



15 June 2017

Ref: A17879447

The Secretary
NSW Department of Planning and Environment
GPO Box 39
Sydney NSW 2001

Attention: Kane Winwood

Dear Kane,

Re: Request for Modification of Condition of Approval B17 for the Hornsby Quarry Project (SSI-7066)

This letter is to formally request a modification to the conditions of approval for the Hornsby Quarry Road Construction and Spoil Management Project (SSI-7066) in accordance with the requirements of section 115ZI of the NSW *Environmental Planning and Assessment Act 1979* (the EP&A Act). The modification request relates to condition of approval B17 which requires no compression braking by heavy vehicles on Bridge Road and on the site.

Background

The spoil haulage companies have been in touch with LLBJV to advise of their concerns regarding the blanket ban on the use of compression breaking while descending Bridge Road into the Quarry spoil storage area. When the draft conditions were available consultation with haulage companies was undertaken and we were advised that there would be no issues not using compression braking and in lieu utilising the truck gears and brakes to creep down the hill. However now that the site is open to trucks the haulage companies and drivers are now advising of their concerns regarding the blanket restriction on compression braking.

The concern about the elimination of compression braking on a grade such as ours (20%) ultimately lies with the risk of brake failure which can be caused by 'brake fade'. Brake fade reduces the stopping power of the brakes which can occur after repeated or sustained application of the brakes (overheating). The ban on compression braking places additional stress and wear on the trucks primary braking system which can be avoided with the use of the compression breaking. Essentially an improved safety outcome can be achieved with the ability for the trucks to use this additional braking system.

The haulage company has put to the JV that with the posted speed limits of 10km/hr and the modern haulage fleet being used, that the noise impacts from compression braking is actually less than the trucks using first gear (and foot brakes) or even the engine noise when the trucks are climbing out via Bridge Road. A trial has been conducted off site using non NorthConnex trucks and we can confirm that the noise from compression braking of a modern trucks traveling at 10km/hr is of low noise impact.

The negative perception of compression braking generally originates from B-doubles with modified exhaust systems, where they use the brake to slow a truck from 100km/hr to lower speeds when entering towns. It is in these instances whereby nuisance noise and community complaint is generated.

To prove the above case, a trial to use compression braking down Bridge Road into Hornsby Quarry was granted by DPE, and this trial commenced Thursday 8 June 2017.

Proposal

To modify condition B17 (SSI-7066) to allow compression braking on Bridge Road into the Hornsby Quarry. This would be from Roper Lane where trucks access the site and commence their descent into the Quarry.

The intent of condition B17 was to provide for the best noise outcome for residents. Our proposal to modify this condition is in keeping with this intent and provides NorthConnex the ability to provide a much improved safety outcome.

Proposed CoA Amendment

B17 The Proponent shall ensure that no use of compression braking by heavy vehicles associated with the SSI is permitted ~~on~~ except when travelling down Bridge Road ~~and on the site.~~

Noise Impact Analysis

Noise monitoring was undertaken as part of Thursday's visit (8.6.17) with DP&E. All attendees (ER, Hornsby Council, DPE and NCX parties) agreed that compression braking sounded quieter than traditional foot brakes and engine engaged in low gear. Both attended and unattended noise monitoring was undertaken to try and detect a difference in noise impact between the use of the compression brakes and that of traditional braking and gear use. The noise measurements obtained from the attended monitoring adjacent to the haul road below Turn 3 (Figure 1), provided the best data due to the proximity of the noise source to the monitoring point. The noise levels at the other locations were more as a result of general background noise (birds, planes etc) than noise from the trial (which is a good outcome in itself).

As shown in Table 1 below, the noise monitoring results for compression braking versus non-compression braking demonstrates that there was negligible difference between the LAeq [dB] readings. The best noise parameter to consider is the LMax as this parameter is not time dependent, rather it notes the highest noise level recorded.

It is noted that the highest maximum noise level was recorded during non-compression braking. This would have been due to the increase engine revving and brake noises. The difference between that level and next highest level from the compression braking session is $85.5 - 81.4 = 4.1$ dBA. The acoustic rule of thumb is that with every 3dBA difference the sound power level is doubled, the difference here is more than 3dBA. This means that the compression braking results in a considerable reduction in LMax

noise events and the use of the compression brakes is the best outcome in order to minimise noise impact disturbances to the local residents.

TABLE 1. Results of noise monitoring immediately adjacent to the haulage activity.

	Truck Pass 1	Truck Pass 2	Truck Pass 3	Truck Pass 4
Notes	Compression Braking.	Compression Braking.	Non-compression braking.	Compression Braking.
LAeq [dB]	70.2	68.0	69.4	70.0
LAFMax [dB]	81.4	79.1	85.5	81.2

Note: The first truck was 75% loaded and all other trucks were fully loaded

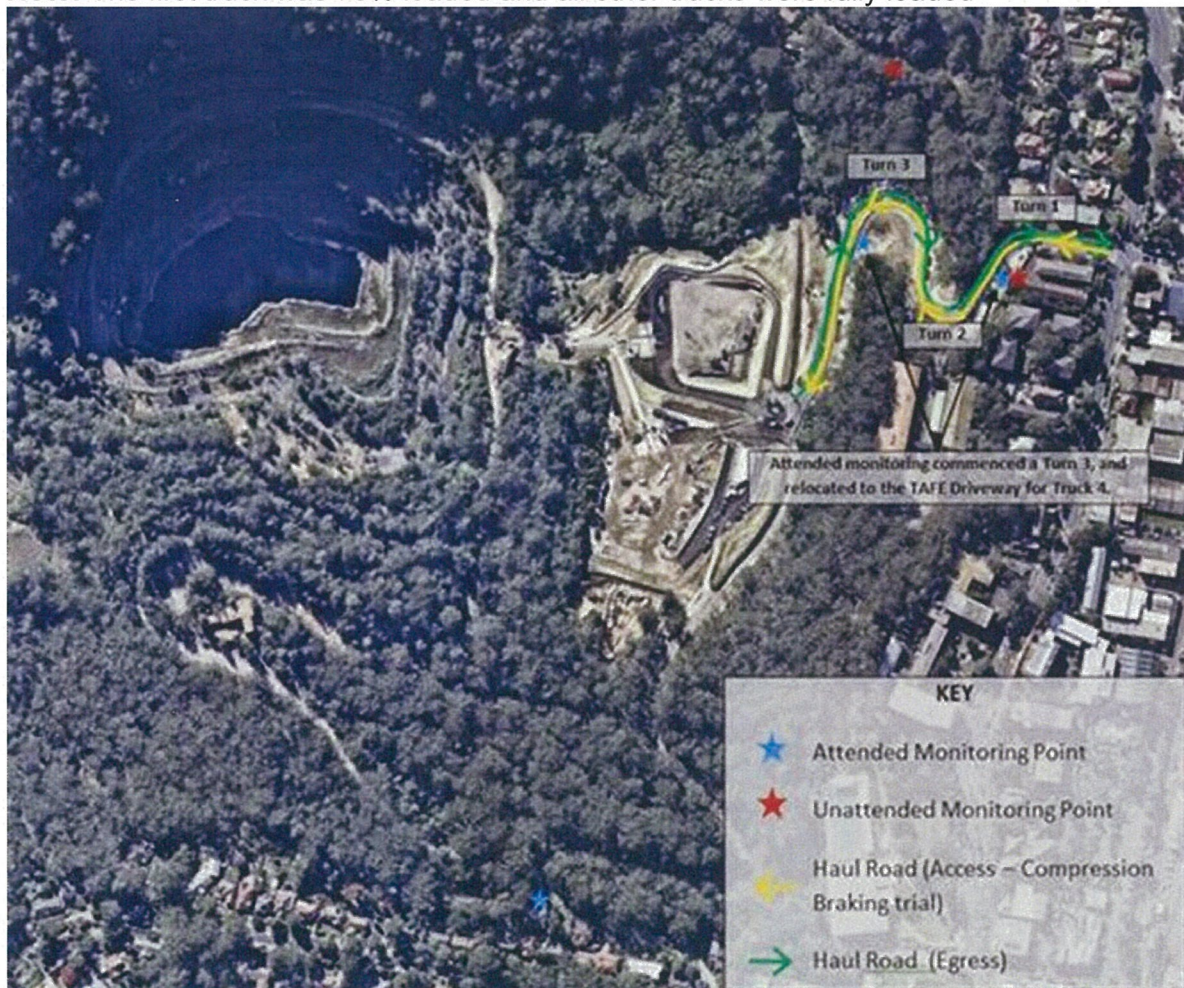


Figure 1. Location of noise monitoring points

The noise monitoring undertaken represented worst case noise scenario, as noise was measured:

- within 5m of the truck.

- at the top of Bridge Road where the trucks would begin to descend and is adjacent to residential receivers.

The distance to the various receivers attenuates from those figures presented due to the distance / attenuation acoustic rule.

Environment Protection License

The Environment Protection Licence (EPL 20570) for the Project does not relate to CoA B17 and the use of compression braking. The EPL is more focused to the hours of truck and fill spreading operations. The noise limit conditions (L3) relate to feasible and reasonable noise mitigation measures being implemented during construction work.

Heavy Vehicle Inspection and Maintenance Protocols

On NorthConnex there are strict requirements for all plant to complete prior to coming onsite and once onsite. This ensures compliance with CoA A8, Operation of Plant and Equipment. This is managed through a separate plant team who sit under the safety department. The process is described below.

Prior to coming onsite:

1. All potential subcontractors need to complete a form that provides information about the plant that is scheduled to come onsite. This includes details and evidence of maintenance records. All plant needs to meet the NCX requirements or it will not be allowed to progress onto the next stage of the process.
2. Once the paperwork is received, a member of the plant team will go and inspect the plant. This can only be completed by a NCX employee with the relevant experience.
3. Once the plant passes the inspection, NCX plant team complete a compliance check to ensure that the paperwork provided by the subcontractor matches what was visually inspected by the Plant team. If it is all correct an approved vehicle sticker is issued which is allocated to the vehicle's file on 3D safety via a QR code on the sticker. The form to be completed by subcontractors and signed off by NCX personnel is attached (NCX902K-hired Plant Inspect). Refer to 'Cab/Operational Checks' section, sixth item down 'Engine Operation Noise/Smoke' in the attached for a key check for compression brakes.
4. All forms are uploaded into 3D safety. This QR code enables the plant to be tracked onsite and inspected through the 3D safety phone application. A screenshot of 3D safety and a list of Kingsfield trucks is shown below as an example of the system

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Search for Plant items

Filter by:

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☐ Show date added
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☐ Show Plant Road Registered status
☐ Show Chassis/VIN/Engine Number

Plant Items

	Contractor	Project(s)	Type	Make	Model	Year	Plant Reg	Plate No	Serial No	Fuel Type	Owner Depot	Principal Audit	Other Projects
view	Kingsfield Contracting Pty Ltd	NorthConnex	Truck	Sterling	LT9599A	2007	CG73GD	T22	2FZHAZCG87AY47406	Diesel		Accepted	For Review
view	Kingsfield Contracting Pty Ltd	NorthConnex	Truck	Freightliner	FLX13A	2014	BZ90NJ	T52	1FVHG7DR3DLFH5412	Diesel		Accepted	For Review
view	Kingsfield Contracting Pty Ltd	NorthConnex	Truck	Freightliner	FLX13A	2014	CA10DL	T53	1FVHG7DR7ELFK0631	Diesel		Accepted	For Review
view	Kingsfield Contracting Pty Ltd	NorthConnex	Truck	Freightliner	FLX13A	2014	CA11DL	T54	1FVHG7DR8DLFG4609	Diesel		Accepted	For Review
view	Kingsfield Contracting Pty Ltd	NorthConnex	Truck	Freightliner	Coronado	2013	CG07GF	T48	1FVHG7DRXDLFF5299	Diesel		Accepted	For Review
view	Kingsfield Contracting Pty Ltd	NorthConnex	Truck	Freightliner	Coronado	2014	CB01RI	T49	1FVHG7DR7DLFG4610	Diesel		Accepted	For Review
view	Kingsfield Contracting Pty Ltd	NorthConnex	Truck	Freightliner	Coronado	2013	CG08GF	T50	1FVHG7DR8ELFR2325	Diesel		Accepted	For Review
view	Kingsfield Contracting Pty Ltd	NorthConnex	Truck	Freightliner	Coronado	2014	BZ89NJ	T51	1FVHG7DR9ELFK0632	Diesel		Accepted	For Review
view	Kingsfield Contracting Pty Ltd	NorthConnex	Truck	Freightliner	Coronado	2014	CC98LS	T55	1FVHG7DR9DLFG4611	Diesel		Accepted	For Review
view	Kingsfield Contracting Pty Ltd	NorthConnex	Truck	Freightliner	Coronado	2014	CC47LT	T56	1FVHG7DR2DLFG4613	Diesel		Accepted	For Review
view	Kingsfield Contracting Pty Ltd	NorthConnex	Truck	Freightliner	Coronado	2014	CD97RQ	T57	1FVHG7DR8ELFL9859	Diesel		Accepted	For Review
view	Kingsfield Contracting Pty Ltd	NorthConnex	Truck	Sterling	LT9599A	2007	CG78GZ	T21	2FZHAZCG18AZ51727	Diesel		Accepted	For Review

Once onsite:

5. Plant are frequently inspected when onsite. This occurs through the safety and plant team as well as by traffic controllers. Using the 3D app and the QR code, a plant can be looked up on the system with all documentation becoming available, including maintenance records. For trucks, this will most often occur prior to the truck entering the site when stopped by the traffic controller. Once viewed in 3D safety and compliance is shown the truck can proceed onsite.

6. When a maintenance record needs to be updated or an inspection is due, 3D safety releases an email to the owner of the plant as well as NCX so that it can be tracked. If it is not uploaded in time, the plant is listed as 'unaccepted' in the system. As new records are provided, the status of the plant can be changed by NCX personnel to confirm it is compliant again.

7. NOTE: All plant maintenance requirements and dates are managed in accordance with the Original equipment manufacturers guidelines

8. All records of all plant are stored on 3D safety even after plant have left the project. This ensures no plant that was once onsite and has the sticker can come back onsite without being reinspected.

Sterling Truck LT9599A (2007)

Contractor: Kingsfield Contracting Pty Ltd
Owner: Kingsfield NSW Pty Ltd
Operator: TBA
Plant Registration: CG73GD
Plate Number: T22
Serial Number: 2FZHAZCG07AY47406
Chassis / VIN / Engine Number: 069R0942036
Owner Depot:
Road Registered: No
Fuel Type: Diesel

Current AttachmentsSelect project: ⓘ**Required Attachments**

- ✓ [Inspection - Annual](#)
- ✓ [Plant Risk Assessment](#)
- ✓ [Proof of Registration - State issued](#)
- ✓ [Inspection - Pre Start](#)
- ✓ [Plant Safety Certification Letter - NCX](#)
- ✓ [Hired Plant Inspection - NCX](#)
- ✓ [Service Record - Kms](#)

As discussed on site, LLBJV's priority is to have a modern/well maintained fleet of trucks used on the project. The Hire Plant Inspection Report is the checklist that is used to determine whether a truck is suitable to be used on site. For the Engine Operation Noise Check this is basically running of the engine and ensuring the truck has a muffler that has not been modified. It is the modified mufflers that cause the nuisance noise associated with compression braking. Following this, site personnel will be responsible for monitoring performance on site and taking appropriate action when and if an issue arises. These actions, together with the 10km/h vehicle speed limit, seek to minimise the occurrence of compression braking noise beyond what was heard on site last week.

As it currently stands, where compression braking is not permitted, there is a risk of non-compliance with the current condition or risk of a safety incident due to loaded trucks not being able to maintain control as they descend down Bridge Road. Roads and Maritime is of the opinion that it is in the best interests of the project and the Department to modify condition of approval B17 to allow compression braking on Bridge Road.

Your earliest consideration of this request would be greatly appreciated. Should you wish to discuss this matter further or require any additional information please do not hesitate to contact the RMS Environment Officer for the NorthConnex Project, Rhonda Pollard on rhonda.pollard@rms.nsw.gov.au or 0439 688 734.

Yours sincerely,

A handwritten signature in dark ink, appearing to be 'S. Shand', written over a horizontal line.

SONJA SHAND

Project Manager – NorthConnex Delivery

Attachment 1: NCX902K-hired Plant Inspect