



Drayton South Coal Project:

Response to the Environmental Impact Statement and the Secretary's Environmental Assessment Report Scenic and Visual Impacts

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FOR

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EXECUTIVE SUMMARY

INTRODUCTION

This report has been prepared for Coolmore Australia (Coolmore) and Darley Australia (Darley) in response to the proposed Drayton South Coal Project, a new open cut coal mine proposed by Anglo American (Anglo). The Coolmore and Darley Woodlands Thoroughbred breeding studs are located between Jerrys Plains and Denman on the Golden Highway in the Upper Hunter Valley. The Drayton South project site is located across the Golden Highway less than 1km directly north of the studs.

SCENIC AND VISUAL VALUES

As recognised by previous PAC's and Gateway Panel the high scenic and visual values of the Coolmore and Woodlands and the surrounding area are well recognised. These scenic and visual values are integral to the studs' image, reputation and viability.

The Department itself state in the SEAR that;
“... image and visual presentation are critical to the business model of the studs”.

VISUAL IMPACTS

As recognised by the previous PAC's and the Gateway Panel, there are 3 types of visual impacts assessed in this project:

- **Direct Visual Impacts** which represent visible mining activities including pits, overburden dumps, haul roads and plant and machinery,

- **Indirect Visual Impacts** which represent the visible effects of mining including dust, gas, lighting and mining vehicles on public roads
- **Dynamic Visual Impacts** which represent the perception or images of a place or journey based on travel, media, publications and the many information sources on the internet including Twitter, Facebook and Google.

Direct Visual Impacts

The Secretary's Environmental Assessment Requirements require the proponent to assess in detail the visual impacts *paying particular attention to impacts on the nearby **thoroughbred breeding operations, Hollydene Estate Winery, private residences, tourists and road users.***

The EIS incorrectly states that there would be *no impacts on the studs* and that *there would be no direct views of the mine.*

Approximately 200 hectares of the studs' land will have Direct Views into the mine. The previous EIS assessed the 2 viewpoints on this land but they have not been assessed in this EIS. At least 600 metres of the Golden Highway is also exposed to the mine as indicated in Figure 7 (page 14). Anglo's consultant assessed this viewpoint when assessing a previous Mt Arthur Mine proposal identifying it as VP11, however this view was not assessed for this project.

Edderton Road is to remain in use until Year 4 of the mine's operation and the plan in the top right of Figure 9 (page 16) shows that the mine workings will be immediately adjacent to

this public road. However no screening of the mine workings are proposed for this road in the EIS.

The re-aligned Edderton Road, will also have views of the mine workings at a distance of around 2km away. The VIA incorrectly states that it is 2.5km away from the mine workings.

Tree screening is proposed for the southern and central section of this re-aligned road however these tree plantings will require at least 4-5 years to start to screen views of the proposed mine. Tree screening is however not proposed for at least 1km of this new road (at the northern end) because as the VIA states, Anglo does not own the land. This will leave this section of the road exposed to the mine for some years until the outer faces of the overburden dumps are fully rehabilitated.

Clearly the mine will be visible from a range of viewpoints both on the stud's land and on public roads.

Indirect Visual Impacts

Indirect visual impacts manifest in a number of different forms including; dust from blasting, excavation, overburden emplacement and vehicles on haul roads; visible gas plumes from blasting; lighting operations at night and a range of mining vehicles on public roads.

Indirect visual impacts are a very significant risk to the operations and viability of the two studs particularly an event such as the Mt Arthur botched blast in February 2014 in which highly visible clouds of orange gas was observed across a wide area.

Dynamic Visual Impacts

Both the Review PAC and the Determination PAC consider the effect of dynamic visual impacts as presented by Dr. Lamb. On page 12 of his report, Dr. Lamb states that;

“While it is conventional to concentrate on fixed viewing locations as the VIA does and this extends to the new photomontages presented in the PPR, there is a significant aspect of visual impacts that is thereby missing from the assessment. This is no consideration of dynamic, or moving views. Views are experienced not only in moving sequences, which may be repeated regularly, but may also be from experiences that are displaced in time, in which views or other visual material, such as those from books, digital or other visual media etc. are also assembled cognitively into an image of a place, journey or destination. The latter is a significant consideration with regard to impacts on the visual imagery of the stud operations, which is integral to the presentation of their aesthetic values”.

The Department acknowledges the presence of dynamic visual impacts in assessing visual impact and yet Anglo makes no mention of them in either the EIS or the VIA report. The SEAR states on page 52 *“that it does not discount the reality of dynamic views”*, however it would appear from the EIS analysis, that Anglo has either discounted or ignored dynamic impacts despite them being considered in both PAC reports and both of the SEAR’s. This is an element of the visual assessment which should have been addressed in the VIA by Anglo and renders the assessment incomplete.

MITIGATION OF VISUAL IMPACTS

Proximity

This revision of the Drayton South coal mine plan is now proposed to be a minimum of 1km away from the boundary of the two studs, as stated in the EIS on page 1-2. However, the distance measures only 850m at its closest point as illustrated in Figure 12 (page 19). The previous mine plan boundary was 450m at its closet point to Coolmore’s boundary. The removal of most of the Redbank Pit has increased the distance by an extra 400m which is not sufficient to mitigate the visual impacts of this mine.

An extra 400m buffer is inadequate and would be of no tangible benefit to the protection of the studs from direct, indirect and dynamic visual impacts of this mine over 15+years.

Tree Screening

The EIS and the SEAR are relying on tree screens along the Golden Highway and the proposed re-aligned Edderton Road reserve boundaries to mitigate the range of visual impacts that would occur with this proposed mine. Tree screens are relatively ineffective measures and are only proposed for most of the viewpoints along the Golden Highway and the re-aligned Edderton Road.

Edderton Road will remain open to the public for the first 4 years of the mine life and would appear to have no screening proposed along the eastern boundary with the proposed mine. The elevated lands on both Coolmore and Woodlands cannot be protected from the visual impacts of the mine due to their elevation and open landscape character. As such, these areas will remain impacted for the full life of the mine.

In relying on trees for screening it is important to note that these plantings will take 5 to 10 years to reach an effective density to potentially screen the views and during this time the workings of the mine will be exposed to viewers on these roads. These tree screens will also be subject to the effects of drought, fire, pests and disease which would impact on their effectiveness as screens over the life of the mine.

Conclusion

Open cut coal mining has the largest impact of any land use in a rural setting. The sheer scale and footprint of these mines are very difficult, if not impossible to conceal from the public view. By contrast, Thoroughbred breeding studs have the highest standards of landscape visual quality and presentation which relates directly to their reputation and image

These 2 rural land uses are polar opposites in terms of scenic and visual values and to suggest that they can coexist within less than 1km of each other is to ignore the reality of their differences and most importantly the sensitivity of the studs to these kinds of impacts. Once the damage is done to a reputation such as that of these two studs, it will difficult, if not impossible, to recover in this location.

At such close proximity, these impacts cannot be mitigated sufficiently to protect the studs and no conditions can be devised that would ensure that these impacts could not occur. Coolmore and Darley Woodlands studs are just too sensitive and important to the Thoroughbred industry in NSW to risk jeopardising their future in this unique valley.

I. INTRODUCTION

This report has been prepared for Coolmore Australia (Coolmore) and Darley Australia (Darley) in response to the proposed Drayton South Coal Project, a new open cut coal mine proposed by Anglo American (Anglo). The Coolmore and Darley Woodlands Thoroughbred breeding studs are located between Jerrys Plains and Denman on the Golden Highway in the Upper Hunter Valley.

The Drayton South project boundary is located across the Golden Highway and north of the Coolmore and Woodlands studs, as illustrated in Figure 1. The existing Drayton mine is located approximately 10km north of the studs.

Anglo has prepared an Environmental Impact Statement (EIS) (dated May 2015) for the revised mining proposal following the refusal of the previous proposal by the Determination Planning Assessment Commission (PAC) in October 2014. The Department of Planning & Environment (the Department) has prepared a Secretary's Environmental Assessment Report (SEAR), dated August 2015 for this current EIS and has recommended the project for approval.

This report provides a review of the key visual impact issues as presented in the EIS and the SEAR and highlights a range of shortcomings in both of these reports which should be taken into account when making a determination about the project.

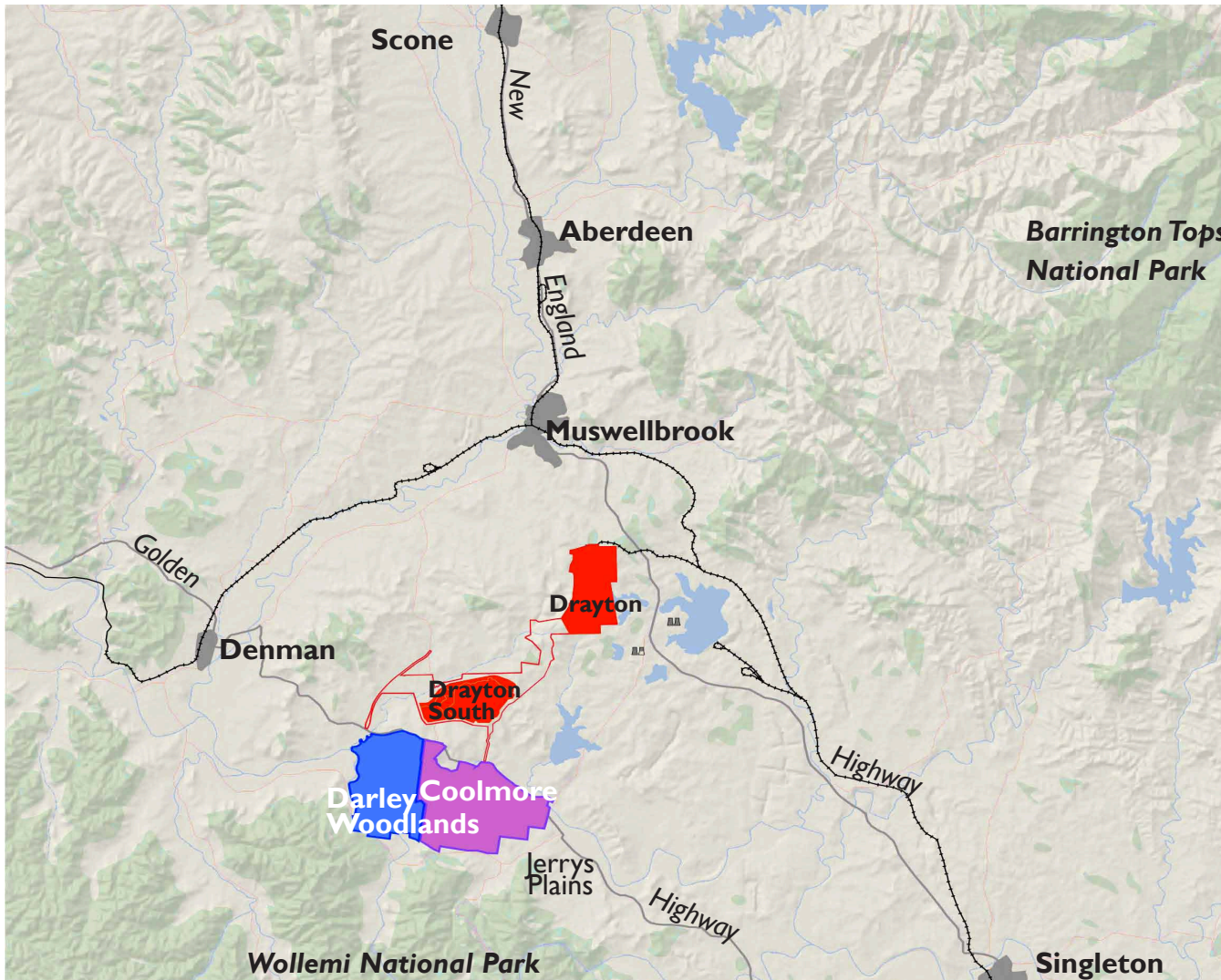


Figure 1: Regional location plan of the proposed Drayton South mine and the existing Drayton mine in relation to the Woodlands and Coolmore studs

PREVIOUS REPORTS

In addition to this report, there are three previous reports which were prepared in response to earlier Drayton South application reports by Anglo. The first report, Response to Anglo American's Response to the Scenic and Visual Issues Raised in the Planning Assessment Commission (March 2014) was prepared in response to Anglo's report entitled Justification (February 2014). The second report, Commentary on the Drayton South Retracted Mine Plan (May 2014) was prepared in response to Anglo's report entitled Consequential Environmental Impact Assessment for Retracted Mine Plan (March 2014). The third report, Response to the Secretary's Environmental Assessment Report for the Drayton South Coal Project (September 2014) in response the SEAR (July 2014).

These three reports should be read in conjunction with this report in order to gain a more complete understanding of importance of the scenic and visual values of the Upper Hunter Valley area to the two studs of Coolmore and Woodlands. These reports which highlight the deficiencies in the visual assessments undertaken in the reports prepared by Anglo and the Department, are attached as appendices to this report.

SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

The following statement sets out the Secretary's Environmental Assessment Requirements in relation to visual impacts of the proposed mine:

***Visual** – including a detailed assessment of the likely visual impacts of the development (including dust, blasting and night lighting) on surrounding private landowners and key vantage points in the public domain, paying particular attention to impacts on the nearby thoroughbred breeding operations, Hollydene Estate Winery, private residences, tourists and road users;*

REPORT STRUCTURE

In order to clearly identify and understand the deficiencies in Anglo's Drayton South EIS and the SEAR assessment in relation to visual and landscape character impacts on the two studs, this report is structured to respond to each of the required assessment criteria. This report is structured in the following chapters:

Chapter 2 - Scenic and Visual Values

Chapter 3 - Visual Impacts

Chapter 4 - Mitigation of Visual Impacts

Chapter 5 - Conclusion

References

Appendices

STUDY AREA CONTEXT

The land to the south of the proposed Drayton South Coal Mine is highly scenic; comprising the Hunter River and the adjoining irrigated floodplain meandering through undulating hills and ridges, with a forested mountain range, Wollemi National Park, to the south which creates a prominent and attractive backdrop to the area. The high scenic quality of this landscape contrasts with the landscapes to the north and east which consists primarily of moderately undulating foothills of cleared, open grazing paddocks, with limited tree cover.

The presentation of the Coolmore and Woodlands studs is commensurate with their standing as two of the premier Thoroughbred breeders in the world. The selection of the site on the Hunter River is the result of careful research to identify a location with all of the attributes necessary to ensure the establishment of a successful and enduring thoroughbred breeding business. The presence of alluvial soils, ample water, clean unpolluted air and an undulating topography which is ideal for breeding horses, combines with a highly scenic setting of the river valley with a magnificent backdrop of the forested ranges of the Wollemi National Park, the largest wilderness area in NSW which forms part of the Greater Blue Mountains World Heritage Area refer to Figure 2.

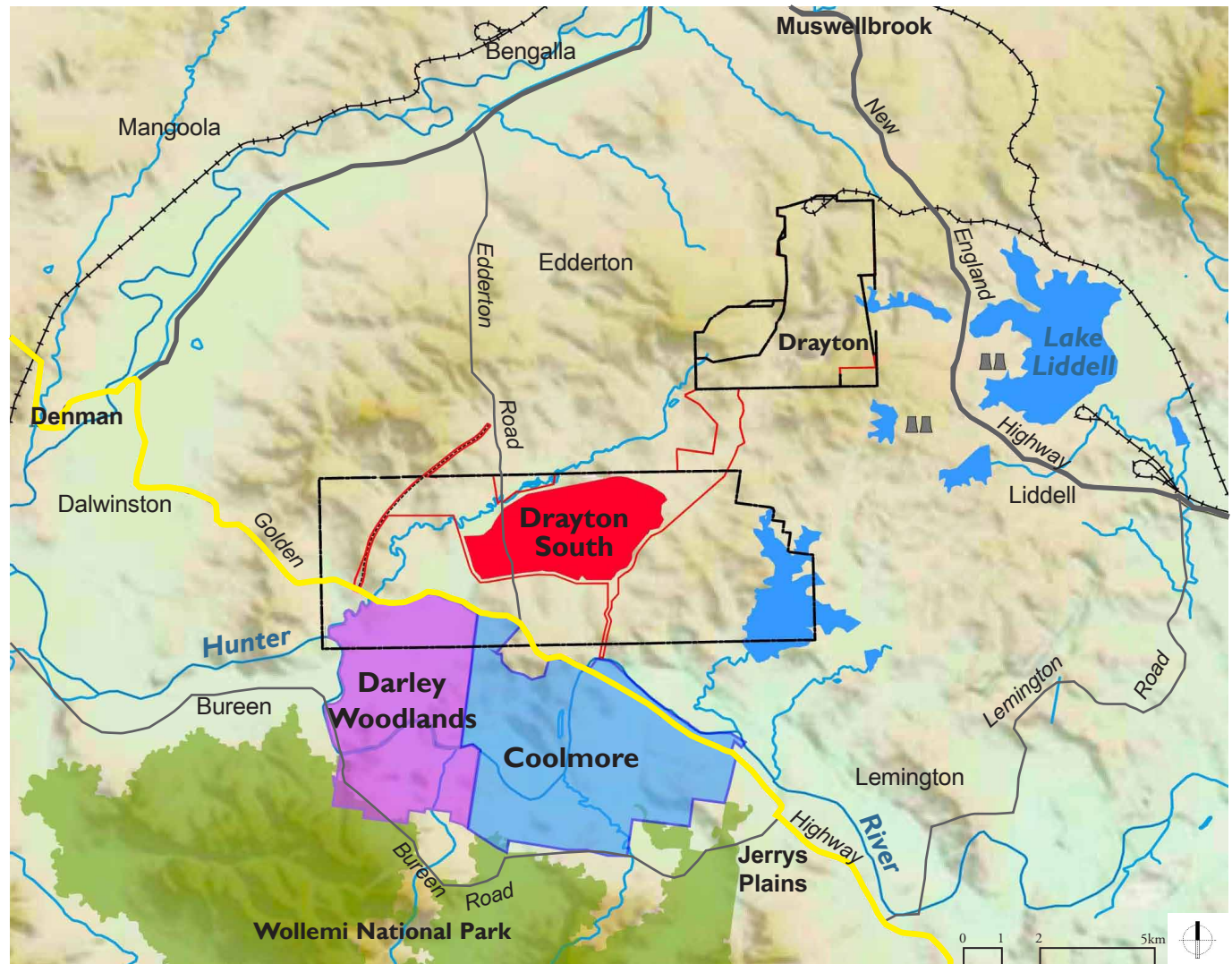


Figure 2: Location plan of the proposed Drayton South Mine in relation to Coolmore and Darley

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2. SCENIC AND VISUAL VALUES



Both the Review PAC and the Determination PAC, as well as the Gateway Panel and the Review PAC's visual specialist Dr. Lamb, recognised and acknowledged the significance of the scenic and visual values of the Upper Hunter Valley landscape both on and around the studs. They also recognised the fundamental relationship of these highly scenic landscapes within the studs and in the surrounding areas to Thoroughbred breeding enterprises.

The Determination PAC stated on page 10 that;

“The critical components of their business model are image, client perception, visual presentation and reputation. ... The image and the landscape play a significant role in investor confidence to invest in the region”.

The Determination PAC concluded that;

“On the evidence, the Commission is persuaded that the image of ‘clean green environment’ is a critical component of the Coolmore and Darley operations in the Hunter Valley and plays a significant role in investor’s perception and confidence to invest”.

Not only did the recent Determination PAC recognise the sensitivity of the studs to changes in the landscape setting surrounding the farms but so to did the Review PAC and their visual specialist, Dr. Lamb, the previous Gateway Panel and also the National Trust who defined the area as a Landscape Conservation Area.

The Determination PAC noted on page 10 that;

“There is a significant risk that the close proximity of an open cut coal mine and the indirect and residual impacts of the mine operation will tarnish the image of the area, causing not only damage to the equine industry, but to the viticulture and tourism industries as well”.

Thoroughbred studs and wineries are some of the most sensitive rural land uses (image, brand and reputation are directly related to viability) while mining is the most visually impacting land use in the Hunter Valley. The Review PAC stated on page 27 of its report that;

“open cut coal mining and an international-scale Thoroughbred breeding enterprise are incompatible land uses”

In terms of landscape appearance and character, international horse breeding studs and open cut coal mining are at the opposite ends of the spectrum. The landscape of an open cut coal mine is the antithesis of the landscape of a Thoroughbred breeding stud, as illustrated in Figure 3.



Figure 3: An example of the stark contrast between the landscape of a Thoroughbred stud and an open cut mine
Response to the Environmental Impact Statement and the Secretary's Environmental Assessment Report for the Drayton South Coal Project (2015) | Michael Wright RLA

Anglo does not share this understanding of the importance and sensitivity of the landscape to international breeding studs in the current EIS, where the Visual Impact Assessment (VIA) report in Appendix L on page 11 sets the levels of visual sensitivity for horse studs and vineyards at Moderate when a mine is within 2.5km to 7.5km.

Due to the level of importance of the presentation of the landscape setting within the studs and the surrounding area to their image and viability, this visual sensitivity level should be set at High. Correspondingly the visual sensitivity level distances between 7.5-12km should be Moderate not Low.

The VIA report however does confirm on page 10 that the studs *“use the scenic amenity values of the surrounding landscape”* and yet this is not reflected in the assessment of visual sensitivity. Clearly the studs use more than just 2.5km of the surrounding landscape as an important part of their image and reputation.

The undulating topography of the area offers ample opportunity for motorists including tourists, clients, staff and their families to see well beyond 2.5km into the surrounding landscape. The relatively drier climate in this predominantly rural valley generally provides a high level of visual clarity to any views across the landscape.

Despite being identified in the previous EIA and in a submission by the National Trust, the VIA report does not mention the Landscape Conservation Area which occurs within the study area. This listing which has also been discussed in both PAC reports and both SEAR's is described by the National Trust as having *“high scenic values that should be protected”*. Surely this level of recognition of the importance of this landscape would also influence the visual sensitivity rating.

Dr Lamb in his report to the Review PAC, on page 17, states that the landscapes of the studs;

“are of special and unique sensitivity to impacts on the scenic values of their settings and are highly vulnerable to direct and indirect visual impacts”.

These landscapes clearly require the highest level of visual sensitivity rating similar to that set for residential dwellings, particularly as the two studs have some 300 people residing on the two properties.

The Determination PAC shares this view on sensitivity of the studs when it states, on page 11, that;

“on the evidence, the Commission agrees that Coolmore and Darley studs are at the ‘epicentre’ of the Thoroughbred breeding industry in NSW and Australia. They are ‘pivotal’ to the sustainability of the Upper Hunter Equine CIC because of their size and market share. They are the largest international scale Thoroughbred studs in Australia and have economic and reputational significance to the region, NSW and Australia. The Commission supports the recommendation of the PAC Review Report and the Gateway Panel report that both studs should be afforded the highest level of protection”.

The assessment of the level of visual sensitivity of the studs in the VIA report is not correct and therefore the overall visual impact assessment does not reflect the true level of visual impact that would be experienced by the studs. The assessments of visual impact in the VIA report should therefore not be accepted as an accurate assessment of the levels of visual impacts on the studs.

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3. VISUAL IMPACTS



The Executive Summary of the EIS states on page 19 that as a result of the new mine plan “there would be **no** impacts on the Coolmore and Woodlands Studs and the amenity of the surrounding landscape”. The EIS again states on page 5-25 that;

“direct views of the proposed Drayton South mine are not possible due to the presence of natural visual buffers and ridgelines that form the existing landscape”.

These statements are incorrect as there will be a range of direct, indirect and dynamic visual impacts on the studs and the two main roads which are used as the primary access to the studs, the Golden Highway and Edderton Road.

There will be direct visual impacts on approximately 200 hectares of elevated land on both properties into the mine, as well as from parts of the Golden Highway which is the primary access road to both studs. Direct views into the mine will also be possible from both the existing and re-aligned Edderton Road which is the primary access for the studs to the equine areas in the north around Muswellbrook and Scone.

Indirect visual impacts such as dust and blast fume plumes, as well as light spill from the night time operations and mining vehicles on public roads, would potentially be visible from almost any part of the studs and the adjacent Golden Highway, and Edderton Road.

Dynamic visual impacts will be evident throughout the 15+ year life of the mine as people move through the area and from a wide range of external sources including media, internet and other publications.

DIRECT VISUAL IMPACTS

The VIA does not assess the impacts of the new proposal from a number of viewpoints assessed in the previous reports for this project, including Trig Hill on Woodlands and the hill near the cattle yard on Coolmore, and yet it assesses a new viewpoint from the Randwick Park residences which is screened from direct visual impacts by the ridge to the north of the studs, although not from indirect impacts such as dust and gas plumes.

Photomontages were provided of the two viewpoints on Woodlands and Coolmore, from the Trig Hill lookout on Woodlands and the Coolmore hill overlooking the cattle yard in its *Justification report* dated February 2014. However these have not been included in the May 2015 report.

By excluding these higher elevation viewpoints from the assessment, Anglo have avoided stating that the mine would be visible from these locations and would either need to rely on tree screening or be left visually exposed to the mining activity. These elevated areas within Coolmore and Woodlands will be sterilised in terms of being able to take visitors into these areas for the 15 year life of the mine.

The adjoining map (Figure 4) illustrates the location of the two viewpoints, as well as the extent of the land on Coolmore and Woodlands from which the mining activity would be likely to be exposed, over the life of the mine. Due to the elevation and extent of these areas, these visual impacts could not be adequately mitigated with any on-site treatments to screen the mine from view.

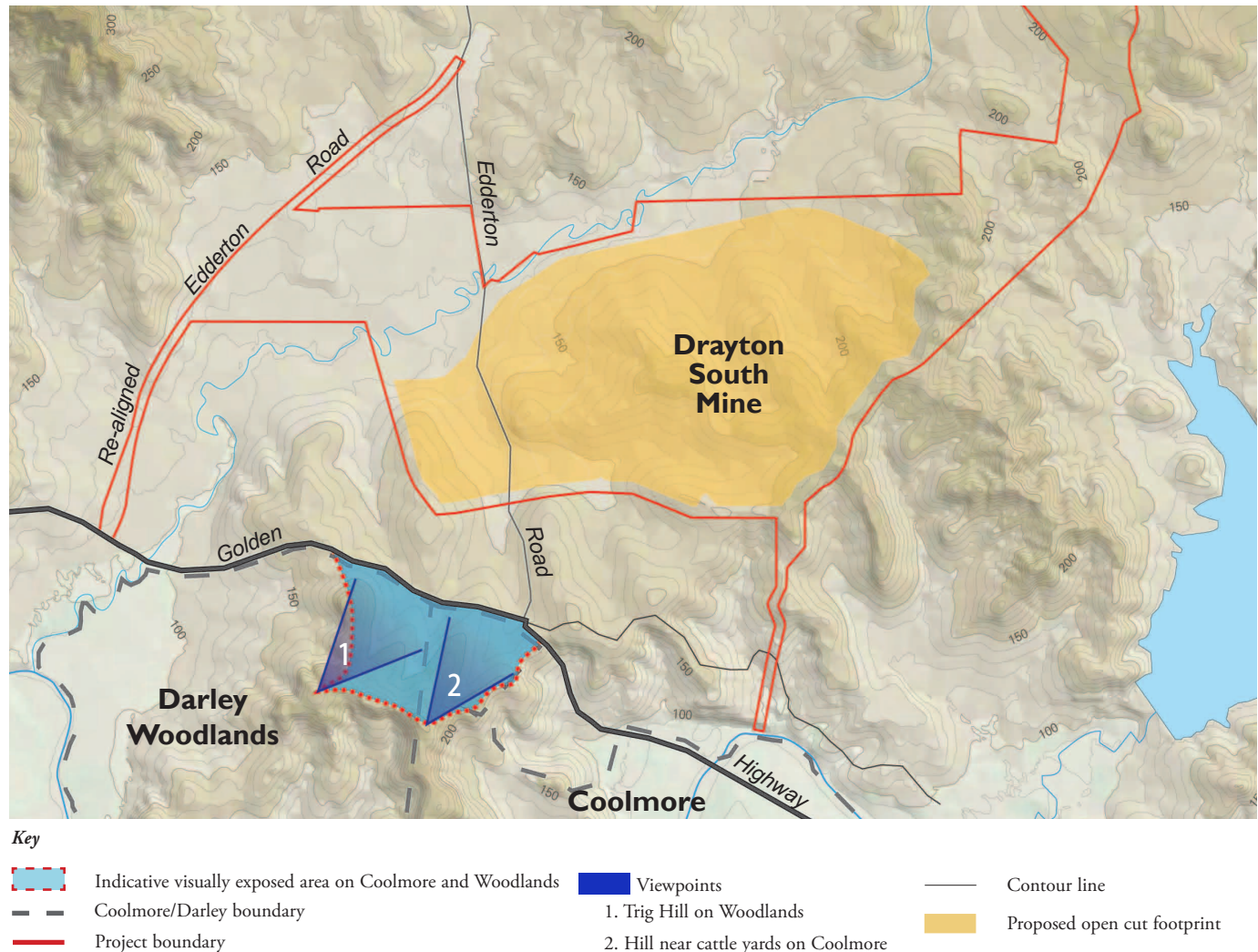


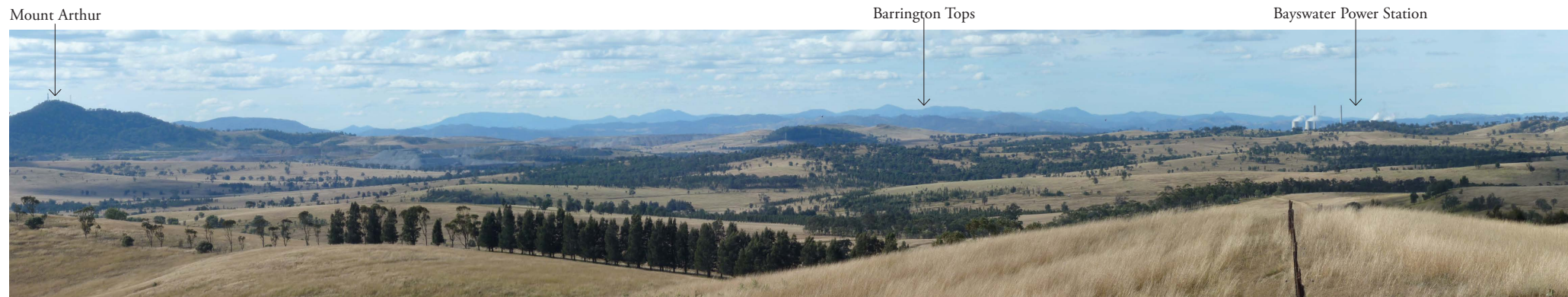
Figure 4: Three viewpoints not re-assessed in the EIS and the indicative area of Coolmore and Woodlands which is visually exposed to the Drayton South mine
Response to the Environmental Impact Statement and the Secretary's Environmental Assessment Report for the Drayton South Coal Project (2015) | Michael Wright RLA

VIEWPOINTS ON COOLMORE, WOODLANDS AND GOLDEN HIGHWAY

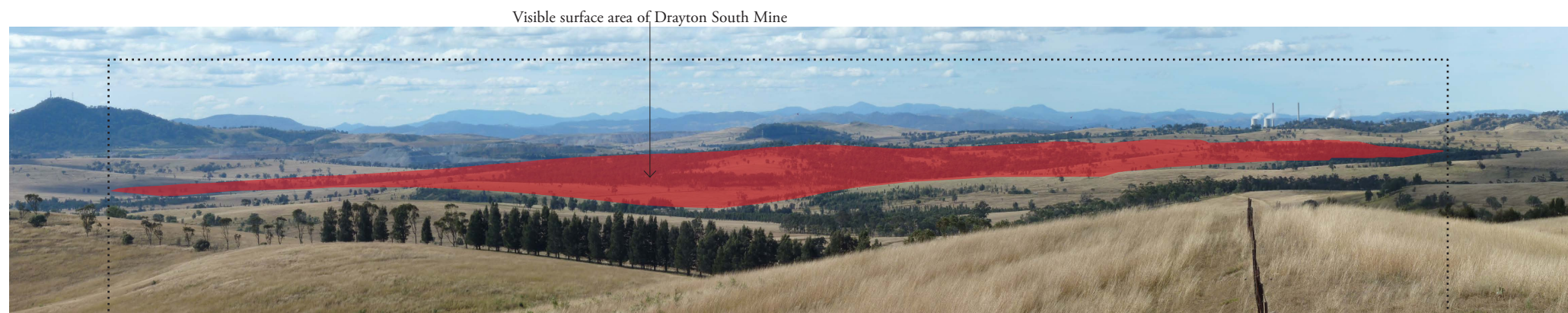
The following photographic images (Figures 5, 6 & 8) provide representations of the extent of the proposed mine that would be potentially visible from the three locations mentioned above: the Woodlands' Trig Hill, the Coolmore hill above the cattle yard and the Golden Highway viewpoint. These have been prepared using Google Earth and illustrate only the ground surface area which would be disturbed by mining activity and therefore potentially visible from each viewpoint.

Using the digital terrain model (DTM) of the mine, Anglo could demonstrate these visual impacts more accurately and show the mounds of overburden which could exceed 50m above the existing ground surface. This modelled view of the overburden dumps from these viewpoints would demonstrate an even greater level of visual impact than these Google Earth generated images.

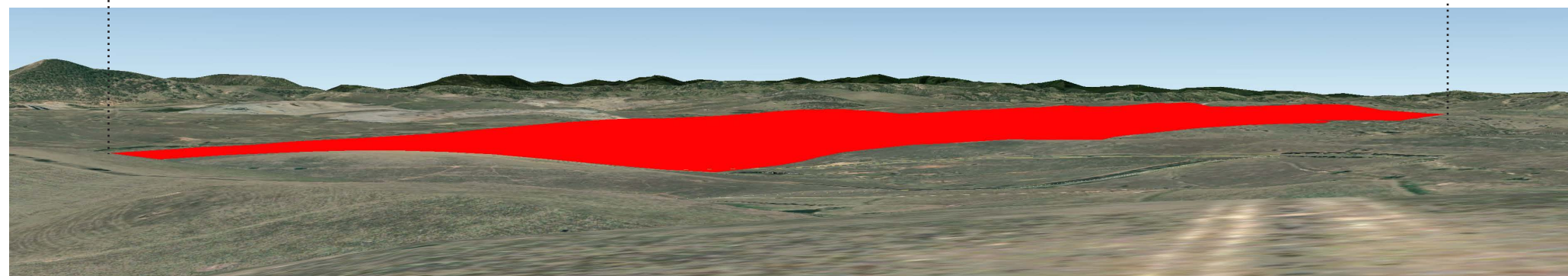
The proposed mine would work from north to south towards the studs which would expose any elevated locations on both studs and the Golden Highway to the overburden faces as they progress closer, over the full 15 year period. Therefore, the visual impacts of the mine from these viewpoints will be considerably greater than the depictions illustrated below. This high level of impact could exclude Trig Hill and any of the land within this 200ha area from visitation by clients or visitors to the studs for the life of the mine.



Photograph from Trig Hill



Composite image using the photograph above and the Google Earth terrain model below

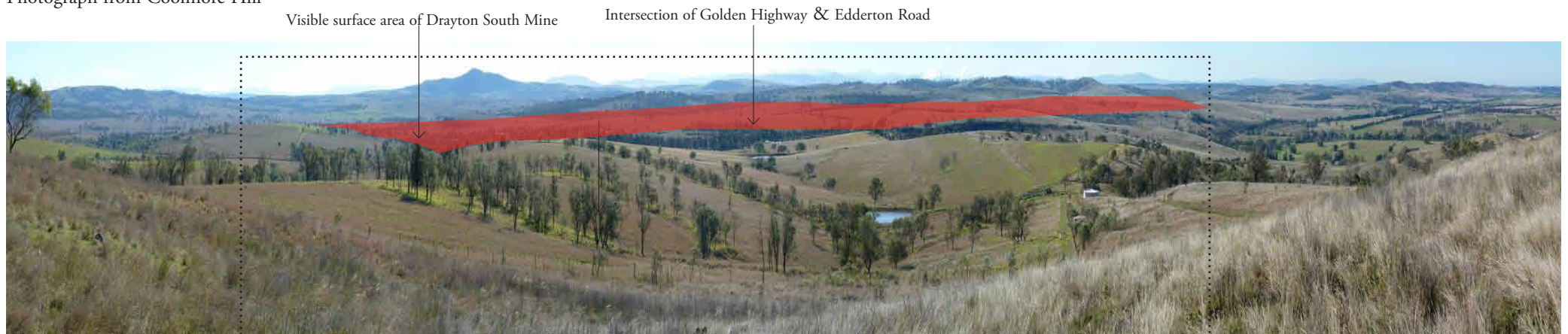


Google Earth terrain model

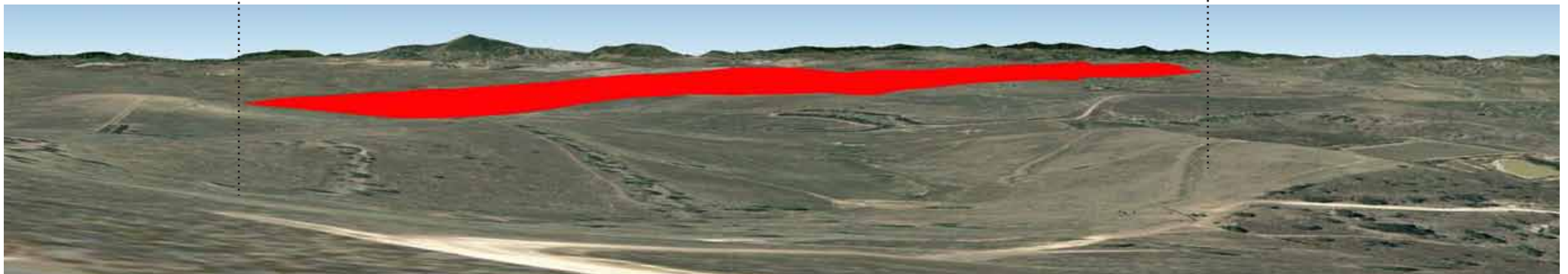
Figure 5: Composite image using a photograph taken from Trig Hill and a Google Earth terrain model, illustrating the potential surface areas of the mine that could be visible.



Photograph from Coolmore Hill



Composite image using the photograph above and the Google Earth terrain model below



Google Earth terrain model

Figure 6: Composite image using a photograph taken from the hill on Coolmore overlooking the cattle yard and a Google Earth terrain model illustrating the surface potential areas of the mine that could be visible.

GOLDEN HIGHWAY VIEWPOINTS

The viewpoint on top of the ridge at the Golden Highway (north of Trig Hill) is also not assessed in the EIS and VIA, and yet travellers at this location will see the mine throughout the proposed 15 year mine life. This viewpoint was assessed by Anglo's consultant when he was assessing the visual impacts of the Mt. Arthur mine for BHP, almost 8km from this viewpoint, and yet this viewpoint (previously identified as VP11) has not been identified for the assessment of the Drayton South project which is only just over 1km away.

It would appear that Anglo's consultant visited this viewpoint during this VIA study as there are two photographs taken from this viewpoint which appear in the VIA in Figure 5.7 (incorrectly labelled as being Edderton Road) and Figure 5.10 which is also incorrectly captioned as looking east instead of looking north. The VIA author chose to identify the Mt. Arthur overburden dumps at Mt. Arthur in Figure 5.10, but not assess the Drayton South overburden dumps and prepare a photomontage from this location. This road is the main highway from Newcastle to the Central West of NSW, a popular tourist road and the main access road to both Coolmore and Woodlands.

Figure 8 illustrates the potential areas of the mine that would be visible from this Golden Highway viewpoint, recognising that this image does not take into account the mounds of overburden which could extend over 50m above the ground surface. Anglo's consultant describes this amount of change to the landscape as "minor" on page 83 and again on page 87.

The question must be asked "Why was this viewpoint not assessed and a photomontage not produced?" Particularly when views of the mine site from this viewpoint extend continuously for over 600m along the Highway as it traverses the side of the ridge.

To not assess this viewpoint is contrary to the Secretary's Requirements which stipulated that *a detailed assessment of the likely visual impacts of the development (including dust, blasting and night lighting) on surrounding private landowners and key vantage points in the public domain, paying particular attention to impacts on nearby Thoroughbred breeding operations, Hollydene Estate Winery, private residences, tourists and road users.*

Not only is it *likely* that the mine itself will have a direct visual impact on Highway travellers but indirect impacts including dust, gas emissions and night lighting will be visible from this section of the Golden Highway. It is not sufficient to simply dismiss this viewpoint because views may be *eliminated by further plantings* as it states on page 51 of the VIA or that there will be no direct visual on the Golden Highway as *all views of the Project are screened (page 83)*. Based on Figures 5 and 6, *all views* are clearly not screened. These inconsistent statements within the EIS cast doubt on the level of confidence the public and the studs can have about what the final outcome will be.

The EIS states in Management and Monitoring Table 8.1 on page 8-2 item 16, that;

"Tree screens will be established along the Golden Highway, to improve amenity and minimise views of the Project".

Anglo clearly accepts that tree screens will not fully obstruct views of the project from the Golden Highway and therefore cannot say that there will be *no visual impact on the studs and the surrounding landscape*, including the elevated areas of both properties and the Highway.

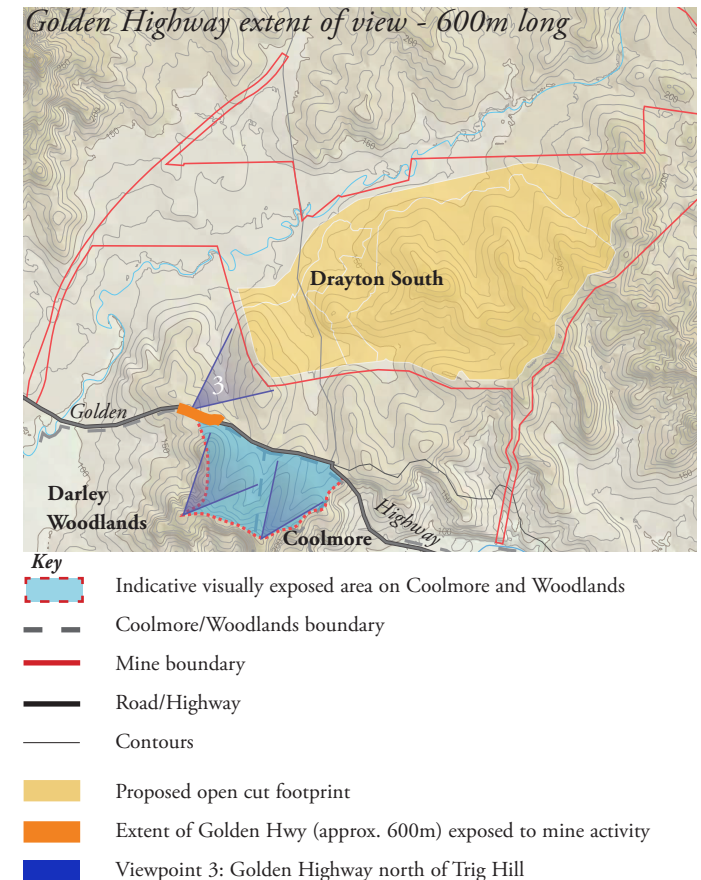
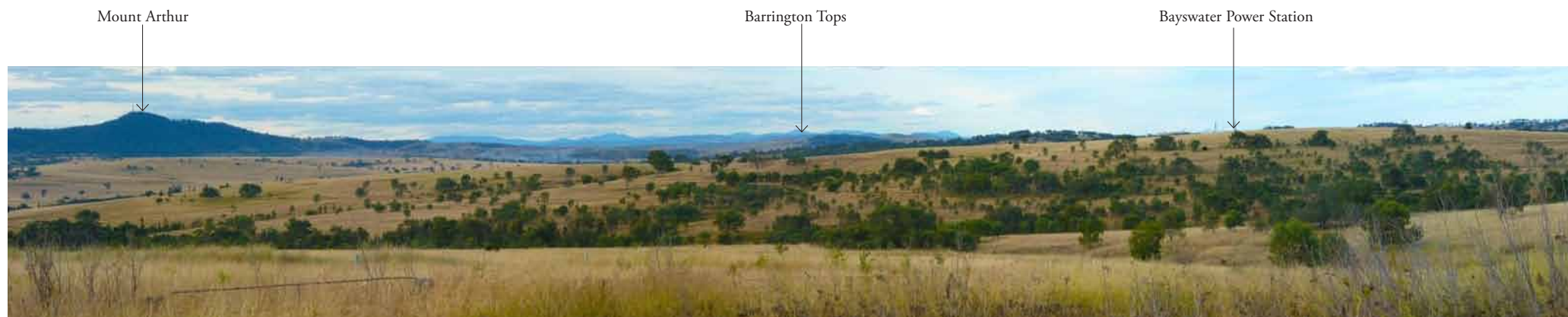


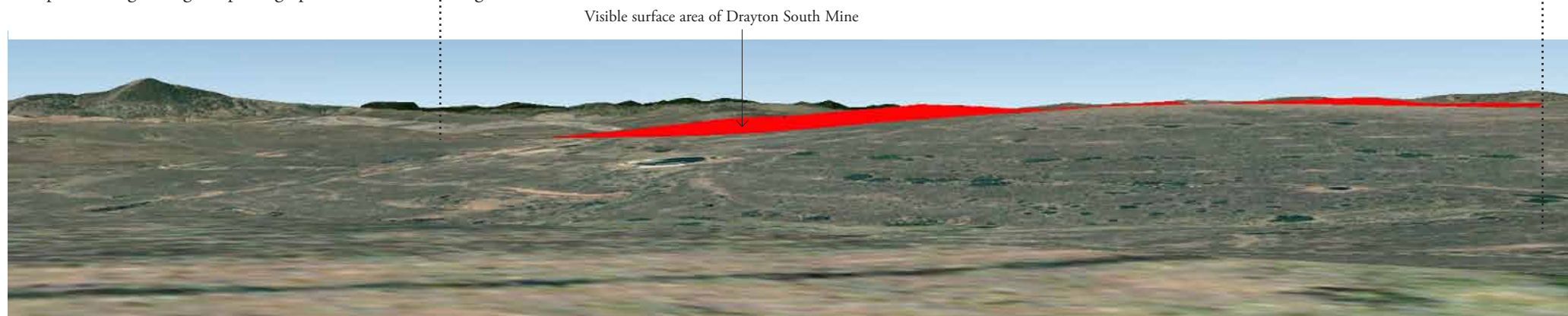
Figure 7: Golden Highway viewpoint not assessed in the EIS which is visually exposed to the Drayton South mine



Photograph from the Golden Highway



Composite image using the photograph above and the Google Earth terrain model below



Google Earth terrain model

Figure 8: Composite image using a photograph taken from the ridge on the Golden Highway north of Trig Hill and a Google Earth terrain model illustrating the potential surface areas of the mine that could be visible.

EDDERTON ROAD VIEWPOINTS

In addition to the Golden Highway, Edderton Road is the primary access road for the stud's clients, staff and their families to access Muswellbrook and the Thoroughbred studs and facilities to the north around Scone. Anglo propose to realign the southern section of Edderton Road within the first 4 years of the project to an alignment west of Saddlers Creek.

However, motorists will continue to use Edderton Road during these first 4 years of development of the mine which will have the potential to expose these travellers to close range views of the open cut mine activities, refer to Figure 9 (top). Tree plantings for screening purposes have not been proposed in the EIS and nor would they have sufficient time in these first 4 years to have any effect on the visibility of the mine activities, if they were proposed. The EIS and the SEAR appear to be silent on this issue however the level of exposure to these close range visual impacts should be assessed before the project is determined.

Four years of negative impacts on this key access road would have potentially serious impacts on the studs as it would represent 4 business cycles, particularly for key client events such as Coolmore's Stallion Parade. This Stallion Parade attracts over 1,000 people many of whom would travel along Edderton Road having attended stallion parades at studs around Scone on the previous day. In addition, the VIA also concedes that a section of the re-aligned Edderton Road will not have any tree planting along its eastern boundary, as Anglo do not own the adjoining land, refer to Figure 9 (bottom). At a distance of just 2km (not the 2.5km as stated in the VIA on page 84) the large scale of this open cut mine would have a high visual impact as the VIA admits it could take 4 years for the overburden dumps to be rehabilitated to the point where it would begin to reduce that impact. The VIA shows an optimistic photomontage of

the proposed tree screen planting on the edge of the proposed re-aligned Edderton Road however it provides no photomontage of the section of the re-aligned Edderton Road where no screen planting is proposed.

CONCLUSION

The visual impact assessment should identify and assess locations where visual impacts are likely to occur and then mitigate any identified visual impacts, particularly of those viewpoints assessed in previous reports for this proposed mine. Anglo have been inconsistent in their assessment by only assessing selected viewpoints such as the re-aligned Edderton Road viewpoint and not the more exposed section of the Edderton Road or the more elevated 600m long section of the Golden Highway viewpoint which the author has assessed for the Mt Arthur project.

The visual impact assessment does not comply with the Secretary's Requirements and has not been comprehensively undertaken and in some instances continues to ignore key viewpoints for assessment such as the elevated Golden Highway viewpoint near Trig Hill, as well as the existing Edderton Road alignment.

Key

-  Indicative visually exposed area on Coolmore and Woodlands
-  Coolmore/Woodlands boundary
-  Mine boundary
-  Road/Highway
-  Contours
-  Proposed open cut footprint
-  Exposed open mining footprint
-  Extent of public road exposed by mine activity
-  Extent of Edderton Road not screened

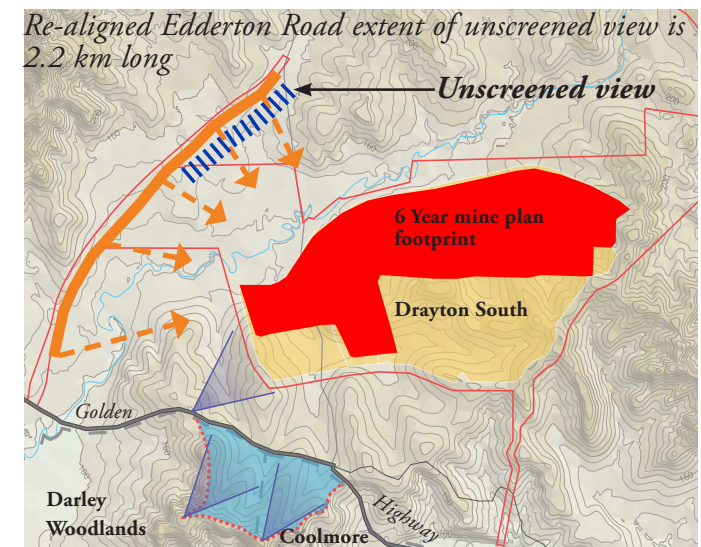
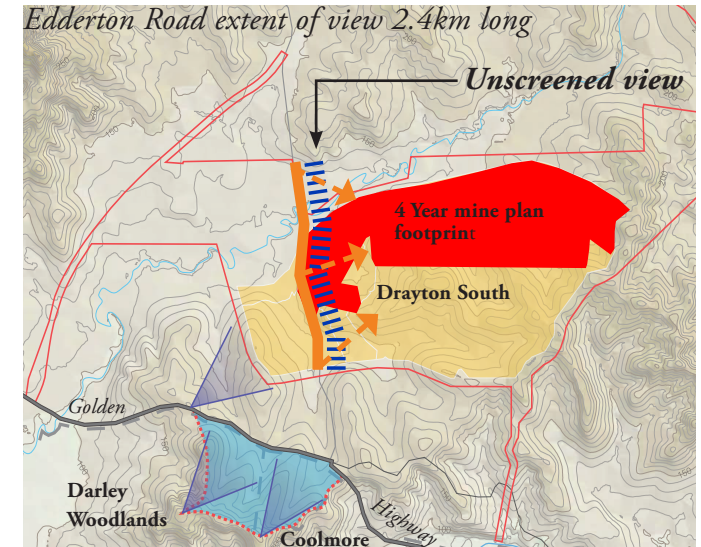


Figure 9: Viewpoints from Edderton Road and the re-aligned Edderton Road which are potentially visually exposed to the Drayton South mine

INDIRECT VISUAL IMPACTS

Indirect visual impacts manifest in a number of different forms including: dust from blasting, excavation, overburden emplacement and vehicles on haul roads; gas plumes from blasting; lighting operations at night and a range of mining vehicles on public roads.

Indirect visual impacts are a very significant risk to the operations and viability of the two studs particularly an event such as the Mt Arthur botched blast in February 2014 in which highly visible clouds of orange gas was observed across a wide area. The two photographs in Figure 10 illustrate the scale of the event and the alarming orange colour that seemed to fill the sky.

Another similar but smaller event was recorded at Anglo's Drayton mine which was the subject of a 4 Corners program in 2010. The resultant outcomes of these kinds of events are not only visual impact but also a potential health risk, all of which would seriously affect the stud's reputation, image and potentially their viability.

The fire at the Hazelwood Mine in Morwell, Victoria, illustrated in the images in Figure 11, would create significant and multidimensional impacts on the studs, particularly as this fire burnt out of control for 45 days in February and March of 2014. These kinds of events are not unique in open cut mining and represent a serious threat to the Coolmore and Darley studs.



Figure 10: Highly visible gases emanating from the botched Mt Arthur Blast.



Source: Sydney Morning Herald 21/02/14



Figure 11: Highly visible smoke from the Hazelwood Coal Mine fire at Morwell in Victoria, which burned for 45 days.



Source: HTBA /HVWTA March 2015

Figure 12: An image of dust plumes typical of a coal mine operating in the Hunter Valley.

All areas across both studs plus over 15km of the Golden Highway would be impacted by indirect visual impacts including dust from blasting, machinery and wind, gas emissions from blasting, lighting and the contributory effects of noise as acknowledged on p 52 in the SEAR

“The Department’s view is that dust and blast fumes would be visible And there would be a noticeable glow during the night. Although not a visual impact, noise may be audible under both scenarios, particularly during adverse weather conditions”.

Scant attention is given in the VIA to dust from blasting and other mining activities as well as the possibility of visible fumes which can be visually significant over a very large area as demonstrated by the Mt. Arthur Mine botched blast in February 2014. Overly simplified and sweeping statements such as “*minimise visible dust and **prevent fumes emissions***” (page L 90 of the VIA) deny the reality that these events are likely to occur over a 15 year mine life and cannot be prevented.

No mention is made of wind borne dust from the extensive areas of exposed earth and rock in the pit and overburden areas which could be visually significant in dry and windy conditions particularly as the prevailing north westerly winds would be likely to drive this dust over the studs.

DYNAMIC VISUAL IMPACTS

Both the Review PAC and the Determination PAC consider the effect of dynamic visual impacts as presented by Dr. Lamb. On page 12 of his report, Dr. Lamb states that;

“While it is conventional to concentrate on fixed viewing locations as the VIA does and this extends to the new photomontages presented in the PPR, there is a significant aspect of visual impacts that is thereby missing from the assessment. This is no consideration of dynamic, or moving views. Views are experienced not only in moving sequences, which may be repeated regularly, but may also be from experiences that are displaced in time, in which views or other visual material, such as those from books, digital or other visual media etc. are also assembled cognitively into an image of a place, journey or destination. The latter is a significant consideration with regard to impacts on the visual imagery of the stud operations, which is integral to the presentation of their aesthetic values”.

With increasing access and accuracy to digital media, including aerial images on Google Maps, viewed on portable devices such as smart phones across the country, as well as social media sites such as Twitter and Facebook, these dynamic impacts are becoming increasingly relevant, particularly where reputation and image are paramount to businesses such as these two horse studs.

The Department acknowledges the presence of dynamic visual impacts in assessing visual impact and yet Anglo makes no mention of them in either the EIS or the VIA report. The SEAR states on page 52 *“that it does not discount the reality of dynamic views”*, however it would appear that Anglo does discount dynamic impacts despite them being considered in both PAC reports and both of the SEAR’s. This is an element of the visual assessment which should have been addressed in the VIA by Anglo and renders the assessment incomplete.

4. MITIGATION OF VISUAL IMPACTS

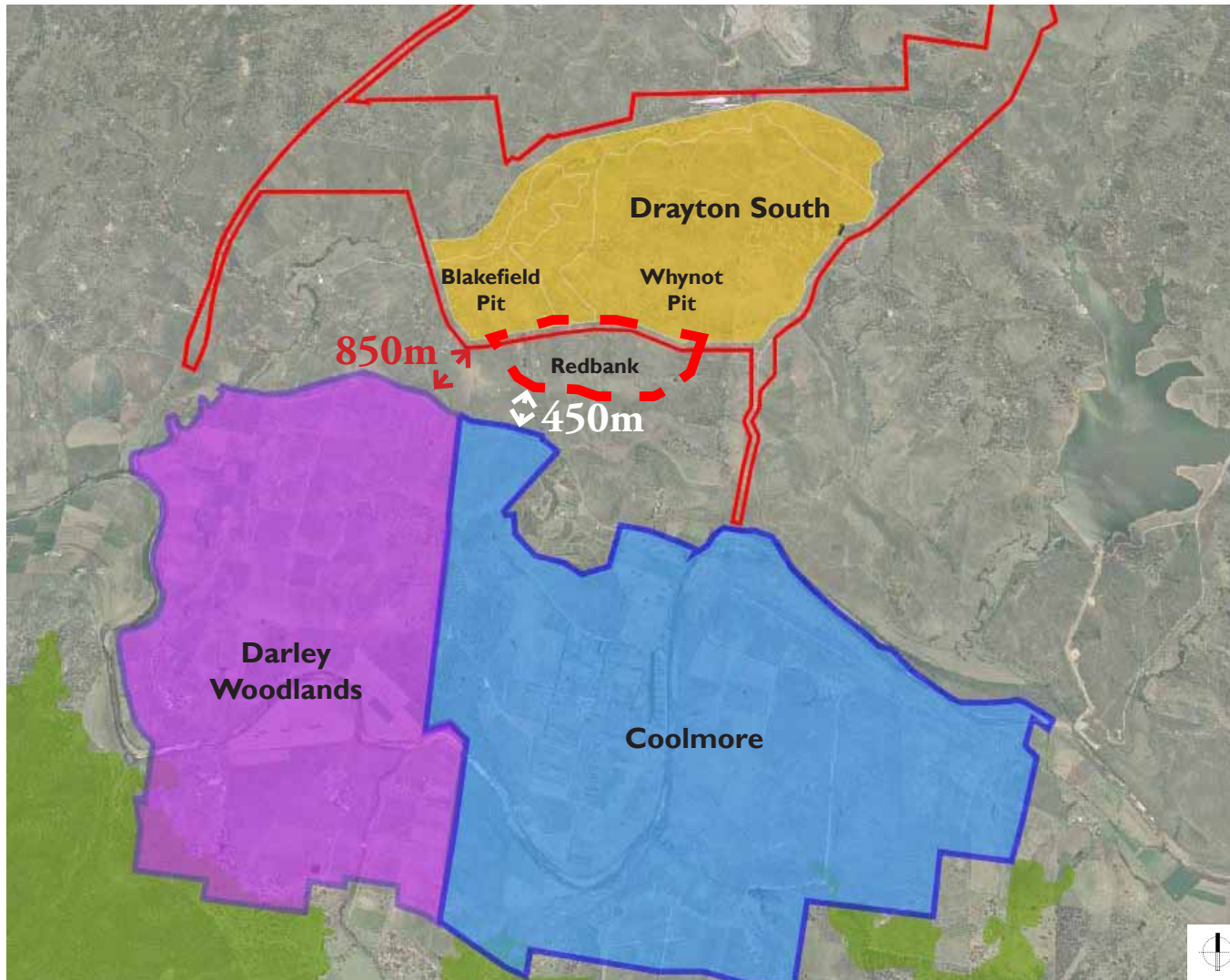


Figure 13: Distance from Woodlands to the proposed Drayton South Mine, compared to the distance from Coolmore to the previous mine plan boundary.

PROXIMITY

This revision of the Drayton South coal mine plan is now proposed to be a minimum of 1km away from the boundary of the two studs, as stated in the EIS in table 1.1, page 1-2. However, the distance measures only 850m at its closest point as illustrated in Figure 12. The previous mine plan boundary at the edge of the Redbank Pit, was 450m at its closest point to Coolmore's boundary. The removal of most of the Redbank Pit has increased the distance by an extra 400m which is not sufficient to mitigate the visual impacts of this mine.

An extra 400m buffer is inadequate and would be of no tangible benefit to the protection of the studs from direct, indirect and dynamic visual impacts of this mine over 15+years.

Existing mines are located significantly further away from the two studs being up to eight times further away from the studs than the proposed Drayton South mine. Figure 13 illustrates a comparative distance between the boundary of Woodlands and the proposed Drayton South mine in comparison to the existing mines of Mt. Arthur and Hunter Valley Operations as well as the Bayswater Power Station.

This new proposal has moved the mine boundary slightly further away from Coolmore, however the proposed mine boundary has remained virtually the same distance as the previous mine plan from the Woodlands boundary. Therefore the impacts of the proposed mine on the Woodlands stud remain unchanged.



Figure 14: View proximity comparative distance showing the Woodlands boundary on the Sydney Harbour Bridge and Drayton South in red

Figure 14 provides a close up of the map in Figure 13 showing the comparative distance between the previous mine plan for Drayton South and the current proposal. The previous mine plan boundary at the edge of the Redbank Pit was 450m from the Coolmore boundary at its closest point. The current mine plan boundary at the edge of the Blakefield Pit is 850m from the Woodlands boundary.

It is important to note that the Golden Highway is therefore slightly closer to the mine than these distances being located just north of the studs' boundaries.

The 400m increase in distance proposed in the current mine plan is an irrelevant increase in the buffer, given the scale of the mine and the magnitude of the potential direct, indirect and dynamic visual impacts.

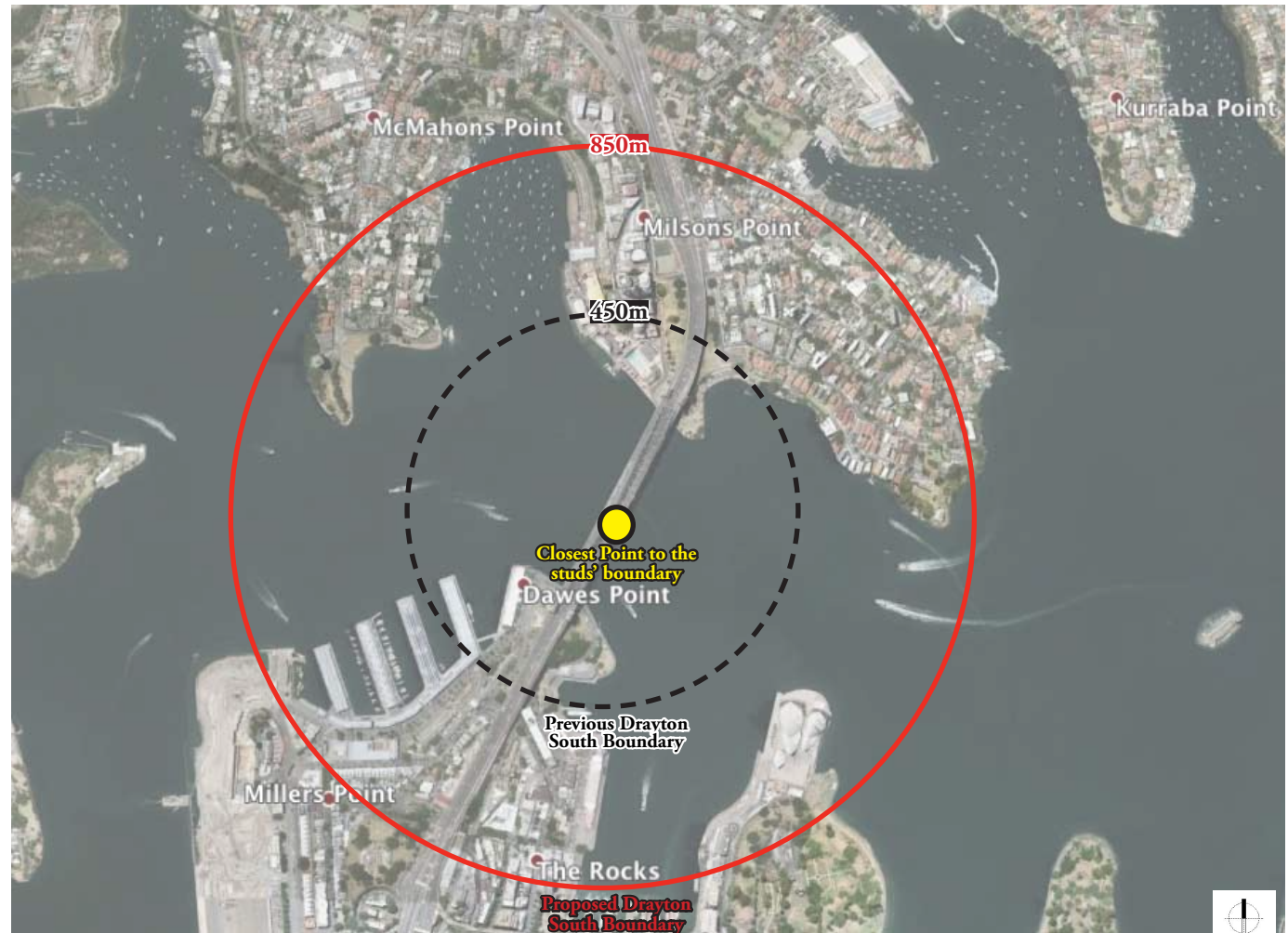


Figure 15: View proximity comparative distance showing the Coolmore/Darley boundary in yellow on the Sydney Harbour Bridge and the previous and proposed Drayton South boundaries in red (proposed) and black (previous)

TREE SCREENING

The EIS and the SEAR are relying on tree screens along the Golden Highway and the proposed re-aligned Edderton Road reserve boundaries to mitigate the range of visual impacts that would occur with this proposed mine. Tree screens are relatively ineffective measures and are only proposed for most of the viewpoints along the Golden Highway and the re-aligned Edderton Road.

Edderton Road will remain open to the public for the first 4 years of the mine life and would appear to have no screening proposed along the eastern boundary with the proposed mine. The elevated lands on both Coolmore and Woodlands cannot be protected from the visual impacts of the mine due to their elevation and open landscape character. As such these areas will remain impacted for the full life of the mine.

In relying on trees for screening it is important to note that these plantings will take 5 to 10 years to reach an effective density to potentially screen the views and during this time the workings of the mine will be exposed to viewers on these roads. These tree screens will also be subject to the effects of drought, fire, pests and disease which would impact on their effectiveness as screens over the life of the mine.

Any areas of trees lost to any of these impacts would again take 5 to 10 years to begin to be screen views of the open pit and overburden areas thus exposing viewers to the mine. These tree screens are not a total screen and therefore cannot be relied on to block views of the mine over the life of the mine.



Figure 16: Views of Drayton Mine from Thomas Mitchell Drive through the gaps in the boundary screen plantings.

The Review PAC and Dr. Lamb expressed concern about the permanence and effectiveness of the proposed tree screens and a review of the Drayton Mine compliance record would support this concern. The Specific Environmental Conditions for the Drayton Mine 2008 Project Approval states that *“within 2 years of this approval (2008), the proponent shall plant additional trees along the Thomas Mitchell Drive corridor to provide a mature tree screen for the project”*. The photos taken in 2014 shown in Figure 15 indicate that after 6 years, this has not occurred in accordance with the conditions of approval for the Drayton Mine.

Another example of their ineffectiveness is illustrated in Figure 16 which show the transparency of existing tree screen plantings by Anglo adjacent to the Golden Highway and Edderton Road. These plantings, which typically consist of 3-4 rows of mixed tree species in a 20-30m wide corridor, are clearly not screening the landscape beyond. These plantings are also a stark contrast to those proposed in the EIS to be created along parts of Edderton Road in Figure 17, which suggest a solid wall effect.

No shrub species have been included as suggested by Dr. Lamb, to fill in the gaps and screen the eye level views. Shrubs typically have a much shorter life than trees and if implemented in their plantings, Anglo would need to replace them at least once during the life of the mine to maintain an effective screen. Continuous tree screens along the full length of the Golden Highway from Edderton Road to Saddlers Creek will also have a visual impact as it gradually encloses the road corridor restricting landscape views to the north as well as signifying to travellers that a mine is present, as these continuous tree plantings over long distances, are synonymous with open cut mining in the Hunter Valley.

Much of the proposed tree screening along the Golden Highway from Saddlers Creek east the ridge top, opposite Trig Hill is totally superfluous as their own assessment indicates that the current proposal will not be visible from these areas of the highway. This tree screening along the Highway serves no purpose except to screen future possible mine extensions south of the current proposal.

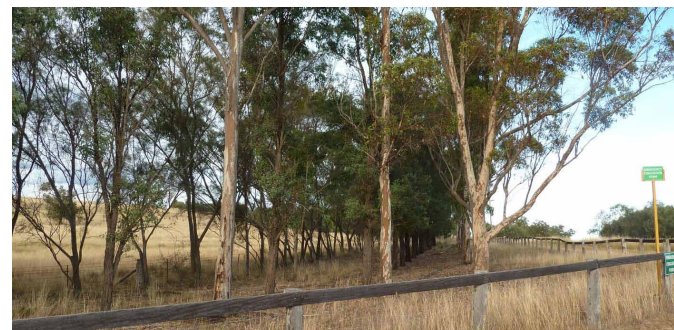


Figure 17: Example of the transparent screen planting on the Golden Highway near the intersection with Edderton Road

Existing



Year 4



Year 6



Year 12



Figure 18: Photomontage of proposed tree screening on Edderton Road. (Page 81; VIA).

BEST PRACTICE

The EIS and the SEAR refer to the implementation of “**Best practice**” mining to protect the studs from direct or indirect impacts of the mine. The SEAR uses the term 15 times in reference to avoiding and mitigating impacts of the mine on the surrounding environment.

The compliance records of both Drayton and Mt. Arthur clearly suggest that whilst the best endeavors to avoid serious events which cause visual impacts on the surrounding area are undertaken, these events will still be likely to occur. For the studs, one such serious event could result in significant damage to their reputation as a breeding operation located within a “clean and green” environment.

In many cases treatments such as tree screening and management practices employing “Best Practice” principles will not be able to mitigate dynamic impacts of the mine’s activities on the adjoining studs. The knowledge and recognition of mining in close proximity of the studs will be clearly evident from a wide range of information sources readily available within the public domain.

REHABILITATION AND LANDFORM

As described in my previous report (September 2014), the mining plans prepared by Anglo create the impression of a highly ordered mining and rehabilitation process at Drayton South.

The aerial photographs in Figure 18 of Anglo’s Drayton mine demonstrate a very different picture. There is no apparent orderly sequence of vegetation clearance, stripping of overburden, excavation of the ore and then the progressive rehabilitation of the site, as suggested in the mine plans on pages 42-45 of the VIA. The Conditions of Approval for the Drayton mine stipulated that progressive rehabilitation be undertaken by Anglo and yet it is difficult to identify those areas that have been successfully rehabilitated.

The current mine approval is due to expire at the end of 2017 which would suggest that the rehabilitation of the Drayton mine has fallen well behind schedule, as there are only just over 3 years remaining from the date of the last aerial photo. With the extent of apparent non-compliance of the rehabilitation at the Drayton mine, it is difficult to have confidence that Anglo will undertake the proposed works at Drayton South in a different manner to that which has occurred at Drayton.

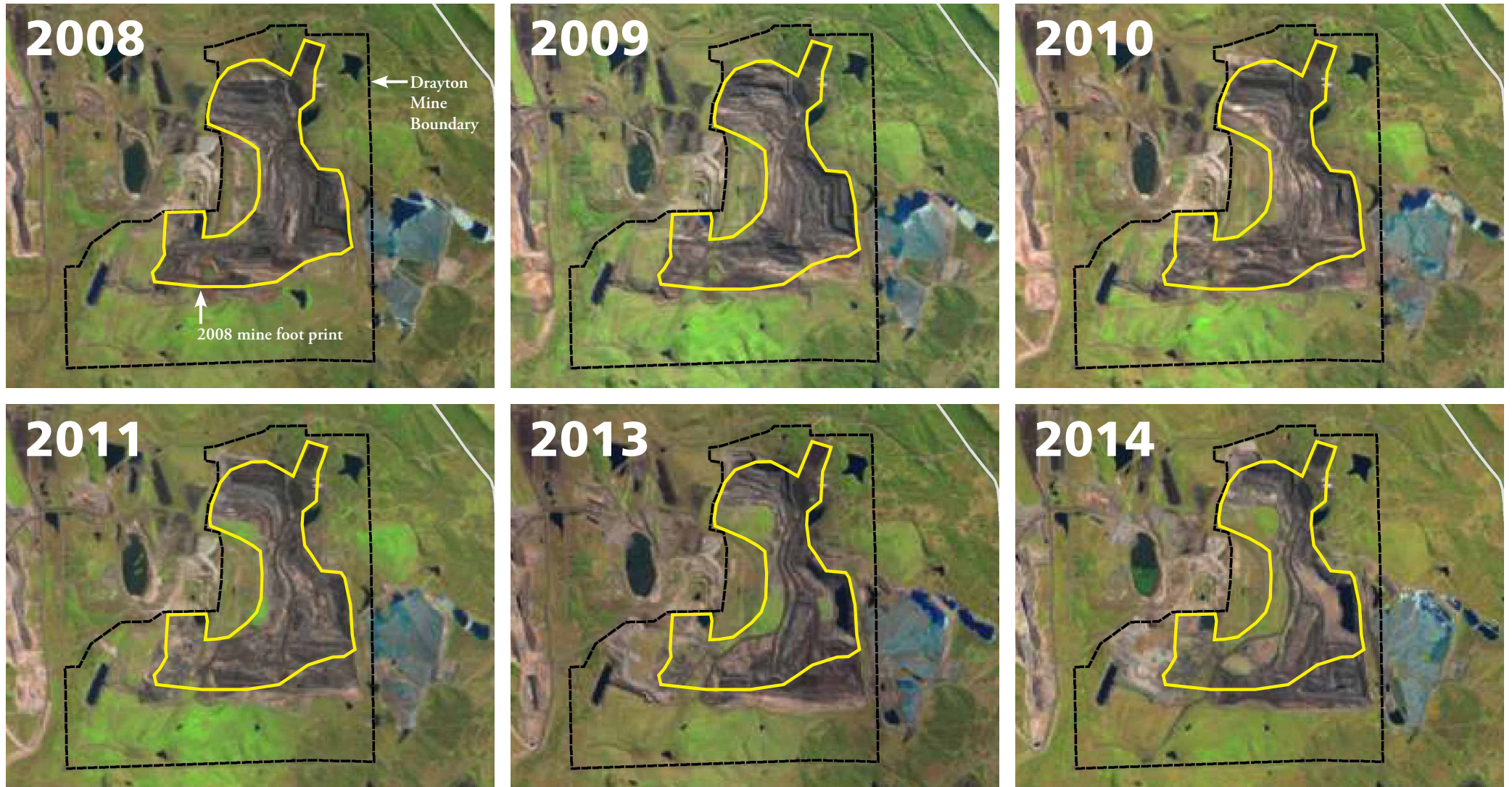


Figure 19: Demonstration of the apparent lack of progressive rehabilitation that has occurred at Drayton, by Anglo American, since the 2008 approval of the Drayton Mine - Extension Project which required progressive rehabilitation.

5. CONCLUSION

After many years and over 5 reports Anglo have failed to complete a comprehensive and accurate visual impact assessment of this project and in particular its affect on the international Thoroughbred breeding operations of Coolmore and Darley at their Woodlands Stud.

The following list reflects the shortcomings of this assessment:

- Failed to acknowledge and accurately assess the Visual Sensitivity of the studs.
- Failed to prepare a Visual Catchment Map for the project despite many requests and yet BHP produced one for the Mt Arthur Modification, a project which would occur within the boundaries of the existing mine, instead of being located in a greenfields site and close to two significant and highly sensitive Thoroughbred breeding studs.
- Removed from the current EIS, the two elevated viewpoints on Coolmore and Woodlands from which the mine would be visible for the full life of the mine and cannot be mitigated.
- Failed to assess the elevated viewpoint on the Golden Highway, a key viewpoint on this main road.
- Failed to properly assess the visual impacts of the mine on both Edderton Road and the re-aligned Edderton Road.
- Failed to acknowledge the real and significant effects of indirect visual impacts on these sensitive locations.
- Failed to assess Dynamic visual impacts despite them being considered by both the Department and the two PAC's.

- Failed to identify and acknowledge in the VIA reports the National Trust listed Landscape Conservation Area.
- Claim that tree screens will effectively screen views of the mine for the life of the mine when current local examples contradict this assertion.

Anglo American have presented 3 alternate proposals for the proposed Drayton South mine since the first in 2012. Each proposal has resulted in incremental changes to the southern margins of the proposed mine area. Due to shortcomings in the assessment of this proposal, the studs can have no confidence in the visual assessment and therefore the mine's impact on the future viability of the operations of the two studs.

The vital importance of the appearance and presentation of not only the landscape within the studs' boundaries but also the surrounding landscape to the reputation and operational viability of each business can not be underestimated. Anglo has repeatedly not recognised or acknowledged the significance of these critical visual values to the studs when assessing its impacts.

Open cut coal mining has the largest visual impact of any land use in a rural setting. The sheer scale and footprint of these mines are very difficult, if not impossible to conceal from the public view. By contrast, Thoroughbred breeding studs have the highest standards of landscape visual quality and presentation which relates directly to their reputation and image, sometimes referred to as '*Brandscape*'.

These 2 rural land uses are polar opposites in terms of scenic and visual values and to suggest that they can coexist within less than 1km of each other is to ignore the reality of their differences and most importantly the sensitivity of the studs to these kinds of impacts. Once the damage is done to a reputation such as that of these two studs, it will difficult, if not impossible, to recover in this location.

The risks of impacting the stud's substantial and well established business operations is heightened by the relative close proximity of the proposed mine to the studs and the scale of the potential impacts.

At such close proximity, these impacts cannot be mitigated sufficiently to protect the studs and no conditions can be devised that would ensure that these impacts could not occur. Coolmore and Darley Woodlands studs are just too sensitive and important to the Thoroughbred industry in NSW to risk jeopardising their future in this unique valley.



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APPENDICES

Appendix A: *Drayton South Coal Project Response to Anglo American's Response to the scenic and visual impact issues raised in the Planning Assessment Commission's Report.* Prepared by Michael Wright, registered landscape architect, for Coolmore Australia and Darley Australia. March 2014.

Appendix B: *Commentary on the Drayton South Retracted Mine Plan.* Prepared by Michael Wright, registered landscape architect, for Coolmore Australia and Darley Australia. May 2014.

Appendix C: *Response to the Secretary's Environmental Assessment Report for the Drayton South Coal Project.* Prepared by Michael Wright, registered landscape architect, for Coolmore Australia and Darley Australia. Sept. 2014.