Doc No: 252525-11160

Construction Noise Management Plan
12-16 Florence Street, Tweed Heads NSW

Prepared for:
The Trustee for WAFI Property Trust
c/- Dreambuild

Author:

Neil Pennington
B.Sc.(Physics), B. Math.(Hons), MAIP, MAAS, MASA
Principal / Director

February 2026

MEMBER FIRM

Association of Australasian Acoustical Consultants

CONTENTS

1.0 INTRODUCTION

This construction noise management plan (CNMP) has been developed in relation to the construction of a multi-unit residential development at 12-16 Florence Street, Tweed Heads NSW.

This document has been prepared in accordance with the *Interim Construction Noise Guideline* (ICNG, 2009). The ICNG is a non-mandatory guideline but is usually referred to by local councils and the NSW Department of Planning when construction/demolition works require development approval.

The CNMP is designed to ensure noise emissions resulting from the construction are maintained to minimise potential impacts to the surrounding local community.

The proponent has advised that the entire project may take more than 26 weeks to complete. This CNMP has been prepared to satisfy Point 4 of the NSW Department of Planning, Housing and Infrastructure (DPHI) Response to Submissions dated 2 February 2026.

4. Construction

- Prepare a preliminary construction noise and vibration management plan for the development that assesses predicted construction noise levels from construction plant against the noise management levels, with appropriate recommendations and mitigation measures if necessary. Additionally:
  - detail specific acoustic measures for mitigation for high-risk activities such as sheet piling, if required for the construction of the development.
  - detail measures for acoustic monitoring during construction and post construction verification of noise compliance

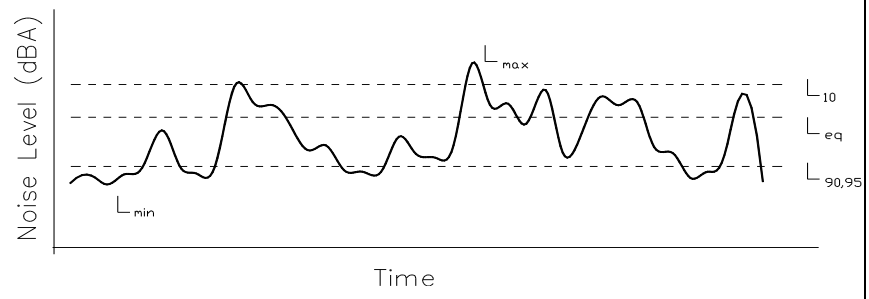
The site location is shown attached to this report as **Appendix A**.

2.0 TERMS AND DEFINITIONS

Table 1 contains the definitions of commonly used acoustical terms and is presented as an aid to understanding this report.

TABLE 1
DEFINITION OF ACOUSTICAL TERMS

Term	Definition
dB(A)	The quantitative measure of sound heard by the human ear, measured by the A-Scale Weighting Network of a sound level meter expressed in decibels (dB).
SPL	Sound Pressure Level. The incremental variation of sound pressure above and below atmospheric pressure and expressed in decibels. The human ear responds to pressure fluctuations, resulting in sound being heard.

STL	Sound Transmission Loss. The ability of a partition to attenuate sound, in dB.
Lw	Sound Power Level radiated by a noise source per unit time re 1pW.
Leq	Equivalent Continuous Noise Level - taking into account the fluctuations of noise over time. The time-varying level is computed to give an equivalent dB(A) level that is equal to the energy content and time period.
L1	Average Peak Noise Level - the level exceeded for 1% of the monitoring period.
L10	Average Maximum Noise Level - the level exceeded for 10% of the monitoring period.
L90	Average Minimum Noise Level - the level exceeded for 90% of the monitoring period and recognised as the Background Noise Level. In this instance, the L90 percentile level is representative of the noise level generated by the surrounds of the residential area.
	

3.0 APPLYING THE GUIDELINE

Section 1.5 of the ICNG outlines the steps for management of construction noise impacts as follows:

1. **identify sensitive land uses** that may be affected.
2. **identify hours** for the proposed construction works.
3. **identify impacts** at sensitive land uses.
4. **select and apply the best work practices** to minimise noise impacts.

Each of the above four points is assessed in detail in the following sections.

3.1. Surrounding Land Uses

The subject site is in a suburban area with existing residences immediately adjoining the site and residences Albert Street and Charles Street.

Potential construction noise impacts at these residences will require assessment.

3.2. Operating Hours

Typical operating hours for these developments contain the following time restrictions for the construction works

- Monday to Friday 7.00 am to 6.00 pm,
- Saturday 8.00 am to 1.00 pm, and
- No construction work is to take place on Sundays or Public Holidays.

Construction work outside the hours detailed above is normally only permissible for delivery of oversized structures, emergency works, public infrastructure works that are supported by the affected community or where the proponent demonstrates and justifies a need (other than simply convenience) to work outside the recommended standard hours (ICNG, p9).

As any variation to the hours of work detailed above will require further council approval it will be assumed in this CNMP that demolition and remediation works would occur within those hours.

3.3. Impacts at Sensitive Land Uses

The ICNG provides two assessment methodologies for construction noise impacts: a 'qualitative' assessment where works occur for less than three weeks and a 'quantitative' assessment for works of longer duration. As works on the site will take longer than three weeks, the quantitative methodology is applicable.

Noise management Levels

Table 2 is an extract from the ICNG setting out noise management levels for construction works as reproduced below.

Table 2: Noise at residences using quantitative assessment

Time of day	Management level $L_{Aeq\ (15\ min)}$ *	How to apply
Recommended standard hours: Monday to Friday 7 am to 6 pm Saturday 8 am to 1 pm No work on Sundays or public holidays	Noise affected RBL + 10 dB	The noise affected level represents the point above which there may be some community reaction to noise. • Where the predicted or measured $L_{Aeq\ (15\ min)}$ is greater than the noise affected level, the proponent should apply all feasible and reasonable work practices to meet the noise affected level. • The proponent should also inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and duration, as well as contact details.
	Highly noise affected 75 dB(A)	The highly noise affected level represents the point above which there may be strong community reaction to noise. • Where noise is above this level, the relevant authority (consent, determining or regulatory) may require respite periods by restricting the hours that the very noisy activities can occur, taking into account: 1. times identified by the community when they are less sensitive to noise (such as before and after school for works near schools, or mid-morning or mid-afternoon for works near residences 2. if the community is prepared to accept a longer period of construction in exchange for restrictions on construction times.

* Noise levels apply at the property boundary that is most exposed to construction noise, and at a height of 1.5 m above ground level. If the property boundary is more than 30 m from the residence, the location for measuring or predicting noise levels is at the most noise-affected point within 30 m of the residence. Noise levels may be higher at upper floors of the noise affected residence.

Background noise monitoring conducted by Soundness Acoustics for the Development Application established a daytime background noise level of 48 dB(A),L90. This gives a construction noise management level of **53 dB(A),Leq(15min)**.

3.4 Work Practises and Noise Sources

The works will involve building demolition and site clean-up followed by residential construction with demolition and site works generally being that loudest component, albeit the shortest in duration.

The Spectrum Acoustics technical database has been referenced to determine the Lw most applicable to the actual equipment proposed to be used on the site. The sound power levels are shown in **Table 2**.

By definition plant such as those detailed in Table 2 will move about and will be, be at various operating levels (and thus producing various levels of noise) throughout any 15 minute period. The level shown in Table 4 is based on measurements of worst case 15 minute Leq noise levels for the

machinery under typical operating conditions on a construction site similar to the current project.

TABLE 2 TYPICAL EQUIPMENT SOUND POWER LEVELS	
Equipment	Lw dB(A) / utilisation[1] % / Lw (15 min)
2t Excavator	92 / 50 / 88
D9 dozer	98 / 50 / 95
Road-going truck	94 / 50 / 91

[1] Typical percentage of time the item generates maximum noise level.

Noise emission from the demolition works will vary throughout individual days and also throughout the length of the overall project. The noise level at individual receivers will also be dependent upon the location of the various works, relative to those receivers, at different times.

To gauge some potential impacts a typical operational scenario has been considered where the plant items in Table 2 are being used in relatively close proximity to each other near the centre of the site.

Table 3 show the results of a sample calculation of potential noise impacts at receivers surrounding the development, as a result of the assessed operations taking place at various distances from the boundary of the site.

TABLE 3 SITE CLEARING NOISE as dB(A) Leq (15 min)			
	@10	@20	@30
Remediation, Lw	98	98	98
Distance Loss to Receiver	28	34	38
Received Noise	70	64	60
Criterion (Management level)	53	53	53
Impact	17	11	7

The results in Table 3 show that there will be exceedances of the construction noise management level at residential receivers surrounding the site. The “highly affected” level of 75 dB(A) may be exceeded for demolition works for brief periods during operations when plant items or loud equipment is situated within 5m of the boundary fences of neighbouring receivers. Noise management practices should be implemented, as detailed in Section 4 of this report.

Importantly, ground vibration during construction works will be negligible as there will be no sheet piling or other impact driving methods. Concrete pylons will be formed via the Continuous Flight Auger (CFA) method which is vibration-free.

4.0 NOISE MANAGEMENT

The mechanisms available for control of construction noise are limited due to the necessary and mostly unchangeable location of the works and the size and type of plant and machinery which, by necessity, must be used.

Noise control, planning and management options are discussed below and applicable recommendations are included.

4.1 Noise Control

The best ways to minimise construction noise impacts are to employ quiet work practices and use the quietest available construction equipment. There are four main methods of controlling noise. These are;

1. Controlling noise at the source. Examples are; sound proof covers, sound reducing mufflers on plant etc. Also included here is the substitution of processes or equipment with less noisy items,

2. Controlling the transmission of noise in its path. Examples are noise barriers (such as appropriate fencing) or portable barriers which may be used around static equipment like generators,

3. Controlling noise at the receiver. Examples are insulation on buildings and thicker glazing, and

4. In addition to the above noise mitigation can involve scheduling of the more noisy activities to less sensitive periods of the day or times of the year.

For the current construction works there is little scope for the feasible and reasonable application of methods in items 2 and 3.

With regard to item 1 several recommendations are made in **Section 4.3** of this report. In addition to this, **Section 4.2** details noise management procedures to enable identification of particularly noise sensitive times.

4.2 Noise Planning

The proponent should undertake noise control planning as part of project pre-planning. This will identify potential noise problems and eliminate them in the planning phase prior to site works commencing.

Residents in streets adjacent to the construction site should be notified of the project timing. This would, typically, be done by a letterbox drop. Included in the notification should be a description of proposed works and an outline of the proposed time frame for the various stages of the works.

The letterbox drop should include all residences in;

- No. 2 and 4 Boyd Street
- No. 18, 25 and 29 Florence Street
- No. 49 and 51 Beryl Street

The contact name and phone number of a responsible person should be given out so that residents may comment on the works and indicate any particularly significant noise sensitive times.

The advice should also advise the name and phone number of the person responsible for accepting and dealing with complaints. All complaints or communications should be answered promptly and a record kept of all response and actions.

The main contractor should plan to co-ordinate subcontractors so that there are no unnecessary cumulative impacts arising from the simultaneous activities of more than one subcontractor. That is, planning to avoid, if practical, having more than one noisy activity taking place in close proximity. It is good practice to appoint a single co-ordinator to oversee all significant noise producing activities.

4.3 Noise Management

Construction activity is typically allowed only during the period 7.00am to 6.00pm Monday to Friday and 8.00am to 1.00pm Saturday, with no work on Sundays or public holidays. All personnel working on the site must be made aware of these hours.

All personnel working on the job including subcontractors and their employees must be made aware of their obligations and responsibilities with regard to minimising noise emissions. A sample Noise Emission Risk Assessment is attached to this Plan for reference.

Site inductions and toolbox meetings to all employees and subcontractors must include information about the need to minimise noise impacts to surrounding areas.

Contractors should familiarise themselves with methods of controlling noisy machines and alternative construction procedures. These are explained in AS2436-1981 “Guide to Noise Control on Construction, Maintenance and Demolition Sites”.

Any new fencing proposed for the boundaries of the site should be constructed at the earliest opportunity.

Any activities that are known or have the potential to create excessive noise should, where possible, be scheduled to occur at times to cause least annoyance to the community. Carrying out such work during early

morning should be avoided. This includes start up and idling etc. of heavy machinery prior to commencement of work.

Mechanical plant should be silenced using best available control technology. Noise suppression devices should be maintained to manufacturer's specifications.

All equipment used on the site shall have exhaust systems that have been recommended by the manufacturer as having the lowest associated noise for that machine.

Machines which are used intermittently should either be shut down in the intervening periods between use or throttled down to a minimum.

Any portable equipment with the potential to create high levels of noise e.g. compressors, generators etc. should only be selected for use if it incorporates effective noise control. This equipment should be located where practical so that site sheds, or previously erected structures are between it and the nearest potentially affected receivers. Where no such barriers are present this machinery should be located at as great a distance as practicable from residential neighbours.

Plant known to emit noise strongly in one direction should, where possible, be oriented such that the noise is directed away from the closest or the most noise sensitive receivers.

Regular and effective maintenance of all equipment including vehicles moving on and off the site should be conducted. Prompt attention must be given to repair of loose or rattling parts and broken equipment. All maintenance work should only be carried out by qualified persons.

When selecting contractors and/or equipment for the job, preference must be given to those with capacities best suited to the task at hand. That is the use of larger machines with excess capacity should be avoided unless these can be shown to be quieter than smaller capacity machines.

Site access should be designed such that delivery vehicles, and other heavy vehicles moving through the site can do so with minimum need to reverse.

Where possible loading and unloading of plant and materials should be carried out away from potentially affected receivers. No delivery of plant or materials should be accepted before 7 am Monday to Friday or 8 am on Saturday.

Care should be taken not to drop materials from height either into, or out of trucks or other rigid surfaces. The surface to which the materials are being moved should be covered by some resilient material. Particular care should be taken during the loading or unloading of any scaffolding.

5.0 ADMINSITRATIVE PROCEDURES

5.1 Subcontractor Management

It is the responsibility of the main contractor to ensure that all subcontractors comply with site requirements as well as statutory requirements. No subcontractor should be allowed on site without being able to prove duty of care for the safety of their employees and bystanders with regard to noise emissions.

No subcontractor should be allowed on site without being able to provide adherence to the noise control measures detailed in this CNMP that are relevant to their respective operations.

5.2 Action Plan

The Action Plan is the document that will state responsibilities, actions, due dates and specific controls to be implemented. A sample Noise Control Action Plan and Noise Emission Risk Assessment Form are attached for reference.

APPENDIX A

SITE LOCATION PLAN

Noise Control Action Plan

Plant Item	Existing Controls	Sufficiently Controlled (Yes/No)	Proposed Control Measures	By Who	When	Comments

Noise Emission Risk Assessment Form

Plant Item	Risk	Low, Medium, High risk	Immediate Mitigation Possible (Yes/No)	Further Assessment Required	Proposed Action