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20 January 2020

Lauren Evans
Team Leader, Energy and Resource Assessments
NSW Department of Planning, Industry and Environment
GPO Box 39
Sydney NSW 2001

By email: Lauren.Evans@planning.nsw.gov.au

Dear Lauren,

RE: RESPONSE TO INFORMATION REQUEST FOR THE MAXWELL PROJECT (SSD-9526)

I refer to the NSW Department of Planning, Industry and Environment's (DPIE's) information request (dated 20 December 2019 and received via the planning portal on 6 January 2020). The DPIE's information request also included supplementary information requests from the Resources Regulator.

A response to each of the DPIE's information requests is provided in Enclosure 1.

A response to each of the Resources Regulator information requests is provided in Enclosure 2.

Please do not hesitate to contact the undersigned should you wish to discuss.

Yours sincerely,

Bill Dean
General Manager – Projects
Malabar Coal Limited

ENCLOSURE 1

RESPONSE TO DPIE INFORMATION REQUESTS

ID	Information Request	Response
	Rehabilitation	
1	*The Resources Regulator has requested additional information with respect to rehabilitation objectives, the design of final voids and interactions with the proposed Maxwell Solar Project. A copy of the Resources Regulator's requested dated 11 December 2019 has been provided to Malabar Coal via separate email. The Department requests a detailed response to the matters raised by the Resources Regulator.*	A detailed response to each of the Resources Regulator information requests is provided in Enclosure 2.
	Economic Impacts	
2	*The Department requests clarification regarding projected workforce numbers throughout the EIS. Please clarify, for example:* • *whether the maximum workforce numbers provided in Section 3.9 of the EIS are full-time equivalent (FTE) positions; and* • *how the total operational workforce numbers are expected to change over the life of the project.*	The maximum workforce numbers provided in Section 3.9 of the EIS are full-time equivalent (FTE) positions. Mining operations are planned to commence in 2021. The operational workforce would build to approximately 160 personnel during 2021 and then to approximately 300 operational personnel in 2022, with a peak of approximately 430 operational personnel in 2023. Employment numbers would vary over time, primarily driven by the underground roadway development tasks. The workforce complement would average approximately: • 350 personnel during the first ten years (assumed to be 2021-2030); • 270 personnel during the second ten-year period (assumed to be 2031-2040); and • 190 personnel for the remaining six years of operation (assumed to be 2040-2046).
3	*Section 5.2 of the Economic Assessment (Appendix M) states that to "be conservative, the additional income relative to average income in the mining industry is applied in the LEA summary results presented in Section 5.6." However, the results in Section 5.6 appear to be based on an average wage, rather than an average mining-industry wage. The Department requests clarification in this regard.*	The Local Effects Analysis (LEA) in Section 5.6 of the Economic Assessment reported results based on the average income across all industries (Table 5.3) rather than the average income in the mining industry (Table 5.2). Whilst this is inconsistent with the statement in Section 5.2, the use of average income across all industries is not incorrect, but rather represents a likely upper bound of the net income effect realised in the locality. Conversely, the use of average income in the mining industry is a likely lower bound of the net income effect realised in the locality and therefore is the most conservative choice. Malabar's employment commitments include planned recruitment of approximately 50% of the operational workforce from individuals outside of the underground mining sector, including young people, and people who are unemployed, as well as various training, apprenticeship, cadetship and/or intern programs. Given these commitments, the likely net income effect in the locality will most likely lie somewhere in the middle of the range shown in Table 5.2 and Table 5.3. Section 5.2 of the Economic Assessment presents the results based on a comparison to the average income in the mining industry (Table 5.2). The benefits described in Table 5.2 are lower, as the approach adopted is more conservative, but nevertheless represent a positive effect in the locality. The conservative estimate of benefits are: • $1.0 million (M) net increase (per year) in income in the locality during the establishment phase. This is equivalent to 13 additional FTE jobs. • $2.9M net increase (per year) in income in the locality during the operations phase. This is equivalent to 38 additional FTEs. Section 5.6 provides a summary of the results that have been discussed earlier in Section 5.2. The results reported in Section 5.6 do not inform any subsequent analysis and therefore do not change the other findings of the LEA.

ID	Information Request	Response
4	*Please provide some further explanation as to how the data in Charts 4.1 and 4.2 was used to calculate coal prices in Section 4.3.1.1 of the Economic Assessment.*	Charts 4.1 and 4.2 of the Economic Assessment both contain two separate graphs. The first of the two graphs, titled 'Hard coking coal prices' and 'Thermal coal prices', respectively, are the prices taken from the Department of Industry, Innovation and Science (DIIS) and Consensus Economics. These are the historical and forecasted prices reported by these organisations. The prices were converted to 2018 Australian dollars using foreign exchange rate and nominal rate assumptions published by the DIIS. In the years where there was no forecast available, the price has been held constant and is equal to the price from the most recent year. The above prices were then used to calculate the price of semi-soft coking coal and low ash thermal coal, which were then used to estimate the gross mining revenue. The estimated prices are presented in the bottom graphs of Charts 4.1 and 4.2, titled 'Semi-soft coking coal prices' and 'Low ash thermal coal prices', respectively. To calculate the price of semi-soft coking coal, the price of hard coking coal was multiplied by 71%, which is the average conversion rate used in external studies and past assessments on mines producing metallurgical coal. To calculate the price of low ash thermal coal, the price of thermal coal has been scaled proportionately based on the energy content from the low ash thermal coal proposed to be mined (as per coal quality information collected through the Project exploration programme), relative to the Newcastle average. That is, low ash thermal coal exhibiting 10% higher energy content relative to the Newcastle average results in the price equivalent to (110% x thermal coal price). Note that the analysis adopted Consensus Economics forecasts for coal prices, and not the DIIS coal price forecasts.
5	*Please confirm whether the Economic Assessment considered how a change in output composition (ie the balance between metallurgical and thermal coal) might affect the CBA. Can the 75/25 figure in the Economic Assessment be considered conservative?*	The Project would produce high-quality coals with at least 75% of coal produced capable of being used in the making of steel (known as coking or metallurgical coals). The balance would be export thermal coals suitable for the new-generation High Efficiency, Low Emissions power generators. A change in output composition was not specifically assessed as part of the Sensitivity Analysis in the Economic Assessment, as no departure from this composition is expected. Notwithstanding, the Economic Assessment did consider the effects of a sustained decrease in export coal price forecasts by 25% (lower sensitivity scenario). The estimate of net economic benefits for NSW under this conservative sensitivity scenario range from approximately $199M to $714M, depending on the discount rate that is applied.
	Coal Transport	
6	*The EIS indicates that up to 7 million tonnes (Mt) of product coal may be transported by rail in any year, consistent with the existing transport limits under DA 106-04-00. However, as Table 3-3 of the EIS indicates that the maximum coal production in any year of the Project would be 6.7 million tonnes, and given the capacity of coal stockpiles at the Maxwell Infrastructure site, is it likely that coal transport would reach 7 Mt per year throughout the life of the Project?*	The existing product coal stockpile area at the Maxwell Infrastructure would be extended to allow for better management of different product coal blends and to provide sufficient capacity during longwall moves. The combined capacity of the product coal stockpiles would increase from approximately 320,000 tonnes (t) to approximately 500,000 t. As the product stockpiles would have a combined capacity of approximately 0.5 million tonnes (Mt) and the Project would produce up to 6.7 million tonnes per annum (Mtpa) of product coal, it is possible that 7 Mt of product coal could be transported along the rail loop in a given year.
7	*Please confirm the approximate length of the site access road (ie total length from Thomas Mitchell drive to the MEA and length of the proposed extension).*	The total length of the site access road from Thomas Mitchell Drive to the mine entry area is approximately 11.4 kilometres (km). The total length of the proposed extension of the site access road, from Coal Lease 229 to the mine entry area, is approximately 4 km.
8	*Please confirm the status of easement negotiations with AGL regarding the section of the transport and services corridor within AGL-owned land.*	Malabar has a commercial agreement with AGL for the required land.

ID	Information Request	Response
	Figures	
9	*Please provide a high-resolution version of Figure 1-1 (Regional Location) from the EIS, preferably in JPEG format. Please include the locations of the Coolmore and Godolphin horse studs and Hollydene Estate on this figure.*	As requested, a revised version of Figure 1-1 showing the Coolmore Stud, Godolphin Woodlands Stud and Hollydene Estate has been provided to the Department of Planning, Industry and Environment.
10	*In Figure 3-1, there appear to be some geological structures (delineated with straight blue and brown lines) which are not identified in the legend. The Department requests clarification in this regard.*	The blue lines on Figure 3-1 represent 'known' igneous dykes and the brown lines represent 'known' faults. The brown lines enclosed by the blue lines represent the presence of 'probable' dykes in the vicinity of a 'known' fault structure.

ENCLOSURE 2

RESPONSE TO RESOURCES REGULATOR INFORMATION REQUESTS

Information Request	Response
Environment and Rehabilitation	
The Response to Submissions outlines that if no clear resolution to reduce the size of voids is reached by 2025 in relation to options for additional emplacement of rejects or overburden/interburden, Malabar would rehabilitate the South Void highwall North Void low wall in accordance with the Final Void Management Plan (FVMP). As the FVMP has been incorporated into the Mining Operations Plan under the condition of the mining leases, the Regulator considers that the rehabilitation commitments for the final voids as outlined in this document should be included into the Environmental Impact Statement.	Consistent with the Resources Regulator request, Section 8.3 of the Preliminary Rehabilitation and Mine Closure Strategy (Appendix U of the EIS) describes the rehabilitation commitments in the approved Final Void Management Plan. These are based on recommendations made by Coffey (2014) and include: • Drilling and highwall blasting to reduce highwall slope. Drill and blast inert material above equilibrium water level. Dozer push loose material from blasting into void to form a buttress against the highwall below equilibrium water level. • Capping of slope immediately above equilibrium water level with inert material. • Establishment of a bench immediately above the final void water level. • Construction of a bund along the top of the highwall to divert water off-site. • Rapid establishment of vegetation (including grasses, trees and shrubs) to manage erosion. • Daily inspection of highwalls by the Open Cut Examiner during rehabilitation activities and monthly inspection by the Environmental Superintendent following vegetation establishment. • Ongoing earthworks to manage/repair erosion. If, by the end of 2025, no clear resolution is reached with other mining and industrial facilities in the region, Malabar would rehabilitate the South Void highwall and North Void low wall in accordance with the above recommendations, unless otherwise agreed with the Resources Regulator. The North Void highwall works would be completed once the rail and CHPP infrastructure are no longer required.
Rehabilitation objectives need to be more specific to clarify outcomes in relation to the following: • *the target capability of the land that will be returned to pasture (e.g. land capability classification); and*	The objective for land within the Rehabilitation Area – Pasture (Domain C) during the growth medium development phase would target the pre-mining land capability classification of Class V – Low intensity grazing with occasional cultivation (shallow soils).
• *the target woodland communities that revegetation activities will be designed to achieve on site. Given the age of the existing rehabilitation areas, it is noted that it will not be the intent to create like-for-like vegetation communities. However, specificity of target communities should be provided to ensure that the woodlands that are established on site are consistent with local vegetation communities in terms of species composition as well as habitat value.*	A woodland or pasture seed mix would be used to rehabilitate any disturbed areas. The selection of vegetation would be consistent with the approved MOP and based on flora species endemic to the local area. Table 2-1 provides an example of the native woodland seed mix that would be used for the revegetation. The seed mix would also consist of a native grass mix of up to 2 kilograms per hectare (kg/ha) and a non-persistent cover crop such as Japanese Millet (during Autumn/Winter) or Oats (during Spring/Summer). Flora species endemic to the local area would be preferentially used for rehabilitation, except where seed or tubestock supply may be a limiting factor. In this case, other appropriate native species that have performed well in the region would also be considered. A provisional list of Plant Community Types (PCTs) that would be considered for on-site use in the rehabilitation activities is provided in Table 2-2. This list includes the PCTs that have been identified as occurring on-site and in the nearby surrounds in ecological investigations to date. The table also lists the key canopy and shrub species relevant to each of the relevant PCTs.

Information Request	Response
Malabar has included objectives for the Maxwell Solar Farm Infrastructure Area. As this project does not have a current development consent, the Regulator is of the view that the rehabilitation obligations under the existing consent will continue to apply. A change in the rehabilitation obligation for this area will be dependent upon whether a development consent is granted for the solar project.	In parallel to the Project, Malabar, through a subsidiary, is seeking approval to develop a solar farm on a portion of the existing Maxwell Infrastructure site (the Maxwell Solar Project) subject to a separate assessment and approval. As described in Section 4.5.3 of the Preliminary Rehabilitation and Mine Closure Strategy (Appendix U of the EIS), in the event the Maxwell Solar Project does not proceed, the existing waste emplacement area would be rehabilitated to pasture.
Mine Safety	
Mine Safety Operations within the Resources Regulator is responsible for ensuring mine operators manage the risk to worker health and safety though [sic] *compliance with the Work Health and Safety (Mines and Petroleum Sites Act 2013 and the subordinate mining legislation. In particular the effective management of risk associated with the principal hazards as specified in the Work Health and Safety (Mines and petroleum Sites) Regulation 2014.* *Mine Safety Operations have not identified any risk that would require comment in relation to this matter.*	Noted.

Table 2-1
Native Woodland Seed Mix

Woodland Species*	kg/ha
Japanese Millet (*Echinachloa esculenta)* (Spring/Summer)	7
Oats (*Avena Sativa*) (Spring/Summer)	7
Couch (*Cynodon dactylon*)	2
Creeping Saltbush (*Atriplex semibaccata)*	0.1
Yellow Burr-daisy (*Calotis lappulacea)*	0.1
Vittandinia cuneate/hispidula/muelleri	0.1
Berry Saltbush (*Einadia hastata*)	0.1
Ruby Saltbush (*Enchylaena tomentosa*)	0.1
Spikey-headed Mat-rush (*Lomandra longifolia)*	0.2
Purple Coral Pea (*Hardenbergia violacea*)	0.05
Smooth Darling-pea (*Swainsona galegifolia*)	0.05
Sticky Daisy-bush (*Olearia elliptica*)	0.1
Sifton Bush (*Cassinia arcuata*)	0.1
Fan Wattle (*Acacia amblygona*)	0.1
Western Silver Wattle (*Acacia decora*)	0.3
Sickle Wattle (*Acacia falcata*)	0.3
Silver-stemmed Wattle (*Acacia parvipinnula*)	0.2
Sticky Hop-bush (*Dodonaea viscosa*)	0.2
Black She-oak (*Allocasuarina littoralis*)	0.2
Bulloak (*Allocasuarina luehmannii*)	0.02
Hickory Wattle (*Acacia implexa*)	0.2
Broughton Willow (*Acacia salicina*)	0.2
Rough-barked Apple (*Angophora floribunda*)	0.1
Blakely's Red Gum (*Eucalyptus blakelyi*)	0.2
Narrow-leaved Ironbark (*Eucalyptus crebra*)	0.4
Grey Box (*Eucalyptus moluccana*)	0.3
Native Grass Mix	2.0

* Species mix adopted for rehabilitation activities in 2018. Seed mix may vary in future based on availability, cost or the outcomes of rehabilitation monitoring/trials.

kg/ha = kilograms per hectare.

Table 2-2
Provisional Plant Community Types

PCT ID	PCT Name	Formation	Class	Key Canopy Species	Key Shrub Species
1607	Blakely's Red Gum - Narrow-leaved Ironbark - Rough-barked Apple shrubby woodland of the upper Hunter	Dry Sclerophyll Forests (Shrub/grass sub-formation)	North-west Slopes Dry Sclerophyll Woodlands	*Eucalyptus blakelyi, E. beyeriana, E. moluccana, Angophora flonbunda, Brachychiton populneus* and *Ficus rubiginosa*	*Teucrium junceum, Enchylaena tomentosa* and *Breynia oblongifolia*
1607	Blakely's Red Gum - Narrow-leaved Ironbark - Rough-barked Apple shrubby woodland of the upper Hunter - DNG	Dry Sclerophyll Forests (Shrub/grass sub-formation)	North-west Slopes Dry Sclerophyll Woodlands	-	*Solanum cinereum* and *Maireana microphylla*
1606	White Box - Narrow-leaved Ironbark - Blakely's Red Gum shrubby open forest of the central and upper Hunter	Dry Sclerophyll Forests (Shrub/grass sub-formation)	North-west Slopes Dry Sclerophyll Woodlands	*Eucalyptus albens* and *Eucalyptus albens* x *moluccana*	*Teucrium junceum, Enchylaena tomentosa* and *Eremophila debilis*
1606	White Box - Narrow-leaved Ironbark - Blakely's Red Gum shrubby open forest of the central and upper Hunter - DNG	Dry Sclerophyll Forests (Shrub/grass sub-formation)	North-west Slopes Dry Sclerophyll Woodlands	-	*Maireana microphylla* and *Solanum campanulatum*
1655	Grey Box – Slaty Box shrub – grass woodland on sandstone slopes of the upper Hunter Valley and Sydney Basin	Dry Sclerophyll Forests (Shrubby sub-formation)	Western Slopes Dry Sclerophyll Forests	*Eucalyptus dawsonii, Allocasuarina luehmannii* and *Acacia salicina*	*Eremophila debilis* and *Enchylaena tomentosa*
1655	Grey Box – Slaty Box shrub – grass woodland on sandstone slopes of the upper Hunter Valley and Sydney Basin - DNG	Dry Sclerophyll Forests (Shrubby sub-formation)	Western Slopes Dry Sclerophyll Forests	-	*Enchylaena tomentosa*
1731	Swamp Oak – Weeping Grass grassy riparian forest of the Hunter Valley	Forested Wetlands	Coastal Swamp Forests	*Casuarina glauca* and *Notelaea microcarpa*	*Maireana microphylla,* forbs *Brunoniella australis* and *Cotula australis*
1598	Forest Red Gum grassy open forest on floodplains of the lower Hunter	Forested Wetlands	Coastal Floodplain Wetlands	*Eucalyptus tereticornis*	*Eremophila debilis, Breynia oblongiflora* and *Acacia falcata*
1692	Bull Oak grassy woodland of the central Hunter Valley	Grassy Woodlands	Coastal Valley Grassy Woodlands	*Allocasuarina luehmannii*	*Eremophila debilis*
1693	Yellow Box - Rough-barked Apple grassy woodland of the upper Hunter and Liverpool Plains	Grassy Woodlands	Western Slopes Grassy Woodlands	*Eucalyptus melliodora, Allocasuarina luehmannii* and *Angophora floribunda*	-
1693	Yellow Box - Rough-barked Apple grassy woodland of the upper Hunter and Liverpool Plains - DNG	Grassy Woodlands	Western Slopes Grassy Woodlands	-	-

Table 2-2 (Continued)
Provisional Plant Community Types

PCT ID	PCT Name	Formation	Class	Key Canopy Species	Key Shrub Species
201	Fuzzy Box woodland on alluvial brown loam soils mainly in the NSW South Western Slopes Bioregion	Grassy Woodlands	Western Slopes Grassy Woodlands	*Eucalyptus conica* and *Allocasuarina luehmannii*	-
201	Fuzzy Box woodland on alluvial brown loam soils mainly in the NSW South Western Slopes Bioregion - DNG	Grassy Woodlands	Western Slopes Grassy Woodlands	-	-
1691	Narrow-leaved Ironbark - Grey Box grassy woodland of the central and upper Hunter	Grassy Woodlands	Coastal Valley Grassy Woodlands	*Eucalyptus moluccana, Allocasuarina luehmannii* and *Acacia salicina*	*Eremophila debilis, Enchylaena tomentosa* and *Maireana microphylla*
1691	Narrow-leaved Ironbark - Grey Box grassy woodland of the central and upper Hunter - DNG	Grassy Woodlands	Coastal Valley Grassy Woodlands	-	*Eremophila debilis*
116	Weeping Myall - Coobah - Scrub Wilga shrubland of the Hunter Valley	Grassy Woodlands	Coastal Valley Grassy Woodlands	*Acacia pendula*	*Maireana microphylla* and *Enchylaena tomentosa*
1604	Narrow-leaved Ironbark - Grey Box - Spotted Gum shrub - grass woodland of the central and lower Hunter	Grassy Woodlands	Coastal Valley Grassy Woodlands	*Eucalyptus moluccana, Corymbia maculata* and *Allocasuarina luehmannii*	*Eremophila debilis, Bursaria spinosa, Lissanthe strigosa* and *Solanum cinereum*
1604	Narrow-leaved Ironbark - Grey Box - Spotted Gum shrub - grass woodland of the central and lower Hunter - DNG	Grassy Woodlands	Coastal Valley Grassy Woodlands	-	*Solanum cinereum*