

ADDENDUM REPORT - AIR QUALITY IMPACTS IN CAMBERWELL

Introduction

The Rix's Creek South Continuation of Mining Project (the project) proposes to expand and continue open-cut mining operations at Rix's Creek Mine (more recently referred to as 'Rix's Creek South Mine') for an additional 21 years. The Project is located approximately 5 kilometres northwest of the township of Singleton and is owned and operated by Bloomfield Collieries Pty Limited (Bloomfield).

On 19 June 2019, the Department of Planning, Industry and Environment (the Department) completed its Final Assessment Report for the Project. The application is currently before the Independent Planning Commission of NSW (the Commission) for determination.

Reason for Addendum Report

Following the completion of the Department's final assessment report, Bloomfield prepared an Air Quality Addendum Report (AQAR) to address potential impacts at a number of sensitive receivers within Camberwell village. Bloomfield provided reports entitled *Air Quality Assessment of Receptors at Camberwell Village*, prepared by Todoroski Air Sciences on 9 August 2019 (as amended 2 September 2019) (see **Attachments 2A-B**) and *Rix's Creek Mine Camberwell Residence Summary for the Bloomfield Group* prepared by Hansen Bailey on 20 August 2019 (see **Attachment 2C**). These documents are collectively referred to as Bloomfield's AQAR. The AQAR:

- updates the existing air quality model for annual average PM₁₀ and PM_{2.5};
- calculates predictions and tabulates these for each receiver for the three mine plan options;
- includes a table for the company's preferred mine plan option (ie Option 2) which attributes the proportional contributions for each scenario to the various nearby individual coal mines;
- includes an overarching report providing an assessment of 25% impact on vacant land on a contemporary land ownership plan and considering existing acquisition and mitigation rights; and
- provides a combined summary of proportional predictions for all such receivers against the *NSW Voluntary Land Acquisition and Mitigation Policy 2018 (VLAMP)*.

AQAR Findings

Bloomfield's AQAR identifies five private residences and 14 vacant landholdings within Camberwell village requiring assessment in respect of the project. These properties are depicted in **Figure 1**.

The AQAR indicates that each of the five private residences are predicted to experience exceedances of the cumulative annual average PM₁₀ criterion (ie 25 µ/m³). They are also predicted to experience cumulative annual average PM_{2.5} levels of between 7.5 and 7.7 µ/m³. The Department notes that these levels are all close to, but below, the annual average PM_{2.5} criterion of 8 µ/m³.

Additionally, all 14 identified vacant land holdings are predicted to experience exceedances of the cumulative annual average PM₁₀ criterion over greater than 25% of the landholding. Ten of these land parcels are contiguous lots owned by three of the identified private receivers (N88, N91 and N103). On this basis, all receivers and land-holdings identified in the AQAR are eligible for acquisition rights in accordance with the VLAMP.

The Department notes that this assessment has been undertaken based on the consideration of modelled air quality impacts associated with Option 2, which is consistent with the approach contained in the Department's Final Assessment Report. However, the Department also notes that Bloomfield's response of 5 February 2019 contained revised numeric predictions for a representative worst-case air quality scenario (2023) and that this modelling indicates that Option 1 is likely to result in virtually identical PM_{2.5} impacts and very similar PM₁₀ impacts as a result of the project.

Discussion

Most of the residences and vacant landholdings in Camberwell were granted acquisition rights under the Ashton South East Open Cut (SEOC) Project in April 2015 (MP 08_0182). However, these rights are primarily in respect of potential noise impacts and they predate the application in 2016 of the lower air quality criteria under the EPA's *Approved Methods for the Modelling and Assessment of Air Pollution in NSW (2016)* and the amended VLAMP. Further, they cannot be activated until MP 08_0182 is taken up (via physical commencement) by the project owner (Yancoal). There continues to be a degree of uncertainty as to when or if this will occur.



Figure 1: Identified receivers and vacant landholdings in Camberwell

Consequently, many of the residences and vacant landholdings in Camberwell have not had acquisition rights in respect of air quality impacts until the recent determination of Modification 2 to the Mount Owen Continued Operations Project (SSD 5850 MOD 2) on 4 September 2019. Mount Owen is the first mine near Camberwell to be given the responsibility of acquiring most of these properties if the owner so requests.

However, Mount Owen is not the only contributor (or indeed the major contributor) to air quality impacts in Camberwell. **Table 1**, drawn from the AQAR, identifies the percentage contribution of annual average PM₁₀ from background and all approved coal mine dust sources under the Option 2 scenario at the five

identified residences in Camberwell. The AQAR also modelled PM₁₀ impacts at the five residences to exclude emissions from the Ashton SEOC project, in case this project does not commence. In this scenario, the key PM₁₀ contributors above Rix’s Creek South Option 2 remain unchanged.

Table 1: Annual Average PM10 dust source contribution

Receptors	N88	N91	N103	N161	N105
Source	Annual average PM₁₀ (% of total)				
Background	40	39	38	38	38
Rix’s Creek North ^	17	18	17	19	21
Glendell*	14	12	8	12	12
Rix’s Creek South Option 2*	11	11	14	12	11
Ravensworth Coal Mine	9	10	12	10	9
Ashton SEOC	4	4	6	4	3
Mt Owen *	2	2	2	2	2
Ravensworth East	2	2	2	2	2
Hunter Valley Operations	1	1	1	1	1
Total	Annual average PM₁₀ (µg/m³)				
Total dust level (µg/m ³)	28.9	29.8	30.3	30.3	30.5

* Operations with an “active” planning approval.

^Includes Integra Underground.

Recommendation

Table 2 provides a summary of all identified residences and vacant landholdings in Camberwell, the predicted annual average PM₁₀ impacts, as well as existing and proposed acquisition rights. The Department recommends that acquisition and mitigation rights are extended under the project to all residences and vacant landholdings identified in **Table 2**.

However, the Department recommends that the conditions are framed in such a manner that any acquisition rights afforded under the Ashton SEOC Project would take priority in the event that that development consent is taken up. Further, the acquisition rights available for the Camberwell properties under Mount Owen’s consent SSD 5850 should ‘fall behind’ those to be included in any Rix’s Creek South consent, which causes a greater impact in Camberwell.

In the event that the Ashton SEOC Project does not proceed, obligations under the VLAMP would fall to mines which are nearer to Camberwell that are predicted to have greater contributions to cumulative annual average PM₁₀ levels.

The Department considers that this approach would provide protection for all affected landowners in Camberwell and also provide for the maximum achievable measure of equity in respect of the major local mine-related sources of PM emissions.

Critically, any landowner who wishes to sell their property already has an opportunity to do so from the date of approval of Modification 2 to the Mount Owen Continued Operations Project (SSD 5850 MOD 2). No landowner will have to wait, either for the commencement of the Ashton SEOC Project, or for any other consent modification or determination (including that for Rix’s Creek South).

The Department has revised the draft conditions of consent for the project to reflect this position. The draft conditions have also been updated to reflect recent amendments to standard conditions.

Bloomfield has raised no objections to the recommended conditions of consent, including the proposed provision of additional acquisition rights to residents in Camberwell.

Table 2: Summary of acquisition and mitigation rights under the VLAMP

Receiver	Lot / DP	Receiver Type	Annual Average PM ₁₀ prediction	Current acquisition and mitigation rights	Acquisition and mitigation rights recommended under the Project?
N88	103 / 852484	Residence	28.9 (µ/m ³)	Acquisition & Mitigation - Ashton SEOC	Yes – only if acquisition is not reasonably achievable under Ashton SEOC, Rix’s Creek North and Glendell Mine.
N211	104 / 852484	Vacant Land (contiguous to N88)	Exceedance over more than 25% of land	Acquisition – Ashton SEOC	Yes – only if acquisition is not reasonably achievable under Ashton SEOC, Rix’s Creek North and Glendell Mine.
N91	102 / 852484	Residence	29.8 (µ/m ³)	Acquisition & Mitigation - Ashton SEOC Mitigation – Glendell and Rix’s Creek North	Yes – only if acquisition is not reasonably achievable under Ashton SEOC, Rix’s Creek North and Glendell Mine.
N212	106 / 855187	Vacant Land (contiguous to N91)	Exceedance over more than 25% of land	Acquisition – Ashton SEOC	Yes – only if acquisition is not reasonably achievable under Ashton SEOC, Rix’s Creek North and Glendell Mine.
N161	105 / 855187	Residence	30.3 (µ/m ³)	Acquisition & Mitigation - Ashton SEOC	Yes – only if acquisition is not reasonably achievable under Ashton SEOC and Rix’s Creek North.
N172*	1 / 758214	Residence (uninhabitable)	Exceedance over more than 25% of land	Acquisition - Ashton SEOC - <u>noise only</u> Mitigation - Ashton SEOC Project, Glendell and Rix’s Creek North	Yes - only if acquisition is not reasonably achievable under Rix’s Creek North.
	2 / 758214	Vacant Land	Exceedance over more than 25% of land	Acquisition - Ashton SEOC – <u>noise trigger only</u>	Yes - only if acquisition is not reasonably achievable under Rix’s Creek North.
N103	4 / 758214	Residence	30.3 (µ/m ³)	Acquisition & Mitigation - Ashton SEOC	Yes – only if acquisition is not reasonably achievable under Ashton SEOC and Rix’s Creek North.
N213	1 / 248748	Vacant Land (contiguous to N103)	Exceedance over more than 25% of land	Acquisition - Ashton SEOC	Yes – only if acquisition is not reasonably achievable under Ashton SEOC and Rix’s Creek North.
N214	5 / 758214	Vacant Land (contiguous to N103)	Exceedance over more than 25% of land	Acquisition - Ashton SEOC	Yes – only if acquisition is not reasonably achievable under Ashton SEOC and Rix’s Creek North.
N215	6 / 758214	Vacant Land (contiguous to N103)	Exceedance over more than 25% of land	Acquisition - Ashton SEOC	Yes – only if acquisition is not reasonably achievable under Ashton SEOC and Rix’s Creek North.
N216	7 / 758214	Vacant Land (contiguous to N103)	Exceedance over more than 25% of land	Acquisition - Ashton SEOC	Yes – only if acquisition is not reasonably achievable under Ashton SEOC and Rix’s Creek North.

Receiver	Lot / DP	Receiver Type	Annual Average PM ₁₀ prediction	Current acquisition and mitigation rights	Acquisition and mitigation rights recommended under the Project?
N217	3 / 758214	Vacant Land (contiguous to N103)	Exceedance over more than 25% of land	Acquisition - Ashton SEOC	Yes – only if acquisition is not reasonably achievable under Ashton SEOC and Rix's Creek North.
N218	8 / 758164	Vacant Land (contiguous to N103)	Exceedance over more than 25% of land	Acquisition - Ashton SEOC	Yes – only if acquisition is not reasonably achievable under Ashton SEOC and Rix's Creek North.
N219	2 / 758214	Vacant Land (contiguous to N103)	Exceedance over more than 25% of land	Acquisition - Ashton SEOC	Yes – only if acquisition is not reasonably achievable under Ashton SEOC and Rix's Creek North.
N220	9 / 758214	Vacant Land (contiguous to N103)	Exceedance over more than 25% of land	Acquisition - Ashton SEOC	Yes – only if acquisition is not reasonably achievable under Ashton SEOC and Rix's Creek North.
N190	4 / 1166047	Vacant Land	Exceedance over more than 25% of land	Acquisition Ashton SEOC - <u>noise only</u>	Yes - only if acquisition is not reasonably achievable under Rix's Creek North.
N191	5 / 1166047	Vacant Land	Exceedance over more than 25% of land	Acquisition Ashton SEOC - <u>noise only</u>	Yes - only if acquisition is not reasonably achievable under Rix's Creek North.
N105	3 / 1088108	Residence	30.5 (µ/m ³)	Alternate Accommodation and acquisition <u>noise only</u> – Ashton SEOC Mitigation – Ashton SEOC, Glendell and Rix's Creek North	Yes – only if acquisition is not reasonably achievable under Rix's Creek North and Glendell Mine.

Note: Same coloured cells indicate that residence/landholding has the same landowner

**Receiver N172 consists of two adjoining lots, with the same owner. This land is leased to Ashton Coal Pty Ltd until February 2020. One of these lots (Lot 1) has an uninhabitable dwelling. Bloomfield did not provide individual predictions for this residence. However, it was identified that this receiver would be eligible for acquisition rights due to annual average PM₁₀ exceedances over more than 25% of the lots.*