

**RESPONSE TO RIX'S CREEK IPCN QUESTIONS**  
**Arising from Briefing held 25 May 2018**

1. *Confirmation from relevant agencies that the Department has adequately responded to their submissions within the Preliminary Assessment Report (PAR).*

**NSW Health**

The Department has contacted NSW Health regarding the findings of the Preliminary Assessment Report and is still awaiting its response. Notwithstanding, the Department has again reviewed NSW Health's comments and how they were addressed in the PAR. A summary of Health's submissions is provided in **Table 1** below.

**Table 1: NSW Health Comments**

<b>Correspondence</b>	<b>NSW Health Comments</b>
<p>3 December 2015 re: EIS</p>	<p><i>It is important that the EIS should address the likely future air quality standard for annual average PM10 of between 20 and 25 µg/m3 and annual average PM2.5 of 8 µg/m3</i></p> <p><i>While the EIS states (on page 102) that the "Air quality impacts were assessed having regard to the World Health Organisation (WHO) Air Quality Guidelines (2005) for particulate matter", the EIS did not use the annual goal of 20 µg/m3 recommended by WHO in the document. Our focus in this review is on average annual particulate levels because this measure is most predictive of health impacts and PM2.5 is considered to have more significant health impacts than PM10.</i></p> <p><i>Displaying a 20 µg/m3 and 25 µg/m3 contour (as relevant to the goal promoted in the variation to the Australian NEPM) would be of great use in assessing the impact on the nearby settlements such as McDougalls Hill and Singleton Heights.</i></p> <p><i>The intensive mining in this area will likely exceed current and particularly future air quality goals making it difficult to argue that increase particulate emissions are acceptable from a cumulative impact perspective.</i></p> <p><i>There are multiple and significant impacts on receptors 170 – 177. The EIS appears to dismiss these impacts because the properties are eligible for acquisition, however, rights to acquisition do not diminish or negate the cumulative impact to these communities (page 111).</i></p>
<p>8 December 2016 re: Original RTS</p>	<p><i>The Proponent states that the project would result in a small incremental increase to PM and that this increase is acceptable. The incremental and cumulative impacts of a project are both of importance. As the air quality of this area is impacted by other sources, the addition of this project could result in levels of PM that would make it difficult to meet NEPM goals in the area.</i></p> <p><i>It is still important to consider NEPM guideline levels as they relate to the cumulative impacts an area experiences and reflects the resultant health risks to the community.</i></p>

Correspondence	NSW Health Comments
	<p data-bbox="555 232 1375 456"><i>We appreciate the guidance in identifying the more detailed dust contour maps in Appendix L. Figure E26 in Appendix L provides the most detailed cumulative annual average PM10 predictions for the highest impact year of 2023. The areas highlighted in orange lines indicate significant population areas predicted to lie between 20 and 30 µg/m3. This suggests the annual PM10 emissions will exceed the current NEPM of 25 µg/m3</i></p> <p data-bbox="555 495 1375 613"><i>We acknowledge the response that health impacts are predominantly driven by PM2.5 rather than PM10 effects, however, there is emerging evidence that the long term exposure to the coarse fraction 2.5-10 can have respiratory impacts.</i></p>

The Department’s assessment considered the Project’s predicted air quality impacts against the current NEPM, and in anticipation of a revised VLAMP. There were no receivers that were predicted to experience annual average PM10 impacts between 25 and 30 µg/m3. Some receivers are predicted to experience impacts between 20 and 25 µg/m3. This long-term target is not yet reflected in the NEPM or the EPA’s Approved Methods. Although there is a PM10 goal of 20 µg/m3 in the WHO guidelines, these guidelines also state that the use of the PM2.5 guideline value of 10 µg/m3 is preferred.

Some receivers were predicted to experience exceedances of the current NEPM annual average PM2.5 criteria of 8 µg/m3. However, these receivers were already considered for mitigation and acquisition based on other predicted air quality impacts.

It is also important to note that the predictions made in the AQIA are based on the originally proposed production rate of 4.5 Mtpa as opposed to the revised 3.6 Mtpa. Ultimately, the PM impacts are likely to be less than predicted.

The Revised RTS was provided to NSW Health in December 2017 for comment. No comment was received.

The Department considers that NSW Health’s submissions have been adequately addressed in the PAR.

### Other Agencies

The Department sent the Revised RTS to agencies and received comments from DoI, DRG, EPA, Heritage Council, OEH and RMS. No continuing or additional concerns or objections were raised.

Notably, DoI, DRG and OEH advised that all previous issues had been adequately addressed. Several agencies provided recommendations, many of which would be relevant to drafting conditions of consent for the Project. These recommendations are outlined in Section 5.1 of the PAR.

2. Predicted Exceedances of PSNLs (as against Predicted Exceedances of ANC)

See the following table, compiled by the Department based on Tables 4.7 & 4.8 in the Environmental Noise Assessment (EIS Appendix M).w

**Table 2: Predicted operational noise levels under noise enhancing weather conditions (90<sup>th</sup> percentile)**

NAG	Current criteria L <sub>A10</sub> dB(A) day/night	PSNL L <sub>Aeq15 minute</sub> dB(A) day/evening/ night	Achievable criteria L <sub>Aeq15 minute</sub> dB(A) all periods	2017				2020				2023				2026				
				Day	Eve	Night	Night 2	Day	Eve	Night	Night 2	Day	Eve	Night	Night 2	Day	Eve	Night	Night 2	
A*	47/45	38/38/38	42	25- 40	27- 41	28- 42	25- 38	26- 39	23- 39	24- 40	22- 38	22- 38	22- 38	23- 39	23- 39	24- 38	22- 38	22- 38	22- 39	22- 38
B*	47/45	43/42/37	42	42- 43	42- 43	44- 45	37- 40	40- 41	40- 41	42- 43	36- 40	39- 40	38- 40	40- 42	38- 41	39- 40	39- 40	41- 42	39- 42	39- 41
C	47/45	43/42/37	42	33- 44	31- 44	33- 46	26- 40	31- 41	27- 42	29- 44	23- 41	28- 40	25- 40	26- 42	25- 41	30- 40	27- 40	28- 42	25- 41	25- 41
D	-	36/36/35	40	36- 42	34- 43	35- 43	26- 35	32- 39	33- 43	34- 44	24- 37	30- 38	29- 39	30- 40	27- 38	30- 38	31- 39	32- 39	29- 38	29- 38
E	-	36/36/35	40	24- 39	25- 40	29- 41	16- 33	21- 38	21- 39	23- 39	15- 34	23- 36	18- 36	20- 37	18- 35	23- 36	22- 36	27- 37	19- 35	19- 35
F	-	36/36/35	40	34- 38	36- 39	37- 39	23- 29	31- 36	34- 37	35- 38	23- 31	30- 34	29- 33	30- 33	25- 30	29- 34	29- 34	30- 35	25- 32	25- 32
G	-	39/39/37	40	32- 45	35- 46	36- 46	21- 40	31- 43	24- 42	25- 44	22- 40	28- 41	25- 41	25- 42	22- 40	25- 40	25- 40	26- 41	22- 39	22- 39
H	-	38/38/37	40	31- 44	36- 44	37- 45	29- 39	27- 42	28- 42	28- 42	23- 39	26- 39	26- 39	26- 40	22- 38	24- 38	25- 38	25- 38	22- 37	22- 37
I	-	37/37/37	40	34- 39	38- 40	37- 40	25- 33	33- 38	30- 36	30- 35	27- 33	27- 33	26- 33	26- 32	21- 30	29- 34	29- 34	30- 34	22- 32	22- 32
J	-	39/39/37	40	38- 47	42- 48	42- 49	36- 42	35- 45	31- 44	31- 44	27- 42	30- 42	29- 40	29- 41	25- 38	31- 42	30- 41	31- 42	26- 39	26- 39
K	42/42	35/35/35	40	37- 45	41- 47	41- 47	31- 40	36- 42	38- 43	36- 43	33- 37	28- 36	33- 37	31- 38	29- 33	32- 39	33- 37	32- 38	27- 33	27- 33
L	-	37/37/37	40	35- 40	36- 41	33- 39	20- 33	33- 38	29- 38	27- 35	19- 33	25- 36	26- 39	23- 35	20- 34	24- 35	22- 37	19- 33	16- 32	16- 32
M	-	39/39/38	40	37- 38	40- 41	39- 40	27- 30	36- 38	33- 35	31- 34	24- 30	28- 32	34- 34	29- 33	28- 32	28- 33	28- 32	26- 31	23- 30	23- 30
N	-	45/42/39	40	33- 40	39- 46	38- 46	26- 35	31- 38	31- 38	31- 38	27- 36	25- 37	27- 39	26- 39	23- 38	29- 37	25- 39	24- 39	23- 38	23- 38
O	-	35/35/35	40	35- 38	38- 42	39- 43	31- 34	33- 36	33- 37	34- 38	32- 35	33- 35	32- 35	34- 37	33- 36	32- 35	32- 35	34- 36	33- 36	33- 36

Note \* Predictions for NAGs A and B are based on the use of the RCN rail option (ie Table 4.8 in the ENA), as proposed in the RTS report.

**Legend**

	Comply with PSNL and Achievable Criteria
	Exceed PSNL but comply with Achievable Criteria
	Exceed PSNL and Achievable Criteria

3. *Construction vs operational noise criteria for the construction of the cut and cover tunnel?*

Bloomfield has advised the Department that construction noise from this site would not be audible over the mine's general operational noise. Because of this, no quantitative assessment was provided in the EIS. The Department considers that operational noise criteria could be applied to construction noise associated with the tunnel. This could be further discussed with Bloomfield during drafting of conditions.

4. *OEH's views on Bloomfield's proposed staged approach to offsetting*

OEH has indicated verbally to the Department that further information would need to be provided for its full consideration of Bloomfield's proposed staged approach to offsetting. The offset strategy would need to be clearly identified (only options are provided at this stage), as well as the proposed proportions of credit retirement for each stage of development and offsetting. The Department will seek further information from Bloomfield before finalising its assessment.

5. *Provide higher resolution figure for Figures 13 and 14 of PAR.*

Refer to Figures B4 and B5 in Appendix B of Bloomfield's Revised Biodiversity Assessment 2018.

6. *Do the land-based offsets identified in Table 10 of the PAR and Table 5.1 of the Revised Biodiversity Assessment (March 2018), include the 118.3 ha of land previously designated as the offset for Mod 5 (to be surrendered)?*

The land-based offset areas identified includes the great majority of the offset areas identified for Mod 5. See **Figure 1** below. The purple areas indicate the identified land-based offsets under SSD 6300, the white outlines show the offset areas identified for Mod 5. Please note that the boundaries in this Figure are indicative only.

7. *Final landform – was there any discussion about reducing the size of the final void?*

Overall, the Department was satisfied that the final void design struck an appropriate balance between minimising the size of the void and retaining gentle slopes to ensure public safety and long-term landform stability. The Department did not ask Bloomfield to further consider reducing the void as it would likely be at a cost to these two benefits. Please refer to the Department's answer on this issue as presented in the Public Hearing.

8. *Clarification of water issues related to the proposed approach of the creek running into Void 1.*

Bloomfield is not proposing to direct Rix's Creek into the sole anticipated final void (in Pit 3). Figure 16 in the PAR shows a contour drainage line along the southwest boundary of that void which is a clean water diversion to avoid water running into the void. This may not be fully clear as the contour heights are not well identified.

However, the proposed final landform in the Pit 1 area includes a 17-ha drainage depression and associated drainage lines which would form part of the upper tributaries of Rix's Creek.

Given that the depression would be constructed within areas of backfilling, the Department sought further clarification from Bloomfield as to how it would ensure that the depression drains freely to Rix's Creek and prevent surface water from seeping into the spoil. Bloomfield advised that drainage lines would be lined with clay and compacted before final topsoil and

pasture sowing is undertaken. All drainage structures would also be subject to an ongoing monitoring and maintenance program. Bloomfield noted that these rehabilitation methods have been used successfully at Rix's Creek since 1990.

The IPCN may wish to discuss this matter further with Bloomfield.

*9. Triangular-shaped project boundary at the top of the PAR's Figure 16.*

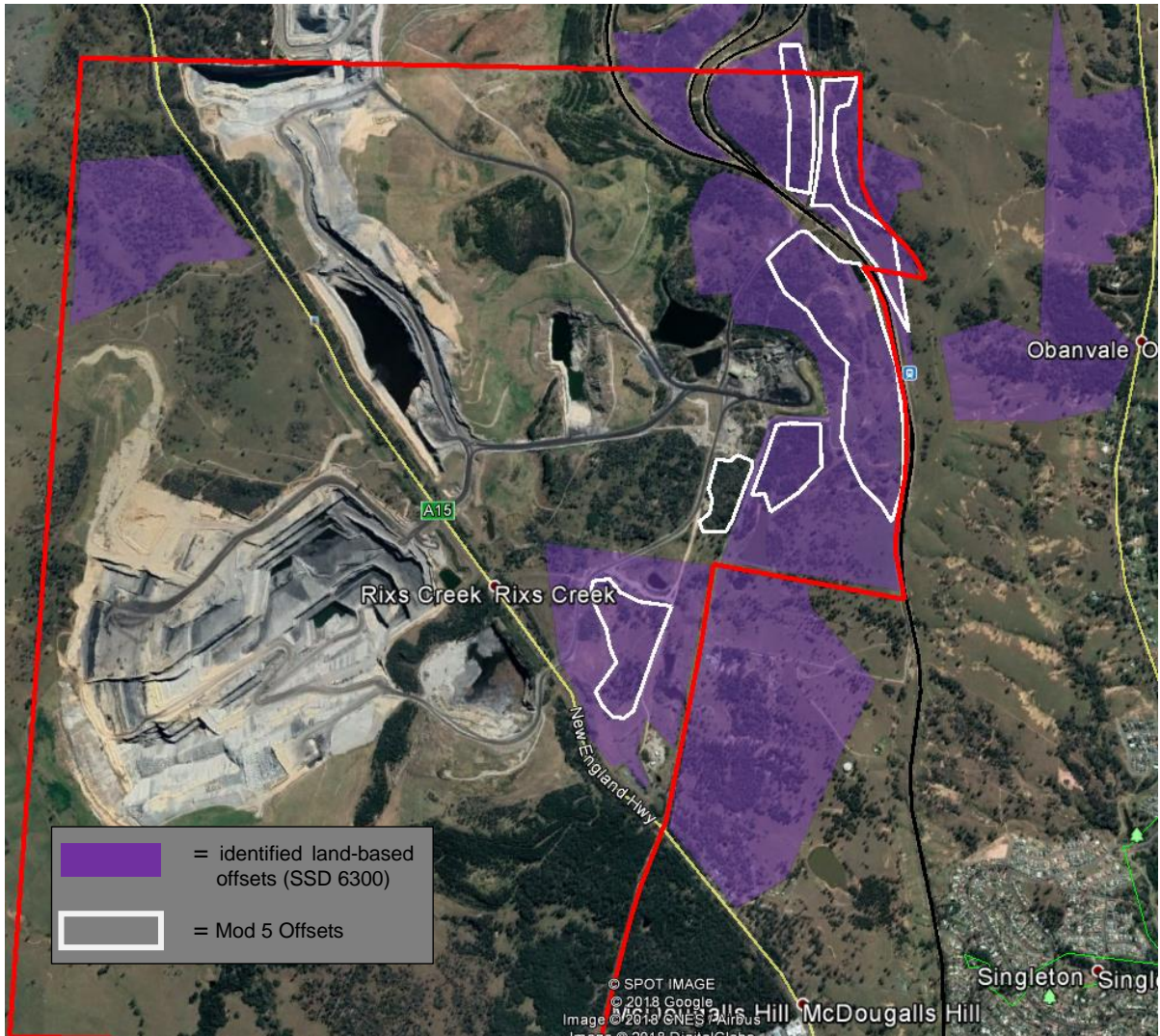
As part of this application, Bloomfield is seeking to extend its project boundary to include the Rix's Creek rail loading facilities (see Figure 4 in the PAR). Bloomfield is proposing the surrender of the Mod 5 approval and is therefore seeking to clarify its continued use of its rail loading facilities on the Rix's Creek North rail loop. Rix's Creek North uses separate rail loading facilities which are located at the northern point of this rail loop. Although the Rix's Creek rail loading facilities are located outside Rix's Creek's mining lease, they are located within the Rix's Creek North mining lease.

*10. Commonwealth – is re-referral required now that impacts to CHVEFW has increased from 19 ha to 47 ha.*

The listing of CHVEFW as a CEEC under the EPBC Act took place after the project was declared by the Commonwealth to be not a controlled action (NCA). Commonwealth officers have advised the Department that the NCA declaration is determinative and that Bloomfield does not need to refer its proposed action to the Commonwealth for review and a second determination.

Therefore, the change in area does not affect the referral.

-----



**Figure 1:** Comparison of SSD identified offset areas vs Mod 5 offset areas