.9 and Volume 4 of the EIS and Section 6.4.4 of the Department's preliminary report. In summary, Anglo proposes to offset residual biodiversity impacts through:

- offset areas within and adjoining the project boundary;
- an offset area at an offsite location approximately 75 km from the project site (the Temi offset);
- rehabilitation of mining disturbance areas to woodland; and
- supplementary offset measures for individual threatened flora species.

These are in addition to and complement the existing biodiversity offsets at the Drayton mine.

In broad terms, Anglo is proposing to offset the clearing of 1,447 ha of native vegetation (woodland and grassland) by conserving and improving the condition of 2,232 ha of native vegetation, and rehabilitating a further 1,127 ha of woodland in the post-mining landscape (an overall ratio of 2.3 to 1).

In terms of the MNES specifically, the proposed onsite offsets contain approximately 20 ha of *White Box-Yellow Box-Blakely's Red Gum Woodland* and approximately 62 ha of associated Derived Native Grassland; and the offsite offset contains approximately 519 ha of *White Box-Yellow Box-Blakely's Red Gum Woodland* and 773 ha of associated Derived Native Grassland.

An assessment of the impact areas and offset areas was completed in accordance with OEH's Framework for Biodiversity Assessment (FBA) to determine the ecosystem and species credits required to offset the project's impacts. OEH reviewed the FBA assessment provided by Anglo and provided advice which states that the proponent proposes to '*appropriately compensate impacts on MNES through a biodiversity offset package and a range of mitigation measures*'.

The Department notes that the project falls within the transitional period for the *NSW Policy for Offsetting for Major Projects*, published in September 2014. To avoid perverse outcomes during the transitional period, there is provision for some flexibility in the application of the FBA, including consideration of establishing biodiversity offsets in neighbouring bioregions. This is an important consideration for the project, as some of the proposed offsets for White-box Grassy Woodland are located approximately 75 km north of the project site in the Peel sub-region of the Nandewar Bio-region (a neighbouring bio-region) but near its border with the Hunter sub-region. In considering the transitional arrangements, the EIS has argued that this flexible approach should be applied to ensure that an adequate quantum of White-box Grassy Woodland is provided.

As stated by OEH, Anglo has provided a clear case that 22 ha of White-box Grassy Woodland on the project site, 82 ha on the onsite offset and 1293 ha on the offsite offset meet the EPBC Act definition of '*White Box-Yellow Box-Blakely's Red Gum Woodland and Derived Native Grasslands CEEC*'. On this basis, OEH has advised that the onsite and offsite offsets together provide a sufficient area of White-box Grassy Woodland to offset the project's impacts.

The Department considers that the proposed offset package is likely to address all significant residual adverse impacts of the project to listed threatened species and communities. Specifically, the Department notes that the proposed offsets are known to contain vegetation consistent with the White-box Grassy Woodland, as well as likely foraging habitat for the impacted listed species. The proposed offsets also demonstrably meet the 'like for like' principle of the *EPBC Act Environmental Offsets Policy (2013)*.

D.4 Demonstration of 'avoid, mitigate, offset' for MNES

A detailed discussion of the measures undertaken or proposed to avoid, mitigate and offset impacts to biodiversity, including to MNES, is contained in Section 7.8.5 of the EIS.

In summary, the development footprint of the project has been reduced from previous concepts which has reduced the expected impact on White-box Grassy Woodland from about 159 ha to approximately 22 ha. This reduction in clearing of remnant woody vegetation also helps to retain food and foraging resources for the Regent Honeyeater, Swift Parrot, Spotted-tailed Quoll and Grey-headed Flying-fox.

In addition to these avoidance measures, a number of specific mitigation measures have been proposed to address the likely impacts of the project on MNES (discussed in detail in Section 7.8.5 and Appendix M of the EIS). These measures also aim to address a range of indirect impacts on MNES associated with noise, light, dust, erosion, vehicle strike, weeds, feral animals and over-abundant native species. To account for any residual impacts that cannot be addressed through the proposed avoidance and mitigation measures, Anglo has proposed a comprehensive offset strategy.

Since the preliminary report, OEH has provided technical advice which states that the proponent proposes to '*appropriately compensate impacts on MNES through a biodiversity offset package and a range of mitigation measures*'. OEH has also recommended a number of conditions of consent that have been considered in the Department's recommended conditions.

As identified above, this biodiversity offset package has been assessed as adequately addressing the *EPBC Act Environmental Offsets Policy (2013)*. Further detailed consideration and assessment of the likely impacts for individual fauna species and the adequacy of the biodiversity offset package is provided in Section 6.4 and Appendix L of the preliminary report.

D.5 Assessment of Residual Impacts

An assessment of the impacts to White-box Grassy Woodland and threatened species identified as likely to be significantly impacted by the project are discussed in further detail below, considering the proposed mitigation and compensation measures.

White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland CEEC (White-box Grassy Woodland)

White-box Grassy Woodland occurs in an arc along the western slopes and tablelands of the Great Dividing Range from Southern Queensland through NSW to central Victoria. In NSW it occurs in the Brigalow Belt South, Nandewar, New England Tableland, Sydney Basin, NSW North Coast, South Eastern Highlands, South East Corner and NSW South Western Slopes bioregions. Estimates are that less than 0.1% of White-box Grassy Woodlands remains in a near-intact condition, with much of the original extent cleared for agriculture.

The preliminary report's assessment of impacts stated that the project is likely to have direct and indirect impacts on approximately 22 ha of White-box Grassy Woodland at a local level. However, the proposed biodiversity offset package has identified significant areas of White-box Grassy Woodland which would be conserved and managed for biodiversity gains. This management is detailed in the EIS and includes revegetation and restoration activities aimed at improving the quality and extend of White-box Grassy Woodland in the region. The Department's analysis of these impacts, including relevant management, mitigation and offset strategies, has concluded that an impact to the national occurrence of this ecological community is unlikely to occur beyond identified localised impacts.

Regent Honeyeater

The Regent Honeyeater is endemic to southeast Australia, where it is widespread but with an extremely patchy distribution. Its range extends from southeast Queensland to central Victoria. Most sightings originate from a few sites in northeast Victoria, along the western slopes of the Great Dividing Range in NSW, and the Central Coast in NSW. In 2011, key breeding areas for the Regent Honeyeater were identified as the Chiltern section of the Chiltern-Mt Pilot National Park in northeast Victoria, the Capertee Valley in central east NSW and the Bundarra-Barraba region in northern NSW.

The preliminary report's assessment of impacts noted that the project is likely to have direct and indirect impacts on the Regent Honeyeater at a local level. The Department's analysis of these impacts, including relevant management and mitigation strategies, has concluded that a significant change to the national occurrence of this species is unlikely to occur beyond identified localised impacts. While some foraging habitat will be removed and degraded through the construction and operation of the project the proposed biodiversity offsetting package will conserve and improve areas of foraging habitat in close proximity of the impacts. The Department considers that these actions are likely to retain and improve foraging resources in the region for the Regent Honeyeater to utilise. Breeding habitat will not be impacted by the project and breeding behaviour for this species is not expected to be impacted by the project. Based upon the retention and improvement of foraging habitat and absence of impacts to breeding habitat the project is considered unlikely to result in any significant impacts on the prevalence, reproductive success and survival of this species.

Swift Parrot

The Swift Parrot is endemic to south-eastern Australia. It breeds only in Tasmania, and migrates to mainland Australia in autumn. The breeding range is always within 8 km of the Tasmanian coast, largely restricted to an area of less than 500 km² along the eastern coastal strip between Saint Helens and Lune River, including nearshore islands such as Maria Island and Bruny Island.

This species is semi-nomadic during winter, foraging primarily in dry woodland areas located in Victoria and NSW. Small but significant numbers have been recorded regularly in south-eastern Queensland and occasionally in the Australian Capital Territory and south-eastern South Australia.

The preliminary report's assessment of impacts stated that the project was likely to have direct and indirect impacts on the Swift Parrot at a local level. While foraging habitat will be removed and degraded through the construction and operation of the project, the proposed biodiversity offsetting package will conserve and improve areas of similar habitat in close proximity to the habitat resources being removed. These actions are likely to retain and improve foraging resources in the region for the Swift Parrot to utilise. Breeding habitat will not be impacted by the project and breeding behaviour for this species is not expected to be impacted by the project.

The Department's analysis of these impacts, including relevant management, mitigation and offset strategies, has concluded that an impact to the national occurrence of this species is unlikely to occur. While the project would have some localised impacts on foraging habitat, based upon the retention and improvement of the overall foraging habitat in the region under the Biodiversity Offset Strategy and considering absence of impacts to breeding habitat, the project is considered unlikely to result in any significant impacts on the prevalence, reproductive success and survival of this species.

Spotted-tailed Quoll

The Spotted-tailed Quoll was historically distributed across southeast Queensland, eastern NSW, Victoria, southeast South Australia and Tasmania. However, the subspecies' range on the mainland has reduced by 50–90%. Detailed distribution records and abundance estimates are generally lacking due to the scale and intensity of surveying that is required to detect the species across its entire range. Figures from 2004 suggest there are 44 known sites in NSW, 16 sites in the ACT and four to five sites in Victoria.

In NSW, Spotted-tailed Quoll records are generally confined to within 200 km of the coast but range from the Queensland border to Kosciuszko National Park. Locations include the Hunter Valley, Taree, Port Macquarie and Coffs Harbour through to the gorges and escarpments of the New England Tableland. There are several disjunct populations between the Border Ranges and the Blue Mountains/Illawarra area.

The preliminary report's assessment of impacts stated that the project is likely to have direct and indirect impacts on the Spotted-tailed Quoll at a local level. While habitat will be removed and degraded through the construction and operation of the project the proposed biodiversity offsetting package will conserve and improve areas of similar habitat in close proximity of the impacts. These actions are likely to retain and improve habitat in the region for the Spotted-tailed Quoll to utilise. Based upon the retention and improvement of suitable habitat it is likely the species will continue to occupy this region. The Department's analysis of these impacts, including relevant management, mitigation and offset strategies, has concluded that an impact to the national occurrence of this species is unlikely to occur beyond identified localised impacts as foraging habitat would be maintained and improved in the region and breeding habitat would not be impacted.

Overall, the Department is satisfied that the project is unlikely to result in any significant impacts on the prevalence, reproductive success and survival of this species.

Large-eared Pied Bat

This species' current distribution is poorly known. Records exist from Shoalwater Bay, north of Rockhampton in Queensland, through to the vicinity of Ulladulla in southern NSW. Despite the large range, it has been suggested that the species is far more restricted than previously understood.

Much of the known distribution is within NSW, with available records suggesting that the largest population concentrations are in the sandstone escarpments of the Sydney Basin and the northwest slopes. Although the species is widely distributed, it is uncommon and patchy across this area. Sightings of note include at Tottenham, west of Narromine NSW (the western-most record); Swansea Open Cut Mine area on the Wallarah Peninsula, Central Coast NSW; a disused gold mine near Barraba in north-eastern NSW that included lactating females and dependent young; and Morton National Park NSW at the southern end of the known range.

The preliminary report's assessment of impacts stated that the project is likely to have direct and indirect impacts on the Large-eared Pied Bat at a local level, specifically to foraging habitat. The EIS identified that the project area would not impact on identified breeding or roosting habitat, inclusive of any sandstone cliffs, caves or rock outcrops. While foraging habitat will be removed and degraded through the construction and operation of the project the proposed biodiversity offsetting package will conserve and improve areas of similar habitat in close proximity to the impacts. These actions are likely to retain and improve foraging resources in the region for the Large-eared Pied Bat to utilise. The Department's analysis of the likely project impacts, including relevant management, mitigation and offset strategies, has concluded that a significant change in the national occurrence of this species is unlikely to occur beyond identified localised impacts.

Overall, the Department considers that given foraging habitat would be maintained and improved in the region and that there would be no impacts to breeding habitat, the project is unlikely to result in any significant impacts on the prevalence, reproductive success and survival of this species.

South-eastern Long-eared Bat

The South-eastern Long-eared Bat (also known as the Greater Long-eared Bat) has a limited distribution restricted to the Murray-Darling Basin in south-eastern Australia. Even in this region its distribution is scattered and it is rarely recorded. It occurs in far eastern South Australia, in areas north of the Murray River, east of Canegrass Station and south of the Barrier Highway. These areas include the Riverland Biosphere Reserve, Dangali Conservation Park and the Birds Australia Gluepot Reserve. It is distributed throughout inland NSW except in the northwest which is dominated by treeless plains. It can be found in the Hunter Valley, extending from central NSW to the eastern Hunter Valley coast. Records also indicate populations in River Red Gum (*Eucalyptus camaldulensis*) forests along the Murray River. The South-eastern Long-eared Bat is rare throughout most of its distribution. In some areas however, it is more commonly recorded. These areas include the Brigalow Belt South and Nandewar Bioregions in north-eastern NSW.

The preliminary report's assessment of impacts stated that the project is likely to have direct and indirect impacts on the South-eastern Long-eared Bat. This species has been recorded in and near the project site multiple times, with both foraging and potential breeding habitat (tree hollows) identified as likely to be cleared. The assessment provided by Anglo identified the project area as core habitat for this species due to the presence of foraging and roosting habitat as well as multiple on-site records since 2000. The Department's analysis of these impacts, including relevant management and mitigation strategies, has concluded that while areas of core habitat for this species would be removed as part of the project, sufficient alternative areas of breeding and roosting habitat would be conserved and managed for conservation through the proposed biodiversity offset package. The Department considers that the conservation and management of these areas make it likely the species would persist in the region and that the project would not have a significant change in its national occurrence.

D.6 Requirements for decisions about threatened species and endangered ecological communities

In accordance with section 139 of the EPBC Act, in deciding whether or not to approve, for the purposes of a subsection of section 18 or section 18A of the Act, the taking of an action and what conditions to attach to such an approval, the Commonwealth Minister must not act inconsistently with certain international environmental obligations, Recovery Plans, or Threat Abatement Plans. The Commonwealth Minister must also have regard to relevant approved conservation advices.

Australia's international obligations

Australia's obligations under the *Convention on Biological Diversity* (Biodiversity Convention) include the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising from the use of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding. The recommendations of this report are not inconsistent with the Biodiversity Convention, which promotes environmental impact assessment (such as this process) to avoid and minimise adverse impacts on biological diversity. Accordingly, the recommended approval requires avoidance, mitigation and management measures for listed threatened species and communities and all information related to the proposed action is required to be publicly available to ensure equitable sharing of information and improved knowledge relating to biodiversity.

Australia's obligations under the *Convention on Conservation of Nature in the South Pacific* (the 'Apia Convention') include encouraging the creation of protected areas which together with existing protected areas safeguard representative samples of the natural ecosystems occurring therein (with particular attention to endangered species), as well as superlative scenery, striking geological formations and regions. Additional obligations include using best endeavours to protect such fauna and flora (special attention being given to migratory species) so as to safeguard them from unwise exploitation and other threats that may lead to their extinction. The Apia Convention was suspended on 13 September 2006. While this Convention has been suspended, Australia's obligations under the Convention have been taken into consideration. The recommendations are not inconsistent with the Convention and its aim for the conservation of biodiversity.

The *Convention on International Trade in Endangered Species of Wild Flora and Fauna* (CITES) is an international agreement between governments which seeks to ensure that international trade in specimens of wild animals and plants does not threaten their survival. The recommendations are not inconsistent with CITES as the project does not involve international trade in specimens of wild animals or plants.

Approved recovery plans and conservation advices

At the time the preliminary report was prepared, approved recovery plans under the EPBC Act for threatened species assessed to be likely to be significantly impacted included:

- White-box Grassy Woodland;
- Regent Honeyeater;
- Swift Parrot; and
- Large-eared Pied Bat.

These were considered in detail in Section 6.4 and Appendix L of the preliminary report. Subsequently a recovery plan for the Spotted Tailed Quoll was approved by the Commonwealth Minister. This additional plan is considered below.

At the time the preliminary report was prepared, an approved conservation advice under the EPBC Act for threatened species assessed to be likely to be significantly impacted was provided only for the Regent Honeyeater. This is considered in detail in Section 6.4 of the preliminary report. Subsequently conservation advices for the Swift Parrot and the South-eastern Long-eared Bat were approved by the Commonwealth Minister. These are also considered below.

Anglo has considered relevant recovery plans and approved conservation advice in additional information provided to the Department and documented in Appendix L of the preliminary report. However, Anglo did not consider the recently-approved conservation advice for the Swift Parrot or South-eastern Long-eared Bat and recovery plan for the Spotted Tail Quoll.

Anglo did consider DoE's draft conservation advice for the *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* CEEC (White-box Grassy Woodland). While noting that this is not an approved conservation advice under the EPBC Act, the Department has considered Anglo's review of this advice to further inform its assessment of impacts on White-box Grassy Woodland.

National Recovery Plan for the Spotted-tailed Quoll

The objective for recovery of the Spotted-tailed Quoll is to reduce the impact of threatening processes throughout the species' range and subsequently halt the current decline in its distribution and abundance. Increasing knowledge of the distribution and status of populations, the impact and management of threatening processes, and investigation of key biological and ecological attributes is also required to facilitate recovery.

The recovery actions in the approved recovery plan are:

- *Determine the distribution and status of Spotted-tailed Quoll populations throughout the range, and identify key threats and implement threat abatement management practices.*
- *Investigate key aspects of the ecology of the Spotted-tailed Quoll to aid recovery, including evaluating and managing the risk posed by silvicultural practices.*
- *Reduce the rate of habitat loss and fragmentation on private land.*
- *Determine and manage the threat posed by introduced species (foxes, cats, wild dogs and cane toads) and of predator control practices on Spotted-tailed Quoll populations.*
- *Determine and manage the impact of fire regimes on Spotted-tailed Quoll populations.*
- *Reduce deliberate killings and frequency of road mortality of Spotted-tailed Quolls.*
- *Determine the likely impact of climate change on Spotted-tailed Quoll populations.*
- *Increase community awareness and contribution to the Recovery Program.*

The project would involve clearing foraging and dispersal habitat for the Spotted Tail Quoll. However, the proposed management and offsetting strategies would lead to other areas of quoll habitat being preserved and managed. Based on the extent of suitable habitat for this species in the offset package, the proposed mitigation measures and the requirements of the recommended management plan, and recommended conditions of consent, the Department does not consider the project to be inconsistent with the recovery actions in the *National Recovery Plan for the Spotted-tailed Quoll*.

Approved Conservation Advice for the Swift Parrot

The conservation advice for this species has identified the following known threats:

- *Predation by Sugar Gliders:* Until recently the main threat to Swift Parrots was thought to be habitat loss and alteration within breeding and drought refuge habitats, however predation on nests by *Sugar Gliders* poses a significant threat during the breeding season (ie in Tasmania) because gliders take the young, eggs and often kill the sitting female.
- *Habitat loss and alteration:* Land clearing for plantation development and native forest silviculture has dramatically reduced landscape cover of nesting and foraging habitat for Swift Parrot.

- *Wildfire*: Wildfires can impact swift parrot habitat by altering tree flowering phenology and tree cavity availability.
- *Collision mortality*: Collisions with wire netting, mesh fences, windows and cars cause mortality to swift parrots, particularly in urban areas, throughout their range.
- *Competition*: Swift Parrots can experience increased competition for resources from larger, aggressive honeyeaters, introduced bird species and bees, especially within altered habitats.
- *Psittacine Beak and Feather Disease (PBFD)*: PBFD is a widespread, lethal parrot disease, which is known to occur in Swift Parrot.
- *Illegal wildlife capture and trade*: Swift parrots are valued internationally and domestically by bird keepers and breeders and are vulnerable to illegal trade. The extent of such activities and their impact on the swift parrot population is currently unknown.

The project would involve clearing foraging and dispersal habitat for the Swift Parrot within a modified landscape. The removal of woodland habitat is likely to increase competition for resources in the vicinity of the project. However, as part of the proposed management and offsetting strategies, areas of Swift Parrot habitat would be preserved and managed to promote biodiversity conservation. This is consistent with the actions identified in the conservation advice. The project is not considered likely to increase the risk to Swift Parrot from other identified threats.

Approved Conservation Advice for the South-eastern Long-eared Bat

The conservation advice for this species has identified the following known threats:

- *Habitat loss and fragmentation*: Extensive clearing of woodland and mallee vegetation is likely to have been a major factor in the decline of the South-eastern Long-eared Bat.
- *Fire*: Bushfires are suspected to be a threat in the remaining uncleared areas of the South-eastern Long-eared Bat's habitat.
- *Reduction in hollow availability*: The availability of suitable roosting habitats is essential for the conservation of the South-eastern Long-eared Bat. This species mainly roosts in tree hollows and so a reduction in hollow availability would likely put pressure on the species.
- *Exposure to agrichemicals*: As an insectivorous species which occurs within habitat located in or adjacent to agricultural areas, this species may be susceptible to exposure from insecticides.
- *Grazing*: Grazing in habitat areas for the South-eastern Long-eared Bat is a suspected threat, particularly in relation to impacts on the composition of understorey habitat.
- *Predation by feral animals*: There is some uncertainty about the impacts of predation on the South-eastern Long-eared Bat by introduced species, such as feral cats or red foxes, and as such, the risks of predation to the species are unknown.

The project would involve the clearing of foraging and dispersal habitat for the South-eastern Long-eared Bat within a modified landscape. The removal of this woodland habitat is likely to increase competition for resources in the vicinity of the project. However, as part of the proposed management and offsetting strategies, areas of South-eastern Long-eared Bat habitat would be preserved and managed to promote biodiversity conservation. This is consistent with the actions identified in the conservation advice. The proposed project is not considered likely to increase the risk to this species from other identified threats.

Threat abatement plans (TAPs)

The threat abatement plans relevant to this action are discussed at Section 6.4 and Appendix L of the preliminary report and are available at <http://www.environment.gov.au/biodiversity/threatened/threat-abatement-plans/approved>. The advice received from OEH in relation to the relevant threat abatements plans is consistent with the discussion provided in the Department's preliminary report.

D.7 Additional EPBC Act considerations

The additional EPBC Act considerations, including mandatory consideration of the principles of ecologically sustainable development and socio-economic impacts are discussed in Sections 6.2, 6.4, 6.9, and 8, and Appendices B and L of the preliminary report.

D.8 Conclusions on controlling provisions

Threatened species and communities (sections 18 and 18A of the Act)

Together, the EIS and advice from the DoE identifies that, in the absence of appropriate mitigation measures, the project would have the potential to result in significant impacts to White-box Grassy Woodland, Regent Honeyeater, Swift Parrot, Spotted-tail Quoll, Greater Long-eared Bat and the Large-eared Pied Bat. To address and manage these potential impacts, Anglo has proposed a range of avoidance, mitigation and offsetting measures in its EIS and Response to Submissions.

For the reasons set out in Section 6.4 and Appendix L of the preliminary report and further discussed in this Appendix, the Department considers that the impacts of the action on threatened species and communities are acceptable, subject to the implementation of the avoidance and mitigation measures described in Anglo's EIS, establishment of the proposed offsetting strategy and the requirements of the recommended conditions of consent at **Appendix E**.

The Department has recommended conditions relating to Anglo's obligation to minimise harm to the environment (condition 1 of Schedule 2) and to address potential impacts on biodiversity and threatened species (conditions 26, 27, 28 and 29 of Schedule 3). These requirements include the implementation of measures to implement the Biodiversity Offset Strategy (including to provide long term security) and ensure that this strategy and the project's rehabilitation strategy focus on the enhancement and/or re-establishment of threatened ecological communities, threatened flora species and habitat for threatened flora and fauna species. The conditions also require Anglo to salvage, transplant and/or propagate threatened flora and native grassland; avoid and mitigate the spread of *Phytophthora cinnamomi*; and control weeds and feral pests, including but not limited to goats, rabbits, European red fox, cats and pigs.

Accordingly, the Department recommends that the Commonwealth Minister require Anglo to implement condition 1 of Schedule 2 and conditions 26 - 29 of Schedule 3, where they relate to the management of potential impacts on listed threatened species and communities under the EPBC Act.

A water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E of the Act)

For the reasons set out in Section 6.5 of the preliminary report, the Department concludes that the impacts of the action on a water resource are acceptable, subject to the avoidance and mitigation measures described in Anglo's EIS, RTS and response to the IESC review, and the requirements of the recommended conditions of consent.

The applicable conditions of consent include an obligation to minimise harm to the environment (condition 1 of Schedule 2), to ensure operations are adjusted to meet the available water supply (condition 20 of Schedule 3), that Anglo has adequate water access licences in place (condition 21 of Schedule 3), that a compensatory water supply is provided to any landowner of privately-owned land whose water supply is adversely and directly impacted (condition 22 of Schedule 3), specific water management performance measures (condition 24 of Schedule 3) and a requirement for the development and implementation of a detailed Water Management Plan (condition 25 of Schedule 3). Notably, the water management performance measures include requirements for negligible environmental consequences to the Hunter River and Saddlers Creek alluvial aquifer beyond those predicted in the EIS, including negligible changes in groundwater levels and quality, and negligible impacts to other groundwater users. The performance measures also include a number of measures aimed at protecting the Hunter River and Saddlers Creek surface water resources.

Accordingly, the Department recommends that the Commonwealth Minister require Anglo to implement condition 1 of Schedule 2 and conditions 20 - 25 of Schedule 3, where they relate to the management of potential impacts on water resources under the EPBC Act.

D.9 Other protected matters:

DoE has determined that other matters listed under the EPBC Act are not controlling provisions with respect to the proposed action. These matters include World Heritage, National Heritage, migratory species, Ramsar wetlands, Commonwealth marine environments, Commonwealth land, Commonwealth action, nuclear actions, the Great Barrier Reef Marine Park and Commonwealth Heritage places overseas.

APPENDIX E: FINAL RECOMMENDED CONDITIONS OF CONSENT
