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Shoalhaven Starches Pty Ltd
C/- Cowmann Stoddart Pty Ltd
PO Box 738
Nowra NSW 2541

Refer: 4522-L1

Attention: Mr Stephen Richardson
Telephone: 02 4423 6198

2 July, 2012

Dear Sir,

Shoalhaven Starches Proposed Gas Pipeline - Construction Noise and Vibration Management Plan - Response to Submissions

Day Design Pty Ltd recently submitted a Construction Noise and Vibration Management Plan (CNVMP) to Shoalhaven Starches for their proposed gas pipeline project, report number 4522-r1 Rev B, dated 26 March 2012. The report formed part of an Environmental Assessment and following a review of that assessment, the relevant regulatory authorities have provided submissions including requests for additional information, as detailed below.

NSW Department of Planning and Infrastructure (DoPI)

In summary the DoPI recognises that there is limited scope to realistically reduce the level of construction noise emission on this project through engineering noise controls, other than those already detailed in the CNVMP (Section 7). Consequently there is potential for an exceedence of the noise management levels at various residences, on some occasions.

The Department therefore requests greater emphasis be placed on managing the potential noise impact on individual receivers through a community consultation process.

The Department also requests that this response shows the predicted level of noise from all plant and equipment combined, following all reasonable and feasible noise controls as detailed in Section 7.3 of the CNVMP.

We are pleased to provide the following response:-

Section 7.2 of the CNVMP outlines Noise Management Controls which are recommended to minimise the noise impact on residential receptors. A significant part of the management controls is community consultation and Shoalhaven Starches will implement a management program as follows.



- AIRCRAFT, ROAD TRAFFIC AND TRAIN NOISE CONTROL
- ARCHITECTURAL ACOUSTICS • INDUSTRIAL NOISE AND VIBRATION CONTROL
- ENVIRONMENTAL NOISE IMPACT INVESTIGATION AND CONTROL
- OCCUPATIONAL NOISE INVESTIGATIONS • QUIET PRODUCT DEVELOPMENT



Periods of Respite

Noisy construction activities such as rock hammering or drilling will only operate for 2 to 3 hours at a time when in close proximity to residences, for example at the Edwards Avenue intersection.

Whilst noisy activities such as rock hammering occur near residences all other construction activities will cease in the same location so as to minimise the cumulative noise impact.

Work Practices

Workers and contractors will be trained in work practices to minimise noise emission such as the following:

- Employ the use of broadband audible reversing alarms on all mobile plant.
- Avoid dropping materials from a height.
- Avoid shouting and talking loudly outdoors.
- Avoid the use of radios outdoors that can be heard at the boundary of residences.
- Turn off equipment when not being used.
- Carry out work only within the recommended hours of operation (see Section 5.3).

Heavy Vehicles and Staff Vehicles

- Keep truck drivers informed of designated vehicle routes, parking locations, acceptable delivery hours or other relevant practices (for example, minimising the use of engine brakes, and no extended periods of engine idling).
- Locate site vehicle entrances away from residences where practicable.
- Optimise the number of vehicle trips to and from the site – movements can be organised to amalgamate loads rather than using a number of vehicles with smaller loads.
- Staff parking areas should be located as far from residential receiver locations as practicable.
- No motor vehicles should access the site via, or park within, residential areas prior to 7 am in order avoid sleep disturbance. For example whilst works progress through receptor area 4 from north of Roseville Road to south of Alfred Street (see Figure 4).

Community Relations

- A Shoalhaven Starches Community Liaison Officer will be appointed prior to the commencement of any works.
- The officer will approach all potentially affected residences prior to the commencement of works as an initial introduction.
- The officer will explain the project, duration of works, potentially noisy periods as well as determine any particularly sensitive receivers or sensitive time periods and schedule works accordingly, as far as reasonably practical.



- A contact number will be provided for any residents to call with complaints or queries.

Once works commence communication with affected residents will be maintained by the officer via a range of media including personal contact and / or letter box drops.

For example a one page flyer detailing any particularly noisy upcoming events with a description of the type of work, date/s on which it will occur, duration of the expected noise and a contact phone number can be delivered to each residence in the lead up to the event/s.

Managing a Noise Complaint

The Community Liaison Officer will receive and manage noise complaints.

All complaints will be treated promptly and with courtesy.

Should a justified noise complaint not be resolved, noise monitoring may be carried out at the affected receptor location and appropriate measures be taken to reduce the noise emission as far as reasonably practicable.

Where it is not practicable to stop the noise, or reduce the noise, a full explanation of the event taking place, the reason for the noise and times when it will stop should be given to the complainant.

Residents subjected to lengthy periods of noise or vibration may be eligible for a project specific respite offer. The purpose of such an offer is to provide residents with respite from an on-going impact. This measure is to be determined on a site by site basis.

The following guidelines are recommended in Section 6 of the *Interim Construction Noise Guideline* to manage a noise complaint:

- Provide a readily accessible contact point, for example, through a 24 hour toll-free information and complaints line.
- Give complaints a fair hearing.
- Have a documented complaints process, including an escalation procedure so that if a complainant is not satisfied there is a clear path to follow.
- Call back as soon as possible to keep people informed of action to be taken to address noise problems. Call back at night-time only if requested by the complainant to avoid further disturbance.
- Provide a quick response to complaints, with complaint handling staff having both a good knowledge of the project and ready access to information.
- Implement all feasible and reasonable measures to address the source of complaint.
- Keep a register of any complaints, including details of the complaint such as date, time, person receiving complaint, complainant's contact number, person referred to, description of the complaint, work area (for larger projects), time of verbal response and timeframe for written response where appropriate.



The following tables are replicated from Tables 7.2 to 7.5 inclusive from the CNVMP and include the calculated combined noise level as requested by the Department.

Table 7.2 Predicted L_{eq} 15 minute Construction Noise Levels – Receptor Area 1 (With Noise Control)

Receptor Locations	Activity	Predicted Sound Level (dBA)	Noise Management Level (dBA)	Compliance (Yes/No)
Receptor Area 1 (Pestells Lane)	Drilling (Princes Highway crossing)	42	47	Yes
	Backhoe	30	47	Yes
	Trencher	46	47	Yes
	Loader	42	47	Yes
	Welding Rig (Diesel)	38	47	Yes
	Dewatering Pump	27	47	Yes
	Truck	44	47	Yes
	Combined	50 *	47	No

* As stated in the CNVMP the combined noise impact is based on all plant and equipment being located at the same place and operating at the same time. This significantly overstates the potential noise impact as this will not occur in practice given that the plant and equipment will be operating at different locations along the 5.5 kilometre length of the pipeline.



Table 7.3 Predicted $L_{eq 15 \text{ minute}}$ Construction Noise Levels – Receptor Area 2 (With Noise Control)

Receptor Locations	Activity	Predicted Sound Level (dBA)	Noise Management Level (dBA)	Compliance (Yes/No)
Receptor Area 2 (Fletchers Lane)	Drilling (Meroo Road crossing)	48	42	No + 6 dB
	Drilling (at Railway Line)	52	42	No + 10 dB
	Backhoe	53	42	No + 11 dB
	Trencher	68	42	No + 26 dB
	Loader	64	42	No + 22 dB
	Welding Rig (Diesel)	54	42	No + 12 dB
	Dewatering Pump	49	42	No + 7 dB
	Truck	67	42	No + 25 dB
	Combined	72 *	42	No

* As stated in the CNVMP the combined noise impact is based on all plant and equipment being located at the same place and operating at the same time. This significantly overstates the potential noise impact as this will not occur in practice given that the plant and equipment will be operating at different locations along the 5.5 kilometre length of the pipeline.



Table 7.4 Predicted L_{eq} 15 minute Construction Noise Levels – Receptor Area 3 (With Noise Control)

Receptor Locations	Activity	Predicted Sound Level (dBA)	Noise Management Level (dBA)	Compliance (Yes/No)
Receptor Area 3 (residences on the eastern side of Meroo Road, south of Fletchers Lane)	Drilling (Meroo Road crossing)	38	42	Yes
	Drilling (at Railway Line)	39	42	Yes
	Backhoe	31	42	Yes
	Trencher	48	42	No + 6 dB
	Loader	42	42	Yes
	Welding Rig (Diesel)	32	42	Yes
	Dewatering Pump	27	42	Yes
	Truck	44	42	No + 2 dB
	Combined	51 *	42	No

* As stated in the CNVMP the combined noise impact is based on all plant and equipment being located at the same place and operating at the same time. This significantly overstates the potential noise impact as this will not occur in practice given that the plant and equipment will be operating at different locations along the 5.5 kilometre length of the pipeline.



Table 7.5 Predicted L_{eq} 15 minute Construction Noise Levels – Receptor Area 4 (With Noise Control)

Receptor Locations	Activity	Predicted Sound Level (dBA)	Noise Management Level (dBA)	Compliance (Yes/No)
Receptor Area 4 (residences in Edwards Avenue and south e.g. Alfred Street and Lillian Place)	Drilling (Edwards Avenue Crossing)	54 to 65	40	No + 14 to 25 dB
	Backhoe	53	40	No + 13 dB
	Trencher	68	40	No + 28 dB
	Loader	64	40	No + 24 dB
	Welding Rig (Diesel)	54	40	No + 14 dB
	Dewatering Pump	49	40	No + 9 dB
	Truck	67	40	No + 27 dB
	Rock Hammering (if required)	68	40	No + 28 dB
	Combined	72 * – 74**	40	No

* As stated in the CNVMP the combined noise impact is based on all plant and equipment being located at the same place and operating at the same time. This significantly overstates the potential noise impact as this will not occur in practice given that the plant and equipment will be operating at different locations along the 5.5 kilometre length of the pipeline.

** The combined predicted sound level with rock hammering will not occur in practice as the management plan under 'periods of respite' precludes this activity occurring



simultaneously with another in the same location. Furthermore, different plant and equipment will be operating at different locations along the 5.5 kilometre length of the pipeline.

Shoalhaven City Council

Council has raised concerns in relation to ground borne vibration levels and states:-

“Council requests that the Department ensure, that conditions are imposed so there is an action plan should the vibration levels be exceeded. Thus ensuring that property and infrastructure owners are protected from damage through vibration rather than relying on the current statements in Annexure 16 as part of the broad inclusion of the document in the application reference condition.”

We are pleased to provide the following response:-

Given the distances that rock hammering is likely to occur from individual residences (circa greater than 30 metres), it is unlikely that vibration levels will reach the limit of 15 mm/s at all.

However, once rock hammering commences at any site, the level of vibration emission should be measured to determine the impact at any nearby receptors, and:-

- carry out structural inspection surveys (dilapidation reports) on residences within 30 metres of rock hammering or vibration producing activities; and
- continue to conduct vibration monitoring at residences within 30 metres whilst vibration producing works occur.

In the unlikely event that vibration levels exceed the recommended limit, all vibration works must cease immediately and alternative methods must be employed.

Environment Protection Authority

The EPA recommends that all feasible and reasonable work practices outlined in Section 7.2 of the CNVMP are required to be applied and that the proponent is required to inform all potentially impacted residents and provide details relating to the work to be carried out, expected noise levels and duration, as well as contact details of a company representative.

The EPA also request that the construction hours are amended to between 7 am and 5 pm Monday to Friday and 8 am to 1 pm on Saturdays, alternatively any construction outside of these hours must comply with the criteria of RBL +5 dB as outlined in the Interim Construction Noise Guideline.

We are pleased to provide the following response:-

We trust that the response to the DoPI above adequately addresses the EPA's request for community consultation. Shoalhaven Starches Pty has amended the proposed hours of construction to between 7 am and 5 pm Monday to Friday and 8 am to 1 pm on Saturdays, with no work on Sundays or Public Holidays.



We trust this adequately addresses the submissions.

Please do not hesitate to contact the undersigned should you require any further information.

Kind regards,



Matthew Harwood, MAAS
Senior Acoustical Consultant



The undersigned hereby certifies that this Report has been checked and approved in accordance with our Quality Management System.

