

APPENDIX D

Project Name:	Gledswood Hills Public School		
Revision:	0	Date of Last Revision:	5/10/18
Reviewed by:	Ed Hartley		

1. PROCESS SUMMARY

To limit the level of noise generated by the construction works so that it does not cause an environmental nuisance to nearby residents and the general public. The following contains advice on managing and monitoring noise levels associated with site works.

2. OBJECTIVES

To provide monitoring information and advice to ensure that noise levels experienced on site and surrounding the site can be adequately managed. Specifically:

- To minimize \ avoid adverse noise impacts associated with the day to day operations of plant, machinery and task through construction methods and management measures.
- Comply with relevant EPA requirements
- Comply with local or site-specific requirements.

Target:

- To monitor noise prior to start at pre-selected locations so that background noise levels can be established and compared against throughout the project life.
- Monitor noise levels generated from plant and equipment and construction activities.
- Maintain noise levels below the accepted rise from the original readings (at surrounding locations).
- Noise complaints that are received from neighboring facilities are dealt with in an appropriate and timely manner.
- To minimise the occurrence of noise complaints associated with the site works from adjacent occupied areas, facilities and neighbors.

3. DEFINITIONS

Not Applicable

4. RESPONSIBILITIES

Owner	Responsibility
Environmental Role	The <u>Environmental Role</u> (or delegated resource) is responsible for the continual monitoring of noise levels on the site.

5. PROCESS DESCRIPTION

5.1 Permits and Licenses

Where construction activities require permits, these must be obtained prior to works commencing – e.g. working outside of hours as stated by local Environmental Protection Authority.

5.2 Impacts

Excessive noise levels can result in a serious nuisance, hearing damage (noise induced hearing loss and tinnitus etc) and loss of usability of site areas and surrounding facilities.

5.3 Noise Generating Activities

	Cross Box for Measures Relevant to Project
Movement and reversing alarms of construction equipment, plant trucks, site vehicles;	<input checked="" type="checkbox"/>
Materials equipment loading and unloading;	<input checked="" type="checkbox"/>
Use of equipment such as concrete cutter, circular saws, nail guns, jack hammer, hand tools, generators, compressors;	<input checked="" type="checkbox"/>
Mobile plant such as Concrete pumps, Agitators, Vibrators, crane operations;	<input checked="" type="checkbox"/>

5.4 Control Measures

	Cross Box for Measures Relevant to Project
Complete Noise Study. Including establishment of 'normal' noise levels at the site prior to construction commencing.	<input type="checkbox"/>
Working hours to be in accordance with contractual and legislative limitations.	<input checked="" type="checkbox"/>
Execute noise generating tasks within the project central area rather than along perimeters, i.e. do not drop rubbish into bins and or loads into trucks from excessive heights or without due care.	<input checked="" type="checkbox"/>

Coordinate site works to maximise the use of existing site features as sound barriers where possible.	<input checked="" type="checkbox"/>
Install temporary or project life hoardings along sensitive areas such as solid panels in preference to mesh panels.	<input type="checkbox"/>
Install temporary, mobile sound barriers or enclosures around noisy tasks, activities and or plant such as brick saws. Possible use of 6mm plywood on timber framing with no gaps at joints or corners. The inside of enclosure lined with sound absorption material (e.g. perforated foil faced fiberglass). These enclosures may be moved as required to achieve maximum benefit for the nearest affected premises, building and or user.	<input type="checkbox"/>
Induction training will address noise awareness, noise sensitive areas and the need to make as little noise as possible, such as avoiding shouting and whistling.	<input checked="" type="checkbox"/>
All site personnel must adhere to site safety rules in relation to hearing PPE when operating or in the vicinity of noise generating plant or equipment when other hierarchy of controls has been eliminated.	<input checked="" type="checkbox"/>
Care shall be taken not to drop materials ensuring no peak noise events occur, including materials from a height into a truck or skip.	<input checked="" type="checkbox"/>
Traffic controllers will prevent queuing, idling or reversing near noise sensitive receivers.	<input checked="" type="checkbox"/>
No music radios or music generating devices are permitted on site	<input checked="" type="checkbox"/>
Plant and Equipment Controls	<input type="checkbox"/>
Vehicle warning devices such as horns are only to be used in case of emergency or where there is imminent threat of danger.	<input checked="" type="checkbox"/>
All plant and equipment to be regularly serviced in accordance with manufacturers' specification.	<input checked="" type="checkbox"/>
Eliminate noisy work practices, shut down plant and do not leave it idling unnecessarily, substitute for something that does not generate as much noise.	<input checked="" type="checkbox"/>
Generators and or other noisy plant are to be situated to minimise noise disturbance to local residents and the general public.	<input checked="" type="checkbox"/>
Noisy equipment to be removed from site.	<input checked="" type="checkbox"/>
Trucks and plant to follow approved, designated transport routes.	<input checked="" type="checkbox"/>
Ensure silencers and enclosures are intact, rotating elements of plant and equipment is balanced, loose bolts are tightened, and frictional noise is reduced through lubrication and cutting noise reduced by maintained sharp equipment.	<input checked="" type="checkbox"/>
Use only necessary power to complete the task at hand. The correct tool, plant and or equipment for the activity.	<input checked="" type="checkbox"/>
Ensure equipment is fitted with adequately maintained silencers \ mufflers which meet the design specifications.	<input checked="" type="checkbox"/>
Plant known to emit noise strongly in one direction shall be orientated so that the noise is directed away from noise sensitive areas where practicable.	<input checked="" type="checkbox"/>
Trucks to be loaded within legal limits for travel on public roads.	<input checked="" type="checkbox"/>
Where possible plant and equipment to be selected with lowest noise rating or to have silencing and noise suppression equipment fitted.	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>
Use of BBS-TEK Backalarm or similar system	<input type="checkbox"/>
Acoustically enclose generators and compressors where possible	<input type="checkbox"/>
Off site access is to be located as far away as possible from noise sensitive receivers	<input checked="" type="checkbox"/>

5.5 Monitoring

General

Observation of noise levels from equipment, vehicles and operation during working hours

Monitoring Devices

To be determined as soon as possible prior to site works commencing.

Noise Monitoring Location Plan:

To be completed as soon as possible prior to site works commencing.

5.6 Emergency Response

- Cease noisy work and consider alternative methods.
 - Repair or service noisy equipment.
- The above tasks may be included within the *Emergency Management Plan*, this document may be attached to the *Emergency Management Plan*.

5.7 Incident Reporting

Refer to the *Injury, Illness and Incident Management and Reporting* flow chart for detailed guidance regarding the management and reporting of injuries, illness and incidents.

Procedures and processes referenced within the above-mentioned document address the following:

- Detailed definitions
- Reporting responsibilities and obligations (both internal and external)
- Incident Reporting responsibilities and expectations
- Site and or National Investigation requirements
- Corrective and Preventive Action
- Analysis of data \ findings (including Objectives \ Targets status)

5.8 Training

- All Hindmarsh Site Staff to be inducted into the *Environmental Management Plan*.
- Relevant Personnel to complete Manager / Supervisor Training in Noise Management this may include a basic grasp of noise terminology, methods of noise measurement, knowledge of current Acts and Regulations OHS&E.
- All site contractors to be inducted into the site-specific induction.

6. RECORDS \ REPORTING (as required)

- *Weekly SQE Inspection,*
- *Weekly Environmental & Sustainability checklist,*

In the event of a complaint record the following via the Action Required Notification:

- A complaint or the recording of successive excessive noise levels above the determined surrounding levels may result in the following corrective actions being implemented
- Address complaint and respond with and implement proposed mitigation measures
- Retraining, removal, re induction, review
- Monitor updated control measures for effectiveness

7. REFERENCES

Internal References	Compass Ref No.
Environmental Management Plan	C-PRE-M005
Environmental Risk and Opportunity Profile	C-PRE-F016
Equipment Calibration Register	C-PRE-F007
Weekly Environmental & Sustainability Checksheet	C-CON-F019
Environmental Noise Monitoring Report	C-CON-F030
Emergency Management Plan	C-PRE-M004

External References		
Document Title	Section	Date \ Revision
Refer to ENV Risk Profile for external resource references		

Project Name:	Gledswood Hills Public School		
Revision:	0	Date of Last Revision:	05/10/18
Reviewed by:	Ed Hartley		

1. PROCESS SUMMARY

The limit of level of vibration generated by the construction of the works so that it does not cause an environmental nuisance to site workers and adjoining property owners.

2. OBJECTIVES

No structural, stakeholder effects on adjoining or nearby buildings \ occupiers or structures caused by site works or laden trucks on public roads.

3. DEFINITIONS

Not Applicable

4. RESPONSIBILITIES

Owner	Responsibility
Environmental Role	The Environmental Role (or delegated resource) is responsible for the continual monitoring of vibration on site

5. PROCESS DESCRIPTION

5.1 Permits and Licenses

Not Applicable

5.2 Control Measures

	Cross Box for Measures Relevant to Project
Review the contract and/or construction activities to determine the need for vibration monitoring.	<input type="checkbox"/>
For all immediate structures and features complete dilapidation surveys of buildings, roads, footpaths.	<input type="checkbox"/>
Schedule the use of vibration causing equipment, such as jackhammers, at the least sensitive time of day.	<input checked="" type="checkbox"/>
Programme operations so that vibration causing activities do not occur simultaneously.	<input checked="" type="checkbox"/>
Adhere to normal hours of operation	<input checked="" type="checkbox"/>
Prior warning to be provided where sensitive locations are expected to be affected by vibration levels in excess of nominated levels (AS2670.2). Including how long the vibration is expected to last.	<input type="checkbox"/>
Plan transportation routes in consultation with the council.	<input type="checkbox"/>
Seek as much distance as possible between plant or equipment and sensitive areas \ receivers.	<input checked="" type="checkbox"/>
Plant and Equipment Controls	
Ensure all equipment and plant is well maintained.	<input checked="" type="checkbox"/>
Isolate equipment causing vibration on resilient mounts, where possible and within manufacturers specifications.	<input checked="" type="checkbox"/>
Use plant that can achieve similar outcome with less vibration, or modification of existing equipment (in keeping with manufacturers specifications) to reduce vibration power levels	<input checked="" type="checkbox"/>
Ensure trucks remain on designated routes.	<input checked="" type="checkbox"/>
Balance variable speed plant and operate at speeds that do not produce resonances (excessive felt vibration in the ground or in the equipment, compared to other speeds)	<input checked="" type="checkbox"/>
Operate vibrating plant at a maximum practical distance to sensitive locations	<input checked="" type="checkbox"/>

5.3 Monitoring

- Vibration monitoring as required.
- Observation of vibration levels during construction works.
- Observation of vehicle and truck movement \ activity.

5.4 Emergency Response

- Cease any work causing atmospheric pollution.
- Review implementation and adequacy of control methods.
- Modify as necessary.

The above tasks are to be included within the *Emergency Management Plan*. This document may be attached to the *Emergency Management Plan*.

5.5 Incident Reporting

Refer to the *Injury, Illness and Incident Management and Reporting* flow chart for detailed guidance regarding the management and reporting of injuries, illness and incidents.

Procedures and processes referenced within the above-mentioned document address the following:

- Detailed definitions
- Reporting responsibilities and obligations (both internal and external)
- Incident Reporting responsibilities and expectations
- Site and or National Investigation requirements
- Corrective and Preventive Action
- Analysis of data \ findings (including Objectives \ Targets status)

6. RECORDS

Keep written record showing:

- *Weekly Environmental & Sustainability Checksheet*

In the event of a complaint record the following via the Action Required Notification:

- A complaint or the recording of successive excessive noise levels above the determined surrounding levels may result in the following corrective actions being implemented
- Address complaint and respond with and implement proposed mitigation measures
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