

22 May 2020

Ms Genevieve Lucas
Team Leader
Resource Assessments
Department of Planning, Industry and Environment
GPO Box 39
Sydney NSW 2001

Dear Gen

Lidsdale Siding MOD 3 – Submissions Report

Lidsdale Siding (the facility) is a rail loading facility which automates the transfer and dispatch of coal from Centennial Coal Pty Limited's (Centennial's) Western Coal Services (WCS) Project to domestic and international markets via rail. The facility is located approximately 500 metres (m) north of Wallerawang and approximately 9 kilometres (km) north-west of Lithgow.

The facility operates under Development Consent 08_0223 (the consent). The consent (as modified) allows coal to be received and dispatched from the facility by rail, and the transfer of coal to the WCS site for use at Mount Piper Power Station (MPPS) in emergency situations. A trigger action response plan (TARP) is used to define the emergency situations when rail unloading activities at the facility are required.

Ivanhoe Coal is seeking to modify the consent, pursuant to Section 4.55(1A) of the EP&A Act, to remove the TARP, thereby allowing the facility to receive coal outside of the emergency situations defined in the TARP. A Modification Report was submitted to the Department of Planning, Industry and Environment to support the modification application.

Advice has been received from four (4) government authorities on the modification application comprising:

- Transport for NSW;
- Environment Protection Authority;
- Lithgow City Council; and
- WaterNSW.

The advice received from the Environment Protection Authority requested further information and clarification on the noise impact assessment prepared to support the Modification Report. A detailed response to the matters raised by the Environment Protection Authority is provided as

Attachment 1 to this letter. No further matters were raised in submissions from the other government authorities that require a response.

If you have any questions or require any further information in regard to this matter, please contact me on my mobile, 0407 207 530, or email james.wearne@centennialcoal.com.au.

Yours sincerely



James Wearne
Group Manager Approvals

Attachments:

- **Attachment 1** – Response to EPA Submission

Attachment 1

Response to EPA Submission

Memorandum



Level 3, 175 Scott Street
Newcastle NSW 2300

T 02 4907 4800

E info@emmconsulting.com.au

www.emmconsulting.com.au

21 May 2020

To: James Wearne
From: David Richards
Subject: J200173 - Lidsdale Siding Modification 3 - Response to submissions

Dear James,

1 Overview

Lidsdale Siding (the facility) is a rail loading facility which automates the transfer and dispatch of coal from Centennial Coal Pty Limited's (Centennial's) Western Coal Services (WCS) Project to domestic and international markets via rail. The facility operates under Development Consent 08_0223 (the consent) which was granted in 2013 under Part 3A of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) by the then Minister for Planning and Infrastructure. The original consent has since been declared a State significant development (SSD) under clause 6 of Schedule 2 of the NSW Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017. The facility is owned and operated by Ivanhoe Coal Pty Ltd (Ivanhoe Coal), a subsidiary of Centennial. The consent has been modified twice.

The consent (as modified) allows coal to be received and dispatched from the facility by rail, and the transfer of coal to the WCS site for use at Mount Piper Power Station (MPPS) in emergency situations. A trigger action response plan (TARP) is used to define the emergency situations when rail unloading activities at the facility are required.

Ivanhoe Coal is seeking to modify the consent, pursuant to Section 4.55(1A) of the EP&A Act, to remove the TARP, thereby allowing the facility to receive coal outside of the emergency situations defined in the TARP. Trains will continue to be unloaded utilising the approved temporary unloading infrastructure.

This memorandum provides EMM Consulting Pty Limited's (EMM's) consolidated response to the input provided by NSW Environment Protection Authority (EPA) on the Lidsdale Siding Modification 3 Modification Report in their letter dated 12 May 2020.

2 Project justification

2.1 Comment from EPA

The EPA notes that the justification for development consent Mod 1 was due to continued lower yields from the Springvale Mine. It is understood that the approval of this mod together with the modification to Clarence Colliery's development consent (DA 504-00) resulted in coal being transferred to the Mount Piper Power Station (MPPS) from Airly and Clarence Mines to alleviate the yield issues related to the Springvale Mine.

Subsequently, development consent 08_0223-Mod 2 (Mod 2) was approved on 14 October 2019 which allowed an increase in the number of laden trains being unloaded at the premises. This modification enabled an increase in the volume of coal that can be unloaded at, and transferred from, the premises to MPPS. The Lidsdale Siding Modification report for the modification to development consent September 2019 (the Mod 2 Report) stated at

section 1.5, page 6: “The proposed modification will allow for temporary, short-term increases in coal transfer on a campaign basis to address coal supply shortfalls at MPPS.”

The Lidsdale Siding Modification report for the modification to development consent April 2020 (the Mod 3 Report) section 1.5, page 6 states: “The proposed modification would allow an ongoing supply of supplementary coal to MPPS and remove risks associated with coal supplies being provided by a single mining operation. The continued supply of coal from the facility will help support the ongoing and efficient operation of MPPS and continued supply of electricity to NSW.”

It is reasonable to assume that the intent of Mod 1 and Mod 2 was to ensure that coal could be supplied to MPPS from multiple sources. The Mod 3 Report does not provide any evidence which indicates concerns remain regarding supply from the processes established through Mod 1 and Mod 2 and as such further justification for Mod 3 is recommended.

2.2 Response

As described in Section 1.1 of *Lidsdale Siding – Modification Report for the Modification to Development Consent 08_0223* (EMM 2020) (herein referred to as the Mod 3 MR), the consent currently allows coal to be received and dispatched from the facility by rail, and the transfer of coal to the Western Coal Services (WCS) site for use at Mount Piper Power Station (MPPS) in emergency situations only.

A trigger action response plan (TARP) is used to define the emergency situations when rail unloading activities at the facility can occur, ie when coal supplies at MPPS are insufficient to ensure ongoing power generation. The TARP was developed as part of Modification 1 to 08_0223 and outlines the necessary actions to be undertaken prior to the commencement of rail unloading activities at the facility (refer Table 2.1).

Table 2.1 Trigger action response plan for rail unloading activities

Operations	Trigger	Action and response
Typical (ie rail loading)	Coal stockpiles at MPPS are greater than 400,000 t.	No action or response required – continue typical operations.
	Forecast coal stockpiles expected to remain at, or above, 400,000 t.	No action or response required – continue typical operations.
Emergency (ie rail unloading required)	Coal stockpiles at MPPS are forecast to fall below 400,000 t for two consecutive months.	Procure temporary rail unloading infrastructure and commence rail unloading activities. Notify DPE of intent to commence temporary rail unloading activities.

Notes: Rail unloading activities will continue until coal stockpiles at MPPS are greater than 400,000 t and the forecast coal stockpile is likely to remain above 400,000 t for a six month period.

The removal of the TARP will allow the facility to receive coal outside of the emergency situations defined in Table 2.1 and will remove the linkages between the receipt of coal at the facility and stockpile levels on-site at MPPS. In doing so, the facility will become part of the ongoing supply chain for MPPS rather than being an option for alternative coal delivery during emergency situations only.

Given the variability and uncertainty that can be encountered during underground coal mining activities, the ongoing supply of coal to MPPS from the facility will help to remove risks associated with ongoing coal supplies being provided by a single mining operation (ie Springvale Mine). As noted above, at present, this can only occur during emergency situations.

The continued use of the facility for distribution of coal will also help avoid a requirement for road haulage of coal from other operations in NSW. The additional heavy vehicle traffic required to meet coal supply demand for MPPS would be significant and it is anticipated that associated impacts to the local and regional road network are unlikely to be considered acceptable by affected local communities or regulatory stakeholders.

The continued supply of coal from the facility will help support the ongoing and efficient operation of MPPS and continued supply of electricity to NSW. By removing the TARP, the facility will be able to continue to supply coal to MPPS and help build sufficient coal stockpiles on-site at MPPS thereby providing certainty for ongoing electricity supply during periods of increased demand.

3 Noise

3.1 Requirement to consider mitigation

3.1.1 Comment from EPA

The predicted noise levels exceed both the site-specific Project Noise Trigger Levels (PNTLs) and the established EPL noise limits at the majority of the residential receivers. Step 5 under the assessment process in Section 6.1.1 of the Noise Policy for Industry (NPfI) states: Where the project noise trigger levels are exceeded, assess feasible and reasonable noise mitigation strategies.

The proponent does not appear to have evaluated any reasonable and feasible mitigation measures as part of the modification application. Chapter 5.4 of the noise report states that these exceedances are largely due to historical and existing noise levels and are not caused by the modification. This implies that the premises does not currently meet the noise limit requirements of its EPL. The proponent should provide further explanation as to whether the premises currently meets its requirements under the existing EPL.

Furthermore, historical exceedances are not considered a sufficient justification to not consider reasonable and feasible mitigation for a modification. For existing premises, Section 6.1.1 of the NPfI does allow for noise limits different from the PNTLs to be established, however only after reasonable and feasible mitigation has been exhausted. The proponent should provide an analysis of reasonable and feasible mitigation for noise emissions from the premises.

3.1.2 Response

Section 5.4 of the *Lidsdale Siding – Modification 3 Noise Impact Assessment* (EMM 2020) (herein referred to as the Mod 3 NIA) acknowledges that noise emissions are predicted to be above the relevant development consent and EPL noise limits as well as the PNTLs. This has been well known and documented in the past.

Based on observations whilst at site and the results of noise modelling, noise emissions from site are controlled by trains (locomotive and wagon noise) manoeuvring in and out of the rail siding and noise from the mobile plant (dozer or front end loader) working on the coal stockpiles. Noise emissions from conveyors and conveyor drives was observed to be negligible at the nearest residences whilst trains and mobile equipment were operational.

Key noise mitigation measures implemented for operations at Lidsdale Siding are detailed within Centennial's (2018) *Western Region Noise Management Plan* and include:

- maintaining all plant and equipment to manufacturer's specifications (ongoing);
- operate mobile plant in a quiet, efficient manner and conduct regular training of operators (ongoing);
- installation of frequency modulated reversing alarms or "quackers" on mobile plant to replace tonal reversing alarms (complete);
- switching off vehicles and plant when not in use (ongoing);
- low-noise design for transfer chutes on conveyor systems (complete);
- partial enclosures on conveyors (complete); and
- noise shielding on the loading bin (complete).

Additional noise management measures specific to train operations on-site include:

- the coal bin is operated such that it will not be empty before being refilled to minimise noise emission from coal falling into an empty bin and impacting on the lower metal conical section; and
- a training program is undertaken with relevant train operators for all drivers attending the site.

Due to measured and predicted noise emissions from the operations being above the relevant noise limits, Centennial has self-imposed operating restrictions at the facility. Rail loading and unloading activities are restricted to daytime hours only (ie 7.00 am to 6.00 pm).

In 2017, Centennial investigated the influence of changing the loadout chute configuration to reduce noise impacts. These investigations identified that changing the loadout chute configuration and height would not improve coal impact noise from train loading activities.

As part of the NIA prepared for Mod 1 (EMM 2019) (herein referred to as the Mod 1 NIA), additional train operational management measures were identified with the aim to reduce noise emissions from wagons and eliminate noise from wagon shunting during unloading/loading activities. This method was described in the Mod 1 NIA and is reproduced below:

- trains will be approximately 850 m long and will arrive with three locomotives at the head of the train;
- once the train reaches the siding, two locomotives will detach from the head of the train, with one remaining non-operational off the rail siding and one re-attaching to the rear of the train to establish a push/pull configuration (ie one locomotive at each end of the train);
- the assistant driver will walk the train into the rail siding, while setting the track in the required configuration to eliminate unnecessary stopping and the possibility of wagon shunting; and
- locomotive power will be reduced to 30%, the train will travel and unload at a speed of approximately 0.2 km/hour, and state-of-the-art electronically controlled pneumatic (ECP) brakes would be utilised to keep the train in a “stretched” configuration which will aid in the avoidance of stop/start operations and eliminate any noise from shunting between wagons.

Unloading activities and associated infrastructure is operated during the daytime period only with mobile equipment restricted to a single dozer or front-end loader. Further, operation of the unloading activities and associated infrastructure does not occur concurrently with the existing infrastructure associated with loading activities. No trains are proposed to be loaded on the same day when train unloading is proposed to occur.

The noise reduction measures described above demonstrate the significant effort that has been made to reduce noise from the main sources of noise at the site. The nearest noise-sensitive receptors are within approximately 200 m–700 m from the site and are situated in varying directions. Given the proximity and relative location of the main noise sources on the site to the receptors, and given they are moving sources, it would not be feasible or reasonable to build a noise barrier to reduce noise in all directions.

It is also noted that there is a low history of noise complaints. There was an isolated complaint in 2016 regarding noise from a train horn. No other noise complaints have been received since the facility was upgraded in 2014. The neighbouring residences are generally very supportive of the site and appreciate the economic input it provides to the local community.

3.2 Sound power levels

3.2.1 Comment from EPA

The statement under Table 5.3 of the Mod 3 noise report states: “As this report shows, the noise emissions from the site are predicted to be the same as currently approved operations and have been shown to be reducing over time as a result of new unloading methodology and mitigation measures implemented at the site”.

However, the information provided in the Mod 3 noise report does not substantiate this statement. Sound Power Levels (SWLs) for some equipment were measured for Mod 3 and found to be significantly lower than assumed for Mod 1 (see page 18 of the Mod 3 report). This suggests that the predicted noise levels between Mod 1 and Mod 3 cannot be compared because they are based on fundamentally different assumptions. Unless the predictions for Mod 1 and Mod 3 use consistent assumptions, a meaningful comparison cannot be made. The proponent should review and update the assessment accordingly.

Table 5.2 presents the acoustically significant plant and their sound power levels. The SWL nominated for the locos applies to activities under approved train unloading operations. However, the locos would seem to perform other tasks when on the premises such as moving the train in and out of the premises. This activity does not appear to have been addressed in the report and results may differ from noise levels presented in this report and previous reports, given that previous assumed SWLs were found to be different to actual measured levels. The proponent should provide an explanation of previous predictions and if they should be revaluated following the findings of the most recent measurements.

3.2.2 Response

At the time of preparing the Mod 1 NIA (EMM 2019) it was not possible to fully validate the sound power levels of all site equipment and train manoeuvring activities. Notwithstanding, noise predictions were based on previous modelling assumptions and/or results of previous monitoring and were considered to be representative of actual site emissions at that time.

Detailed site noise measurements were undertaken for the purpose of determining sound power levels of the current train unloading operations as part of preparing the Mod 3 NIA. These measurements and the subsequent noise modelling considered all locomotive movement on-site incorporating train arrival, unloading, manoeuvring whilst on-site and departing the site.

If the Mod 1 NIA modelling adopted sound power levels for locomotives and wagons as per the measurements and modelling in the Mod 3 NIA, then a comparison of predicted noise would show that Mod 3 NIA noise levels are unchanged with respect to the Mod 1 NIA. Hence, noise from site will not increase from that of approved operations (ie Mod 1).

3.3 Noise modelling

3.3.1 Comment from EPA

The proponent has stated that noise prediction has been undertaken in accordance with International Standard (ISO) 9613-2 Acoustics — Attenuation of sound during propagation outdoors — Part 2: General method of calculation within the iNoise software package. However, Table 5.1 presents two sets of meteorological conditions which have been modelled; standard and noise enhancing. Given that ISO9613-2 is not capable of predicting specific meteorological conditions, the proponent should provide more detail on how each condition has been modelled and justification that the method is appropriate.

The Mod 3 noise report states that a model validation has been performed using noise measurements on-site. The proponent should provide the results of the validation in the noise report.

3.3.2 Response

Noise from existing operations was modelled and compared to the results of operator-attended noise surveys undertaken by EMM in close proximity to the rail line during the improved unloading operations. Operator-attended noise measurements were undertaken at two locations approximately 25 m from the track at either end of the site during weather conditions consistent with 'standard' conditions as per the NPfl.

Results of the model validation indicated that the model predicted to within 1 dB of measured levels. Hence, calibration factors have not been applied within the model.

Reference to the international standard ISO 9613-2:1996 Acoustics – Attenuation of sound during propagation outdoors in the reporting is in regard to the default algorithm of the software adopted for noise modelling. It is correct that specific parameters for wind speed cannot be set under ISO9613, and hence we can confirm that the CONCAWE algorithm was selected in the same software, which does allow setting of specific weather parameters.

4 Closing

If you require any additional information or have any queries please do not hesitate to contact me on 0405 593 675 or via email drichards@emmconsulting.com.au.

Yours sincerely

A handwritten signature in black ink that reads "Dr Richards". The signature is written in a cursive, flowing style.

David Richards

Senior Environmental Scientist

drichards@emmconsulting.com.au