Epping West Public School — Construction Noise Vibration Management Sub Plan (CNVMSP)

Hansen Yuncken

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1 INTRODUCTION

Pulse White Noise Acoustics (PWNA) has been engaged to prepare a Construction Noise and Vibration Management Sub Plan (CNVMSP) for the construction of the Epping West Public School (EWPS) located at 96 Carlingford Road, Epping NSW.

Onsite unattended and attended noise levels have previously been determined for the project and included in the RWDI *Epping West Public School – Noise Impact Assessment* dated 21 April 2021 and reference: 2190042. The details of the acoustic survey included in the RWDI report have been used in this assessment.

A glossary of acoustic terminology used throughout this report is included in Appendix A.

The author of this report is a director of Pulse White Noise Acoustics who is a member of the Australian Acoustic Society, details including Ben's CV and membership of the AAS are included in Appendix B.

1.1 Site Layout and Development Overview

The proposed development is alterations and additions to an existing educational establishment. In summary, the proposed works will include:

- Demolition works;
- Construction of a three (3) storey building in the south-eastern corner of the site and a two (2) storey building further north adjacent to the site's eastern boundary;
- Refurbishment and renovation works to existing buildings, with a small addition to the western side of an existing building;
- Removal of demountable buildings currently located predominantly on the northern part of the site and associated make good works to reinstate the oval and play space which is predominantly on the northern part of the site.

An existing building known as Building G (located between buildings F and H) is proposed to be demolished, Building G is a single storey classroom building.

The site is located to the north of Carlingford Road and the west of Ward Street, the works to be conducted as part of the constructions include buildings to the east of the exiting school grounds. See Figure 1 below.

Epping West Public School is bordered by residential dwellings along the western boundary as well as residence opposite on Ward Street to the east and residence opposite on Carlingford Road to the south. The West Epping Community Centre is located to the north of the site.

Residential receives which are located within proximity to the site include a combination of single and two storey dwellings with windows overlook the school property.

The nearest sensitive receivers to the site have been identified below.

Receiver 1: Single and two storey residential dwellings located to the west of the school located on Downing Street.

Receiver 2: Single and two storey residential dwellings located to the east of the school opposite on Ward Street.

Receiver 3: Single storey residential dwellings located to the south of the school opposite on Carlingford Road.

Receiver 4: The West Epping Community Centre located to the north of the site

Figure 1 Site Map, Measurement Locations and Surrounding Receivers

LEGEND

- Epping West Public School
- Location of works to be undertaken on the site
- Location of previously undertaken noise monitoring
- Residential receivers
- West Epping Community Centre

1.2 SSD Compliance

This report has been undertaken in accordance with the requirements of Item B14 of the project's conditions of consent.

Details of conditions of consent and sections of the report which include the required items required by the consent are included in the table below.

Table 1 SSD Compliance Table

SSD Condition number	Requirement	Report Reference for Satisfaction
B14	*B14. The Construction Noise and Vibration Management Sub-Plan must address, but not be limited to, the following:*	-
(a)	*be prepared by a suitably qualified and experienced noise expert;*	Ben white is a director of Pulse White Noise Acoustics, Ben's CV and membership of the Australian Acoustic Society is included in Appendix B.
(b)	*describe procedures for achieving the noise management levels in EPA's Interim Construction Noise Guideline (DECC, 2009);*	Sections 4.1
(c)	*describe the measures to be implemented to manage high noise generating works such as piling, in close proximity to sensitive receivers;*	Section 6.1 and 6.2
(d)	*include strategies that have been developed with the community for managing high noise generating works;*	Section 6.2 and Section 6.8
(e)	*describe the community consultation undertaken to develop the strategies in condition B14(d);*	Section 6.5.5 and Appendix C
(f)	*include a complaints management system that would be implemented for the duration of the construction; and*	Section 6.6
(g)	*include a program to monitor and report on the impacts and environmental performance of the development and the effectiveness of the implemented management measures in accordance with the requirements of condition B11*	Section 6.2.2 and Section 6.3.2

Note 1: For Monday to Sunday, Daytime 7:00 am – 10:00 pm; Night-time 10:00 pm – 7:00 am.

Note 2: The L_{Aeq} is the energy average sound level. It is defined as the steady sound level that contains the same amount of acoustical energy as a given time-varying sound.

2 EXISTING ACOUSTIC ENVIRONMENT

Measured noise levels from the attended noise survey undertaken as part of the RWDI *Epping West Public School – Noise Impact Assessment* dated January 2021 and reference: 2190042-1600 have been used in this assessment.

As part of the RWDI *Epping West Public School – Noise Impact Assessment* dated 21 April 2021 and reference: 2190042 as assessment of background noise levels within the vicinity of the site has been undertaken. The *Epping West Public School – Noise Impact Assessment* includes an assessment which has been stated to be in accordance with the NSW EPA's *Noise Policy for Industry* (NPI, 2017).

The Rating Background Noise Level (RBL) is the background noise level used for assessment purposes and includes the 90th percentile of the daily background noise levels during each assessment period, being day, evening and night. The RBL L_{A90} (15minute) and L_{Aeq} noise levels presented within the *Epping West Public School – Noise Impact Assessment* are summarised in Table 2.

Table 2 Measured Ambient Noise Levels corresponding to the NPI's Assessment Time Periods

Measurement Location	Daytime[1] 7:00 am to 6:00 pm		Evening[1] 6:00 pm to 10:00 pm		Night-time[1] 10:00 pm to 7:00 am	
	L_{A90}[2] (dBA)	L_{Aeq}[3] (dBA)	L_{A90}[2] (dBA)	L_{Aeq}[3] (dBA)	L_{A90}[2] (dBA)	L_{Aeq}[3] (dBA)
Monitor Location: South of the site on Carlingford Road						
South of the site – See Figure 1	50	67	45	65	34	63
Monitor Location: North west of the site on Downing Street						
North east of the site – See Figure 1	39	51	37	50	32	45

Note 1: For Monday to Saturday, Daytime 7:00 am – 6:00 pm; Evening 6:00 pm – 10:00 pm; Night-time 10:00 pm – 7:00 am. On Sundays and Public Holidays, Daytime 8:00 am – 6:00 pm; Evening 6:00 pm – 10:00 pm; Night-time 10:00 pm – 8:00 am

Note 2: The L_{A90} noise level is representative of the "average minimum background sound level" (in the absence of the source under consideration), or simply the background level.

Note 3: The L_{Aeq} is the energy average sound level. It is defined as the steady sound level that contains the same amount of acoustical energy as a given time-varying sound.

Measured noise levels in accordance with the time periods defined by the NSW EPA RNP 2011 are presented below.

Table 3 Measured Ambient Noise Levels corresponding to the "RNP" Assessment Time Periods

Measurement Location	Daytime [1] 7:00 am to 10:00 pm	Night-time [1] 10:00 pm to 7:00 am
	L_{Aeq} (whole period) [2] (dBA)	L_{Aeq} (whole period) [2] (dBA)
Carlingford Road	66	63

Note 1: For Monday to Sunday, Daytime 7:00 am – 10:00 pm; Night-time 10:00 pm – 7:00 am.

Note 2: The L_{Aeq} is the energy average sound level. It is defined as the steady sound level that contains the same amount of acoustical energy as a given time-varying sound.

3 PROJECTS CONDITIONS OF CONSENT

Relevant noise and vibration criteria for construction activities includes item B14 of the SSD which includes the following:

> Construction Noise and Vibration Management Sub-Plan (see condition B14 for required inclusions)
>
> *B14. The Construction Noise and Vibration Management Sub-Plan must address, but not be limited to, the following:*
> *(a) be prepared by a suitably qualified and experienced noise expert;*
> *(b) describe procedures for achieving the noise management levels in EPA's Interim Construction Noise Guideline (DECC, 2009);*
> *(c) describe the measures to be implemented to manage high noise generating works such as piling, in close proximity to sensitive receivers;*
> *(d) include strategies that have been developed with the community for managing high noise generating works;*
> *(e) describe the community consultation undertaken to develop the strategies in condition B14(d);*
> *(f) include a complaints management system that would be implemented for the duration of the construction; and*
> *(g) include a program to monitor and report on the impacts and environmental performance of the development and the effectiveness of the implemented management measures in accordance with the requirements of condition B11*

The project has included a *Community Communication Strategy* as require in Item B7 of the consent, which includes the following:

> **Community Communication Strategy**
>
> B7. No later than 48 hours before the commencement of construction, a Community Communication Strategy must be submitted to the Planning Secretary for information. The Community Communication Strategy must provide mechanisms to facilitate communication between the Applicant, the relevant Council and the community (including adjoining affected landowners and businesses, and others directly impacted by the development), during the design and construction of the development and for a minimum of 12 months following the completion of construction.
>
> The Community Communication Strategy must:
>
> (a) identify people to be consulted during the design and construction phases;
>
> (b) set out procedures and mechanisms for the regular distribution of accessible information about or relevant to the development;
>
> (c) provide for the formation of community-based forums, if required, that focus on key environmental management issues for the development;
>
> (d) set out procedures and mechanisms:
>
> (i) through which the community can discuss or provide feedback to the Applicant;
>
> (ii) through which the Applicant will respond to enquiries or feedback from the community; and
>
> (iii) to resolve any issues and mediate any disputes that may arise in relation to construction and operation of the development, including disputes regarding rectification or compensation.

Details of the *Community Communication Strategy* are included in Appendix C.

4 NOISE AND VIBRATION CRITERIA

Relevant noise and vibration criteria for construction activities are detailed below.

4.1 Construction Noise Objectives

Relevant construction noise objectives applicable to this project are outlined below.

4.1.1 NSW EPA (Former DECC) Interim Construction Noise Guideline (ICNG) 2009

Noise objective for construction and demolition activities are discussed in the *Interim Construction Noise Guideline* (ICNG). The ICNG also recommends procedures to address potential impacts of construction noise on residences and other sensitive land uses. The main objectives of the ICNG are summarised as follows:

- Promote a clear understanding of ways to identify and minimise noise from construction works;
- Focus on applying all "feasible" and "reasonable" work practices to minimise construction noise impacts;
- Encourage construction to be undertaken only during the recommended standard hours unless approval is given for works that cannot be undertaken during these hours;
- Streamline the assessment and approval stages and reduce time spent dealing with complaints at the project implementation stage; and
- Provide flexibility in selecting site-specific feasible and reasonable work practices in order to minimise noise impacts.

The ICNG contains a quantitative assessment method which is applicable to this project. Guidance levels are given for airborne noise at residences and other sensitive land uses.

The quantitative assessment method involves predicting noise levels at sensitive receivers and comparing them with the Noise Management Levels (NMLs). The NML affectation categories for residential receivers have been reproduced from the guideline and are listed in the table below.

Table 4 NMLs for quantitative assessment at residences

Time of Day	Noise Management Level $L_{Aeq(15minute)}$ [1,2]	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 LAeq(15minute) 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 dBA	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.
Outside the recommended standard hours above	Noise affected RBL + 5 dB	• A strong justification would typically be required for works outside the recommended standard hours. • The proponent should apply all feasible and reasonable work practices to meet the noise affected level. • Where all feasible and reasonable practices have been applied and noise is more than 5 dB above the noise affected level, the proponent should notify the community.

Note 1 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.

Note 2 The RBL is the overall single-figure background noise level measured in each relevant assessment period (during or outside the recommended standard hours). The term RBL is described in detail in the NSW Industrial Noise Policy (EPA 2000).

Construction noise levels at other noise receivers are outlined below:

- Construction noise levels within classrooms other educational institutions is not recommended to exceed 45dBA $L_{Aeq,15minute}$, when measured internally.
- Construction noise levels at offices and retail outlets are not recommended to exceed 70dBA LAeq,15minute, when measured externally.

Based on the measured background noise levels summarised in section 2, and the NMLs outlined above, the construction noise criteria to be used in this assessment are listed in Table 5.

Table 5 NMLs as basis for the acoustic assessment

Receiver Types	NML, dB $L_{Aeq(15minute)}$		
	Standard Hours **Monday to Friday: 7:00am to 6:00pm** **Saturday: 8:00am to 1:00pm**		**Outside Standard Hours** **All hours not listed in the adjacent column.**
Residential – Receiver 1 to the West	**NAFL: 49** (RBL (39) + 10dB)	**HNAL: 75**	RBL + 5dB
Residential – Receiver 2 to the east	**NAFL: 49** (RBL (39) + 10dB)		
Residential – Receiver 3 to the south	**NAFL: 60** (RBL (50) + 10dB)		
Community Centre – Receiver 4 to the north	**NAFL: 49** (RBL (39) + 10dB)	**HNAL: 70**	RBL + 5dB

4.2 Vibration Criteria

Effects of ground borne vibration on buildings may be segregated into the following three categories:

- Human comfort – vibration in which the occupants or users of the building are inconvenienced or possibly disturbed.
- Effects on building contents – where vibration can cause damage to fixtures, fittings and other non-building related objects.
- Effects on building structures – where vibration can compromise the integrity of the building or structure itself.

4.2.1 Vibration Criteria – Human Comfort

Vibration effects relating specifically to the human comfort aspects of the project are taken from AV-TG. This type of impact can be further categorised and assessed using the appropriate criterion as follows:

- Continuous vibration – from uninterrupted sources.
- Impulsive vibration – up to three instances of sudden impact e.g., dropping heavy items, per monitoring period.
- Intermittent vibration – such as from drilling, compacting or activities that would result in continuous vibration if operated continuously.

Table 6 Continuous vibration acceleration criteria (m/s^2) 1 Hz-80 Hz

Location	Assessment period	Preferred Values		Maximum Values	
		z-axis	x- and y-axis	z-axis	x- and y-axis
Critical working areas (e.g. hospital operating theatres, precision laboratories)	Day or night-time	0.0050	0.010	0.10	0.20
Residences	Daytime	0.010	0.0071	0.020	0.014
	Night-time	0.007	0.005	0.014	0.010
Offices, schools, educational institutions and places of worship	Day or night-time	0.020	0.014	0.040	0.028
		0.04	0.029	0.080	0.058
Workshops	Day or night-time	0.04	0.029	0.080	0.058

Table 7 Impulsive vibration acceleration criteria (m/s^2) 1 Hz-80 Hz

Location	Assessment period	Preferred Values		Maximum Values	
		z-axis	x- and y-axis	z-axis	x- and y-axis
Critical working areas (e.g. hospital operating theatres, precision laboratories)	Day or night-time	0.0050	0.010	0.10	0.20
Residences	Daytime	0.30	0.21	0.60	0.42
	Night-time	0.10	0.071	0.20	0.14
Offices, schools, educational institutions and places of worship	Day or night-time	0.64	0.46	1.28	0.92
Workshops	Day or night-time	0.64	0.46	1.28	0.92

Table 8 Intermittent vibration impacts criteria (m/s$^{1.75}$) 1 Hz-80 Hz

Location	Daytime		Night-time	
	Preferred Values	Maximum Values	Preferred Values	Maximum Values
Critical working areas (e.g. hospital operating theatres, precision laboratories)	0.10	0.20	0.10	0.20
Residences	0.20	0.40	0.13	0.26
Offices, schools, educational institutions and places of worship	0.40	0.80	0.40	0.80
Workshops	0.80	1.60	0.80	1.60

4.2.2 Vibration Criteria – Building Contents and Structure

The vibration effects on the building itself are assessed against international standards as follows:

- For transient vibration: British Standard BS 7385: Part 2-1993 *"Evaluation and measurement for vibration in buildings Part 2: Guide to damage levels from ground borne vibration"* (BSI 1993); and
- For continuous or repetitive vibration: German DIN 4150: Part 3 – 1999 *"Effects of Vibration on Structure"* (DIN 1999).

4.2.3 Standard BS 7385 Part 2 - 1993

For transient vibration, as discussed in standard BS 7385 Part 2-1993, the criteria are based on peak particle velocity (mm/s) which is to be measured at the base of the building. These are summarised below.

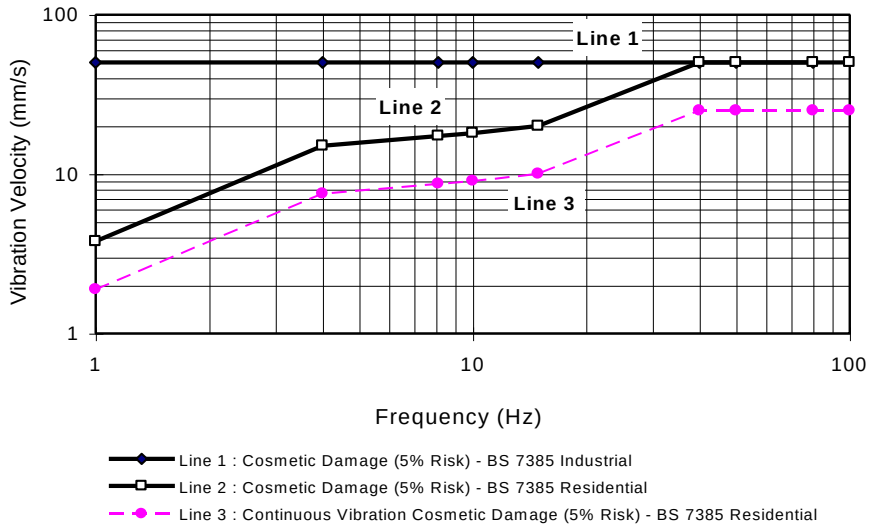
Table 9 Transient vibration criteria as per standard BS 7385 Part 2 - 1993

Line in Figure 2	Type of Building	Peak Component Particle Velocity in Frequency Range of Predominant Pulse	
		4 Hz to 15 Hz	15 Hz and Above
1	Reinforced or framed structures Industrial and heavy commercial buildings.	50 mm/s at 4 Hz and above	
2	Unreinforced or light framed structures Residential or light commercial type buildings	15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above

Standard BS 7385 Part 2 – 1993 states that the values in Table 9 relate to transient vibration which does not cause resonant responses in buildings.

Where the dynamic loading caused by continuous vibration events is such that it results in dynamic magnification due to resonance (especially at the lower frequencies where lower guide values apply), then the values in Table 9 may need to be reduced by up to 50% (refer to Line 3 in Figure 2).

Figure 2 BS 7385 Part 2 – 1993, graph of transient vibration values for cosmetic damage



In the lower frequency region where strains associated with a given vibration velocity magnitude are higher, the recommended values corresponding to Line 2 are reduced. Below a frequency of 4 Hz, where a high displacement is associated with the relatively low peak component particle velocity value, a maximum displacement of 0.6 mm (zero to peak) is recommended. This displacement is equivalent to a vibration velocity of 3.7 mm/s at 1 Hz.

The standard also states that minor damage is possible at vibration magnitudes which are greater than twice those given in Table 9, and major damage to a building structure may occur at values greater than four times the tabulated values.

Fatigue considerations are also addressed in the standard and it is concluded that unless the calculation indicates that the magnitude and number of load reversals is significant (in respect of the fatigue life of building materials) then the values in Table 9 should not be reduced for fatigue considerations.

4.2.4 Standard DIN 4150 Part 3 - 1999

For continuous or repetitive vibration, standard DIN 4150 Part 3-1999 provides criteria based on values for peak particle velocity (mm/s) measured at the foundation of the building; these are summarised in Table 10. The criteria are frequency dependent and specific to particular categories of structures.

Table 10 Structural damage criteria as per standard DIN 4150 Part 3 - 1999

Type of Structure	Peak Component Particle Velocity, mm/s			
	Vibration at the foundation at a frequency of			Vibration of horizontal plane of highest floor at all frequencies
	1 Hz to 10 Hz	10 Hz to 50 Hz	50 Hz to 100 Hz[1]	
Buildings used for commercial purposes, industrial buildings and buildings of similar design	20	20 to 40	40 to 50	40
Dwellings and buildings of similar design and/or use	5	5 to 15	15 to 20	15
Structures that, because of their sensitivity to vibration, do not correspond to those listed in lines 1 and 2 and are of great intrinsic value (e.g. buildings that are under a preservation order)	3	3 to 8	8 to 10	8

Note 1: For frequencies above 100Hz, at least the values specified in this column shall be applied.

4.3 Construction Traffic Noise Criteria

For existing residences and other sensitive land uses affected by additional traffic on existing roads, the NSW *Road Noise Policy (RNP)* states that for noise associated with increased road traffic generated by land use developments, any increase in the total traffic noise level should be limited to 2 dB during both day and night-time periods. An increase of 2 dB represents a minor impact that is considered barely perceptible to the average person.

5 NOISE AND VIBRATION ASSESSMENT

5.1 Construction Noise Assessment

Sound power levels have been predicted for the construction tasks identified in the project program. The equipment anticipated for use in each task is based on previous project experience. The sound power levels for the equipment likely to be used for each of the listed tasks are provided in Table 11 below.

Table 11 Summary of predicted sound power levels

Tasks	Equipment	Sound Power Levels (dBA re 1pW)	Aggregate Sound Power Level per Task (dBA re 1pW)
Site Establishment Works	Mobile crane	110	113
	Power hand tools	109	
	Semi Rigid Vehicle [1]	105	
Ground Works and Demolition	Excavator	112	119
	Hand held jack hammer [1]	111	
	Dump truck [1]	104	
	Concrete saw [1]	114	
	Skid steer	110	
	Power hand tools	109	
Structure	Hand held jack hammer [1]	106	117
	Concrete saw [1]	114	
	Power hand tools	109	
	Welder	101	
	Concrete pump truck	110	
	Concrete agitator truck	108	
Internal Works	Power hand tools	109	109
Common and External Works	Concrete agitator truck	108	117
	Saw cutter [1]	104	
	Dump truck [1]	104	
	Concrete saw [1]	114	
	Power hand tools	109	

Note 1: An assumed time correction has been applied, this being 5 minutes of operation in any 15-minute interval.

5.2 Predicted Construction Noise Levels

Predicted construction noise levels are presented below for each of the surrounding receivers in accordance with the NSW EPA ICNG.

Note:

- Predicted noise levels presented below are given in a range, this includes the expected minimums as well as the maximums.
- With regards to the maximum noise levels in the range, these are typically experienced when plant/works are within close proximity to a boundary. In our experience whilst these levels above NML's and considered intrusive they will only occur for a short time and is not a representation of noise levels during the entire construction period.
- Additionally, As the project will be constructed using modular building systems the expected construction noise levels outlined below are going to be limited when compared to a conventional building construction. Predicted noise levels provided below are considered a worst-case impact.

Table 12 Receiver 1 – Summary of preliminary predicted construction noise levels – Residence to the west of the site

Phase	Activity	Aggregate Sound Power Level (dBA re 1pW)	Predicted Individual Noise Level at Receiver dBA $L_{Aeq\ 15\ minutes}$	Predicted Combined Noise Level at Receiver dBA $L_{Aeq\ 15\ minutes}$	Criteria dBA $L_{Aeq\ 15\ minutes}$	Summary of Result
Site Establishment Works	Mobile crane	113	57 to 60	61 to 64	**Standard Construction Hours** 39 + 10 = **49** **Highly Noise Affected Level** Standard Construction Hours **75**	Works indicatively predicted to have the potential to exceed the noise management level when working near a receiver. Mitigations of construction noise required to be undertaken including measures detailed in this report.
	Power hand tools		56 to 59			
	Semi Rigid Vehicle		53 to 56			
Ground Works and Demolition	Excavator	119	59 to 62	66 to 69		
	Handheld jack hammer		54 to 57			
	Dump truck		52 to 55			
	Concrete saw		62 to 65			
	Skid steer		57 to 60			
	Power hand tools		56 to 59			
Structure	Handheld jack hammer	117	54 to 57	65 to 68		
	Concrete saw		62 to 65			
	Power hand tools		56 to 59			
	Welder		48 to 51			
	Concrete pump truck		57 to 60			
	Concrete agitator truck		55 to 58			
Internal Works	Power hand tools	109	56 to 59	56 to 59		
Common and External Works	Concrete agitator truck	117	55 to 58	64 to 67		
	Saw cutter		52 to 55			
	Dump truck		52 to 55			
	Concrete saw		62 to 65			
	Power hand tools		56 to 59			

Table 13 Receiver 2 – Summary of predicted construction noise levels – Residence to the east of the site

Phase	Activity	Aggregate Sound Power Level (dBA re 1pW)	Predicted Individual Noise Level at Receiver dBA $L_{Aeq\ 15\ minutes}$	Predicted Combined Noise Level at Receiver dBA $L_{Aeq\ 15\ minutes}$	Criteria dBA $L_{Aeq\ 15\ minutes}$	Summary of Result
Site Establishment Works	Mobile crane	113	61 to 72	64 to 76	**Standard Construction Hours** 39 + 10 = **49** **Highly Noise Affected Level** Standard Construction Hours **75**	Works indicatively predicted to have the potential to exceed the noise management level when working near a receiver. Mitigations of construction noise required to be undertaken including measures detailed in this report.
	Power hand tools		60 to 71			
	Semi Rigid Vehicle		56 to 68			
Ground Works and Demolition	Excavator	119	63 to 74	69 to 81		
	Handheld jack hammer		57 to 69			
	Dump truck		55 to 67			
	Concrete saw		65 to 77			
	Skid steer		61 to 72			
	Power hand tools		60 to 71			
Structure	Handheld jack hammer	117	57 to 69	69 to 80		
	Concrete saw		65 to 77			
	Power hand tools		60 to 71			
	Welder		52 to 63			
	Concrete pump truck		61 to 72			
	Concrete agitator truck		59 to 70			
Internal Works	Power hand tools	109	60 to 71	60 to 71		
Common and External Works	Concrete agitator truck	117	59 to 70	68 to 79		
	Saw cutter		55 to 67			
	Dump truck		55 to 67			
	Concrete saw		65 to 77			
	Power hand tools		60 to 71			

Table 14 Receiver 3 - Summary of predicted construction noise levels – Residence located to the south

Phase	Activity	Aggregate Sound Power Level (dBA re 1pW)	Predicted Individual Noise Level at Receiver dBA $L_{Aeq\ 15\ minutes}$	Predicted Combined Noise Level at Receiver dBA $L_{Aeq\ 15\ minutes}$	Criteria dBA $L_{Aeq\ 15\ minutes}$	Summary of Result
Site Establishment Works	Mobile crane	113	58 to 70	61 to 73	**Standard Construction Hours** 50 + 10 = 60 **Highly Noise Affected Level** Standard Construction Hours **75**	Works indicatively predicted to have the potential to exceed the noise management level when working near a receiver. Mitigations of construction noise required to be undertaken including measures detailed in this report.
	Power hand tools		57 to 69			
	Semi Rigid Vehicle		53 to 65			
Ground Works and Demolition	Excavator	119	60 to 72	66 to 78		
	Handheld jack hammer		54 to 66			
	Dump truck		52 to 64			
	Concrete saw		62 to 74			
	Skid steer		58 to 70			
	Power hand tools		57 to 69			
Structure	Handheld jack hammer	117	54 to 66	65 to 77		
	Concrete saw		62 to 74			
	Power hand tools		57 to 69			
	Welder		49 to 61			
	Concrete pump truck		58 to 70			
	Concrete agitator truck		56 to 68			
Internal Works	Power hand tools	109	57 to 69	57 to 69		
Common and External Works	Concrete agitator truck	117	56 to 68	65 to 77		
	Saw cutter		52 to 64			
	Dump truck		52 to 64			
	Concrete saw		62 to 74			
	Power hand tools		57 to 69			

Table 15 Receiver 4 - Summary of predicted construction noise levels – Community Centre to the north of the site

Phase	Activity	Aggregate Sound Power Level (dBA re 1pW)	Predicted Individual Noise Level at Receiver dBA $L_{Aeq\ 15\ minutes}$	Predicted Combined Noise Level at Receiver dBA $L_{Aeq\ 15\ minutes}$	Criteria dBA $L_{Aeq\ 15\ minutes}$	Summary of Result
Site Establishment Works	Mobile crane	113	55 to 62	58 to 65	**Standard Construction Hours** 39 + 10 = **49** **Highly Noise Affected Level** Standard Construction Hours **70**	Works indicatively predicted to have the potential to exceed the noise management level when working near a receiver. Mitigations of construction noise required to be undertaken including measures detailed in this report.
	Power hand tools		54 to 61			
	Semi Rigid Vehicle		50 to 57			
Ground Works and Demolition	Excavator	119	57 to 64	63 to 70		
	Handheld jack hammer		51 to 58			
	Dump truck		49 to 56			
	Concrete saw		59 to 66			
	Skid steer		55 to 62			
	Power hand tools		54 to 61			
Structure	Handheld jack hammer	117	51 to 58	62 to 69		
	Concrete saw		59 to 66			
	Power hand tools		54 to 61			
	Welder		46 to 53			
	Concrete pump truck		55 to 62			
	Concrete agitator truck		53 to 60			
Internal Works	Power hand tools	109	54 to 61	54 to 61		
Common and External Works	Concrete agitator truck	117	53 to 60	62 to 69		
	Saw cutter		49 to 56			
	Dump truck		49 to 56			
	Concrete saw		59 to 66			
	Power hand tools		54 to 61			

5.3 Construction Traffic Noise Assessment

It is proposed that the construction traffic would access the site via Carlingford Road to the south and Ward Street to the east. All construction traffic will access the site and use the surrounding roadways in accordance with the site Construction Management plan.

5.4 Vibration Assessment

In order to maintain compliance with the human comfort vibration criteria discussed in Section 4.2, it is recommended that the indicative safe distances listed in table below should be maintained. These indicative safe distances should be validated prior to the start of construction works by undertaking measurements of vibration levels generated by construction and demolition equipment to be used on site.

Since the criteria for scientific or medical equipment (should any of these exist close to the site) can be more stringent than those required for human comfort, vibration validating measurements should be conducted at each site to determine the vibration level and potential impact onto this sensitive equipment.

Additionally, any vibration levels should be assessed in accordance with the criteria discussed in Section 4.2.

Table 16 Recommended indicative safe working distances for vibration intensive plant

Plant	Rating / Description	Safe Working Distances (m)	
		Cosmetic Damage (BS 7385: Part 2 DIN 4150: Part 3)	Human Comfort (AVTG)
Vibratory roller	< 50 kN (Typically 1 – 2 tonnes)	5	15 – 20
	< 100 kN (Typically 2 – 4 tonnes)	6	20
	< 200 kN (Typically 4 – 6 tonnes)	12	40
	< 300 kN (Typically 7 – 13 tonnes)	15	100
	> 300 kN (Typically more than 13 tonnes)	20	100
Small hydraulic hammer	300 kg, typically 5 – 12 tonnes excavator	2	7
Medium hydraulic hammer	900 kg, typically 12 – 18 tonnes excavator	7	23
Large hydraulic hammer	1600 kg, typically 18 – 34 tonnes excavator	22	73
Vibratory pile driver	Sheet piles	2 – 20	20
Jackhammer	Hand held	1	Avoid contact with structure and steel reinforcements

6 NOISE AND VIBRATION MANAGEMENT PLAN

6.1 Acoustic Management Procedures

Table 17 below summarises the management procedures recommended for airborne noise and vibration impact. These procedures are also further discussed in the report. Hence, where applicable, links to further references are provided in Table 17.

Table 17 Summary of mitigation procedures

Procedure	Abbreviation	Description	Further Reference
General Management Measures	GMM	Introduce best-practice general mitigation measures in the workplace which are aimed at reducing the acoustic impact onto the nearest affected receivers.	Refer to Section 6 For noise impact, also refer to Section 6.2.1 For vibration impact, also refer to Section 6.3.1
Project Notification	PN	Issue project updates to stakeholders, discussing overviews of current and upcoming works. Advanced warning of potential disruptions can be included. Content and length to be determined on a project-by-project basis.	Refer to Section 6.5.4 and 6.5.5.
Verification Monitoring	V	Monitoring to comprise attended or unattended acoustic surveys. The purpose of the monitoring is to confirm measured levels are consistent with the predictions in the acoustic assessment, and to verify that the mitigation procedures are appropriate for the affected receivers. If the measured levels are higher than those predicted, then the measures will need to be reviewed and the management plan will need to be amended.	For noise impact, refer to Section 6 and Section 6.2.3. For vibration impact, refer to Section 6.3.2
Complaints Management System	CMS	Implement a management system which includes procedures for receiving and addressing complaints from affected stakeholders	Refer to Section 6.6
Specific Notification	SN	Individual letters or phone calls to notify stakeholders that noise levels are likely to exceed noise objectives. Alternatively, contractor could visit stakeholders individually in order to brief them in regards to the noise impact and the mitigation measures that will be implemented.	Refer to Section 6.5.4 and 6.5.5.
Respite Offer	RO	Offer provided to stakeholders subjected to an ongoing impact.	-
Alternative Construction Methodology	AC	Contractor to consider alternative construction options that achieve compliance with relevant criteria. Alternative option to be determined on a case-by-case basis.	-

The application of these procedures is in relation to the exceedances over the relevant criteria. For airborne noise, the criteria are based on NMLs. The allocation of these procedures is discussed in Section 6.1.1

For vibration, the criteria either correspond to human comfort, building damage or scientific and medical equipment. The application of these procedures is discussed in Section 6.1.2.

6.1.1 Allocation of Noise Management Procedures

For residences, the management procedures have been allocated based on noise level exceedances at the affected properties, which occur over the designated NMLs (refer to section 4). The allocation of these procedures is summarised in Table 18 below.

Table 18 Allocation of noise management procedures – residential receivers

Construction Hours	Exceedance over NML (dB)	Management Procedures (see definition above)
Standard Hours Mon – Fri: 8:00 am to 7:00 pm Sat: 8:00 am – 5:00 pm	0 - 3	GMM
	4 - 10	GMM, PN, V [1], CMS, AC
	> 10	GMM, PN, V, CMS, SN, AC
Outside Standard Hours Mon – Fri: 7:00 am to 8:00 am Sat: 7:00 am to 8:00 am	0 - 10	GMM, AC
	11 - 20	GMM, PN, V [1], CMS, AC
	> 20	GMM, PN, V, CMS, SN, RO, AC

Notes

1. Verification monitoring to be undertaken upon complaints received from affected receivers

Please note the following regarding the allocation of these procedures:

- The exceedances have been estimated as part of the acoustic assessment, and these are summarised in Section 5.1.
- The allocation of procedures is based on the assumptions used for noise level predictions (refer to Section 5.1). Consequently, these allocations can be further refined once additional details of the construction program become available.

For non-residential receivers (such as commercial), management measures are provided in Section 6.2.3.

6.1.2 Allocation of Vibration Management Procedures

Table 19 below summarises the vibration management procedures to be adopted based on exceedance scenarios (i.e., whether the exceedance occurs over human comfort criteria, building damage criteria, or criteria for scientific and medical equipment). Please note these management procedures apply for any type of affected receiver (i.e., for residences as well as non-residential receivers).

Table 19 Allocation of vibration management procedures

Construction Hours	Exceedance Scenario	Management Procedures
Standard Hours Mon – Fri: 8:00 am to 7:00 pm Sat: 8:00 am – 5:00 pm	Over human comfort criteria (refer to Section 4.2)	GMM, PN, V, RO
	Over building damage criteria (refer to Section 4.2	GMM, V, AC
Outside Standard Hours Mon – Fri: 7:00 am to 8:00 am Sat: 7:00 am to 8:00 am	Over human comfort criteria (refer to Section 4.2)	GMM, SN, V, RO, CMS
	Over building damage criteria (refer to Section 4.2)	GMM, V, AC

6.2 Site Specific Noise Mitigation Measures – High Noise Affected Levels

Predicted noise levels outlined in section 5.1 indicate exceedances above the Noise Management Levels (NMLs) as well as the Highly Noise Affected Level (HNAL) when in proximity to a boundary. To militate against any exceedances, the site will need to introduce periods of respite for activities which are creating noise levels above the HNAL only (i.e. greater than 75dBA). See below.

Table 20 Recommended Respite Periods

Monday to Friday	Saturday
7:00am to 8:00am – No noisy works (Respite Period)	8:00am to 9:00am – No noisy works (Respite Period)
8:00am to 11:30am – Works	9:00am to 12:00pm – Works
11:30am to 12:30pm – No noisy works (Respite Period)	12:00pm to 1:00pm – No noisy works (Respite Period)
12:30pm to 3:30pm – Works	
3:30pm to 4:30pm – No noisy works (Respite Period)	
4:30pm to 6:00pm – Works	

6.2.1 General Comments

The contractor will, where reasonable and feasible, apply best practice noise mitigation measures. These measures shall include the following:

- Maximising the offset distance between plant items and nearby noise sensitive receivers.
- Preventing noisy plant working simultaneously and adjacent to sensitive receivers.
- Minimising consecutive works in the same site area.
- Orienting equipment away from noise sensitive areas.
- Carrying out loading and unloading away from noise sensitive areas.

In order to minimise noise impacts during the works, the contractor will take all reasonable and feasible measures to mitigate noise effects.

The contractor will also take reasonable steps to control noise from all plant and equipment. Examples of appropriate noise control include efficient silencers and low noise mufflers.

The contractor should apply all feasible and reasonable work practices to meet the NMLs and inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels, duration of noise generating construction works, and the contact details for the proposal.

6.2.2 Noise Monitoring

Noise monitoring, if required, will be performed by an acoustical consultant directly engaged by the contractor.

Noise monitoring is recommended to be undertaken by attended noise measurements at the start of any new phase of works (i.e. demolition, excavation or remediation works etc.). The statistical parameters to be measured should include the following noise descriptors: L_{Amin}, L_{A90}, L_{A10}, L_{A1}, L_{Amax} and L_{Aeq}. Unattended noise measurements should be conducted over consecutive 15 minute periods.

This monitoring should also be complemented by undertaking attended noise measurements in order to:

- Differentiate between construction noise sources and other extraneous noise events (such as road traffic and aircraft noise)
- Note and identify any excessive noise emitting machinery or operation.

Noise monitoring and measurements on the site will include the following:

1. Noise monitoring during the required demolition to be completed on the site.
2. Periodic attended noise measurements during the bulk earthworks to be completed on the site, typically monthly.

In addition to the above detailed noise logging and site surveys, should any complaints be received which have not been determined previously, it should be confirmed by conducting additional attended noise measurements.

The survey methodology and any equipment should comply with the requirements discussed in Standard AS 1055.1-1997.

6.2.3 Noise Mitigation Measures for Non-Residential Receivers

Where exceedances have been identified in Section 5, the following mitigation measures are recommended:

- Undertake general mitigation measures as discussed in Section 0
- Issue project updates to tenants in affected premises. The updates can include overview of current and upcoming works, as well as advanced warning of potential disruptions. These updates can also be issued through an email distribution list or via social media.
- Signage to be posted in order to provide stakeholders information regarding project details, emergency contacts and enquiry contact information.

6.2.4 Alternate Equipment or Process

Exceedance of the site's NMLs should result in an investigation as to whether alternate equipment could be used, or a difference process could be undertaken.

In some cases, the investigation may conclude that no possible other equipment can be used, however, a different process could be undertaken.

6.2.5 Acoustic Enclosures/Screening

Typically, on a construction site there are three different types of plant that will be used: mobile plant (i.e., excavators, skid steers, etc.), semi mobile plant (i.e., hand tools generally) or static plant i.e. (diesel generators).

For plant items which are static it is recommended that, in the event exceedances are being measured due to operation of the plant item, an acoustic enclosure/screen is constructed to reduce impacts. These systems can be constructed from Fibre Cement (FC) sheeting or, if airflow is required, acoustic attenuators or louvres.

For semi mobile plant, relocation of plant should be investigated to either be operated in an enclosed space or at locations away from a receiver.

With mobile plant it is generally not possible to treat these sources. However, investigations into the machine itself may result in a reduction of noise (i.e., mufflers/attenuators etc).

6.2.6 Required Piling

Piling on the site will be limited and will not required vibration or percussion piling. All piling should be undertaken during the approved hours of works for the project and the proposed period when piling is to be undertaken is to be included in the community notifications provided to surrounding receivers.

6.3 Vibration Mitigation Measures

6.3.1 General Comments

As part of the CNVMP, the following vibration mitigation measures should be implemented:

- Any vibration generating plant and equipment is to be in areas within the site in order to lower the vibration impacts.
- Investigate the feasibility of rescheduling the hours of operation of major vibration generating plant and equipment.
- Use lower vibration generating items of construction plant and equipment; that is, smaller capacity plant.
- Minimise conducting vibration generating works consecutively in the same area (if applicable).
- Schedule a minimum respite period of at least 30 minutes before activities commence which are to be undertaken for a continuous 4-hour period.
- Use only dampened rock breakers and/or "city" rock breakers to minimise the impacts associated with rock breaking works.
- Conduct attended measurements of vibration generating plant at commencement of works in order to validate the indicative safe working distances advised in Table 25 and, consequently, to establish safe working distances suitable to the project. Measurements should be conducted at the nearest affected property boundary. These safe working distances should be defined by considering the vibration criteria discussed in Section 1.2 (i.e., criteria for structural damage, human comfort and impact to scientific or medical equipment).

6.3.2 Vibration Monitoring

Vibration monitoring will be undertaken at the nearest most affected structures and include the following:

1. Attended vibration surveys resulting from high vibration generating activities which are within the recommended safe working distances detailed in Table 16 above. Vibration assessments should include attended vibration measurements of proposed activities to be undertaken on the site.

The vibration monitoring equipment would be operated and analysed by the acoustical consultant.

Reports of the measured vibration levels and their likely impacts would be prepared by the acoustical consultant and issued to the contractor.

6.4 Noise and Vibration Monitoring

As part of the management of noise from the proposed construction activities to be undertaken on the site the following noise and vibration monitoring is to be undertaken:

1. Noise Monitoring– Attended noise monitoring of excavation and construction activities is to be undertaken during the following periods:
    a. Commencement of any rock breaking or sawing on the site.
    b. In response to any ongoing complaints received from neighbours.

2. Vibration – Based on the proximity of the surrounding receivers to the works magnitudes of vibration resulting from construction activities required to be undertaken on the site are not expected to approach vibration limits detailed in Section 4.2 of this report, therefore permanent continuous vibration monitoring is not recommended.

    Attended vibration monitoring is to be undertaken at the following periods:
    a. Commencement of any high vibration generating activities including hydrail hammering, rock breaking or vibration rolling on the site.
    b. receiver location in the event complaints resulting from construction activities resulting from the perception of vibration are experienced by the occupants of buildings within the vicinity of the site.

6.5 SINSW Complaints management process as outlined in the Community Communication Report (CCR)

6.5.1 Enquiries and complaints management

SINSW manages enquiries, and complaints in a timely and responsive manner and detailed in the Community Consolation Summary report for Epping West Public School and included Appendix C.

Prior to project delivery, a complaint could be related to lack of community consultation, design of the project, lack of project progress, etc.

During project delivery, a complaint is defined as in regard to construction impacts – such as – safety, dust, noise, traffic, congestion, loss of parking, contamination, loss of amenity, hours of work, property damage, property access, service disruption, conduct or behaviour of construction workers, other environmental impacts, unplanned or uncommunicated disruption to the school.

As per our planning approval conditions, a complaints register is updated monthly and is publicly available on the project's website page on the SINSW website. The complaints register will record the number of complaints received, the nature of the complaints and how the complaint was resolved.

6.5.2 Complaints management process

All complaints will be conducted using the SINSW Community Communication Strategy for the Epping West Public School Upgrade, which is included in Appendix D.

Any face to face complaints will be directed to the hotline as detailed in the Community Communication Strategy.

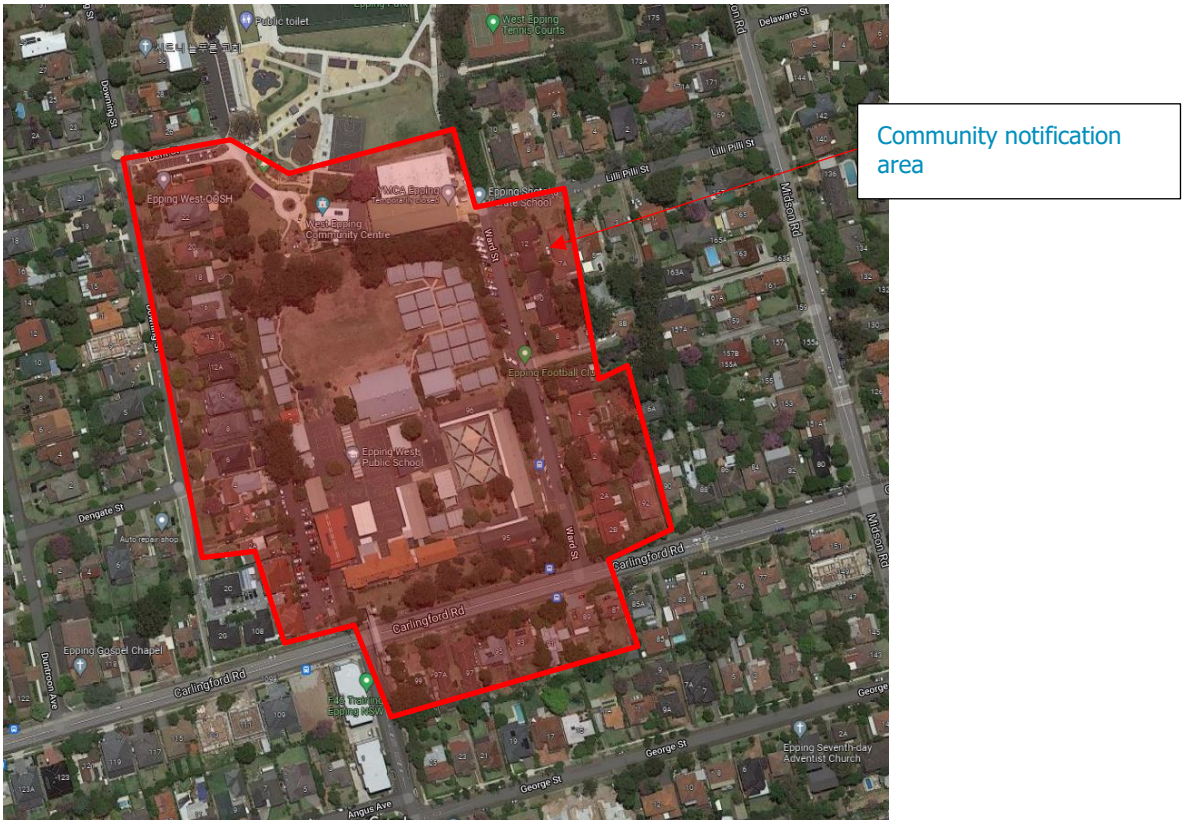
6.5.3 Complaints in common community languages

Complaints can be made in common community languages using the Translating and Interpreting Service (TIS), managed by the Department of Home Affairs. Community members can be connected to an interpreter by calling TIS on 131 450. TIS contact details are included on all project communications. Once TIS has the interpreter on the line, the interpreter and community member are connected to School Infrastructure and phone interpretation can begin. School Infrastructure NSW receives the complaint via the translator and begins the complaints management process as outlined above.

6.5.4 Community Notifications

Prior to the works onsite being undertaken, it is recommended that community consultation with the neighbouring affected parties be undertaken. These include the locations detailed in the figure below.

Figure 3 Required Community Notification Area



Communication notification, should not be limited to the beginning of the onsite works but throughout, providing the community with constant updates on the progress and upcoming works. In our experience these could include:

- Project website.
- Email notifications; and
- Letterbox drops.

6.5.5 Community Engagement

It is proposed that throughout the duration of the project, continued meetings with both the school principals will be undertaken on a regular basis to monitor and mitigate any impacts of construction noise and vibration on the school community.

6.6 Complaints Management System

Should complaints arise they must be dealt with in a responsible and uniform manner, therefore, a management system to deal with complaints is detailed above.

6.7 Contingency Plans

Contingency plans are required to address noise or vibration problems if excessive levels are measured at surrounding sensitive receivers and/or if justified complaints occur. Such plans include:

- Stop the onsite works.
- Identify the source of the main equipment within specific areas of the site which is producing the most construction noise and vibration at the sensitive receivers; and
- Review the identified equipment and determine if an alternate piece of equipment can be used or the process can be altered.
- In the event an alternate piece of equipment or process can be used, works can re-commence.
- In the event an alternate piece of equipment or process cannot be determined implement a construction assessment to be performed by a suitably qualified acoustic consultant.

The Superintendent shall have access to view the Contractor's noise measurement records on request. The Superintendent may undertake noise monitoring if and when required.

6.8 General Mitigation Measures (Australia Standard 2436-2010)

As well as the above project specific noise mitigation controls, AS 2436-2010 "*Guide to Noise and Vibration Control on Construction, Demolition and Maintenance Sites*" sets out numerous practical recommendations to assist in mitigating construction noise emissions. Examples of strategies that could be implemented on the subject project are listed below, including the typical noise reduction achieved, where applicable.

6.8.1 Adoption of Universal Work Practices

- Regular reinforcement (such as at toolbox talks) of the need to minimise noise and vibration.
- Regular identification of noisy activities and adoption of improvement techniques.
- Avoiding the use of portable radios, public address systems or other methods of site communication that may unnecessarily impact upon nearby sensitive receivers.
- Where possible, avoiding the use of equipment that generates impulsive noise.
- Minimising the need for vehicle reversing for example (particularly at night), by arranging for one-way site traffic routes.
- Use of broadband audible alarms on vehicles and elevating work platforms used on site.
- Minimising the movement of materials and plant and unnecessary metal-on-metal contact.
- Minimising truck movements.

6.8.2 Plant and Equipment

- Choosing quieter plant and equipment based on the optimal power and size to most efficiently perform the required tasks.
- Selecting plant and equipment with low vibration generation characteristics.
- Operating plant and equipment in the quietest and most efficient manner.

6.8.3 On Site Noise Mitigation

- Maximising the distance between noise activities and noise sensitive land uses.
- Installing purpose-built noise barriers, acoustic sheds and enclosures.

6.8.4 Work Scheduling

- Providing respite periods which could include restricting very noisy activities to time periods that least affect the nearby noise sensitive locations, restricting the number of nights that after-hours work is conducted near residences or by determining any specific requirements.
- Scheduling work to coincide with non-sensitive periods.
- Planning deliveries and access to the site to occur quietly and efficiently and organising parking only within designated areas located away from the sensitive receivers.
- Optimising the number of deliveries to the site by amalgamating loads where possible and scheduling arrivals within designated hours.
- Including contract conditions that include penalties for non-compliance with reasonable instructions by the principal to minimise noise or arrange suitable scheduling.

6.8.5 Source Noise Control Strategies

Some ways of controlling noise at the source are:

- Where reasonably practical, noisy plant or processes should be replaced by less noisy alternatives.
- Modify existing equipment: Engines and exhausts are typically the dominant noise sources on mobile plant such as cranes, graders, excavators, trucks, etc. In order to minimise noise emissions, residential grade mufflers should be fitted on all mobile plant utilised on site.
- Siting of equipment: locating noisy equipment behind structures that act as barriers, or at the greatest distance from the noise-sensitive area; or orienting the equipment so that noise emissions are directed away from any sensitive areas, to achieve the maximum attenuation of noise.
- Regular and effective maintenance.

6.8.6 Miscellaneous Comments

Deliveries should be undertaken, where possible, during standard construction hours.

Maximise hammer penetration (and reduce blows) by using sharp hammer tips. Keep stocks of sharp profiles at site and monitor the profiles in use.

It is advised that mobile plant and trucks operating on site for a significant portion of the project are to have reversing alarm noise emissions minimised. This is to be implemented subject to recognising the need to maintain occupational safety standards.

No public address system should be used on site (except for emergency purposes).

7 CONCLUSION

This report details the Construction Noise and Vibration Management Sub Plan for the construction of the Epping West Public School project.

An assessment of noise and vibration impacts from the required processes to be undertaken during the construction period of the project (including ground works and construction) has been undertaken and suitable treatments, management controls, perioding measurements and community engagement has been detailed in this report.

Providing the recommendations in this report are included in the construction of the site, compliance with the relevant EPA's *Interim Construction Noise Guideline* and the projects *Consent* will be achieved.

Based on the required construction activities to be undertaken on the site and the distance separation to the neighbouring receivers, compliance with the relevant vibration criteria is expected to be achieved without additional mitigations. Conformation of compliance with the relevant criteria will be undertaken using attended vibration monitoring.

For any additional information please do not hesitate to contact the person below.

Regards

Ben White
Director

Pulse White Noise Acoustics

APPENDIX A: ACOUSTIC GLOSSARY

The following is a brief description of the acoustic terminology used in this report:

Ambient Sound	The totally encompassing sound in a given situation at a given time, usually composed of sound from all sources near and far.
Audible Range	The limits of frequency which are audible or heard as sound. The normal ear in young adults detects sound having frequencies in the region 20 Hz to 20 kHz, although it is possible for some people to detect frequencies outside these limits.
Character, acoustic	The total of the qualities making up the individuality of the noise. The pitch or shape of a sound's frequency content (spectrum) dictate a sound's character.
Decibel [dB]	The level of noise is measured objectively using a Sound Level Meter. The following are examples of the decibel readings of every day sounds; 0dB the faintest sound we can hear 30dB a quiet library or in a quiet location in the country 45dB typical office space. Ambience in the city at night 60dB Martin Place at lunch time 70dB the sound of a car passing on the street 80dB loud music played at home 90dB the sound of a truck passing on the street 100dB the sound of a rock band 115dB limit of sound permitted in industry 120dB deafening
dB(A)	*A-weighted decibels* The ear is not as effective in hearing low frequency sounds as it is hearing high frequency sounds. That is, low frequency sounds of the same dB level are not heard as loud as high frequency sounds. The sound level meter replicates the human response of the ear by using an electronic filter which is called the "A" filter. A sound level measured with this filter switched on is denoted as dB(A). Practically all noise is measured using the A filter. The sound pressure level in dB(A) gives a close indication of the subjective loudness of the noise.
Frequency	Frequency is synonymous to *pitch*. Sounds have a pitch which is peculiar to the nature of the sound generator. For example, the sound of a tiny bell has a high pitch and the sound of a bass drum has a low pitch. Frequency or pitch can be measured on a scale in units of Hertz or Hz.
Loudness	A rise of 10 dB in sound level corresponds approximately to a doubling of subjective loudness. That is, a sound of 85 dB is twice as loud as a sound of 75 dB which is twice as loud as a sound of 65 dB and so on
LMax	The maximum sound pressure level measured over a given period.
LMin	The minimum sound pressure level measured over a given period.
L1	The sound pressure level that is exceeded for 1% of the time for which the given sound is measured.
L10	The sound pressure level that is exceeded for 10% of the time for which the given sound is measured.
L90	The level of noise exceeded for 90% of the time. The bottom 10% of the sample is the L_{90} noise level expressed in units of dB(A).
Leq	The "equivalent noise level" is the summation of noise events and integrated over a selected period of time.
dB (A)	'A' Weighted overall sound pressure level
Sound Pressure Level, LP dB	A measurement obtained directly using a microphone and sound level meter. Sound pressure level varies with distance from a source and with changes to the measuring environment. Sound pressure level equals 20 times the logarithm to the base 10 of the ratio of the rms sound pressure to the reference sound pressure of 20 micro Pascals.
Sound Power Level, Lw dB	Sound power level is a measure of the sound energy emitted by a source, does not change with distance, and cannot be directly measured. Sound power level of a machine may vary depending on the actual operating load and is calculated from sound pressure level measurements with appropriate corrections for distance and/or environmental conditions. Sound power levels is equal to 10 times the logarithm to the base 10 of the ratio of the sound power of the source to the reference sound power of 1 picoWatt

APPENDIX B – BEN WHITE CV AND AAS MEMBERSHIP

Curriculum Vitae – Benjamin White

Employment Experience:

Director – Pule White Noise Acoustics November 2020 – Present

Director - White Noise Acoustics: March 2019 – Present

Director/Engineer - Acoustic Logic Consultancy: March 2001 – July 2018

Experience:

Ben White the Director of White Noise has over 17 years of experience in acoustic.

Ben has significant experience in providing acoustic services and expert advice in the following areas:

- Residential acoustic reports including aircraft noise (AS2021) assessments, traffic noise, train noise and vibration assessments.
- Noise emission assessments for various projects including assessments with planning requirements using EPA, Department of Planning, Council DCP's and similar regulatory requirements.
- Planning approvals including Development Applications for multi dwelling residential developments, commercial developments, hotels and boarding houses, places of entertainment, carparks, mixed use developments, shopping centres and the like.
- Expert court witness including Land and Environment Court and other expert witness work.
- Project planning and specifications for types of projects including residential, commercial, retail, hotel accommodation, warehouses and industrial developments and mixed-use projects.
- Project delivery for all types of projects including, design advice and project delivery requirements at all stages of projects during design and construction.
- Certification works including on site testing for the provision of certification of all types of projects including items required to comply with Part F5 of the BCA as well as project specific acoustic requirements.
- Mechanical design and advice for the treatments of mechanical services with project requirements.
- External façade design and specification.
- Specialised acoustic design advice including areas of projects.
- Issues with existing building include site surveys and audits as well as advice regarding rectification if required.

AUSTRALIAN ACOUSTICAL SOCIETY

This is to certify that

BENJAMIN WHITE

was admitted to the grade of

MEMBER

of the Australian Acoustical Society

on 27th October 2020

and is entitled to use the letters

M.A.A.S.

issued on 26th November 2020

S. Moore

President

General Secretary

AUSTRALIAN ACOUSTICAL SOCIETY A.C.N. 000 712 658
The Common Seal Of

This certificate remains the property of the Australian Acoustical Society

APPENDIX C – COMMUNITY CONSULTANT SUMMARY REPORT

NSW GOVERNMENT Education

April 2021

School Infrastructure NSW

Community Consultation Summary Report

Epping West Public School

Contents

1. Introduction

School Infrastructure NSW's (SINSW) mission is to provide school infrastructure solutions by working collaboratively with all stakeholders to create learning environments across NSW that serve future needs and make us proud.

As part of our transformation in the way we plan, develop and deliver schools across the state, we are committed to openly sharing information. This will show how one school compares with its neighbouring group of schools. It also explains the challenges we face in the complex world of schools planning. Part of this transparency means that we will let the community know which schools will be worked on and at what time. It will take time since we have over 2,200 schools across the state, so we will address high growth areas within each district and region across the State first.

As we develop a range of options for addressing school infrastructure requirements, members of the community will be able to see and comment on our proposal before it is finalised. Feedback is important and helps us refine our planning process. Whilst we cannot commit to implementing everything suggested, engaging with the broader community ensures we've considered what's important to you, and balanced this with practicality and cost to deliver sustainable and relevant solutions for schools.

This report summarises the consultation and communication activities that have been undertaken in relation to the proposed Epping West Public School upgrade. It forms part of the Environmental Impact Statement required for the State Significant Development (SSD) application as specified in the Secretary's Environmental Assessment Requirements (SEARs).

This report summarises the engagement undertaken for this stage of the proposed upgrades by outlining:

- the SEARs for stakeholder and community consultation
- the consultation process undertaken, including key meetings with stakeholders
- a summary of feedback received, and issues raised, by specific stakeholders, and
- how feedback has been considered in the development of the SSD application.

2. Background

The NSW Government is investing $7 billion over the next four years, continuing its program to deliver more than 200 new and upgraded schools to support communities across NSW. This is the largest investment in public education infrastructure in the history of NSW.

The NSW Department of Education is committed to delivering new and upgraded schools for communities across NSW. The delivery of these important projects is essential to the future learning needs of our students and supports growth in the local economy.

The Epping West Public School project will increase the capacity for new teaching and learning spaces across the Epping Primary Schools Community Group (SCG) to respond to the projected high population growth in the Epping area. The upgrades will also provide students with more permanent teaching spaces to better facilitate the delivery of modern pedagogies and support improving educational outcomes.

Epping West Public School is located on Carlingford Road, approximately 770m from the proposed site of Epping South Primary School. The site area is approximately 3.0ha, surrounded by detached 1-2 storey residences. The main student drop off zone is along Ward Street as Carlingford Road is a busy dual carriageway. A pedestrian bridge from Ryde Street, opposite the school, provides a safe crossing of Carlingford Road. Epping town centre, the Epping Train Station and Metro Station are located approximately 1.5km to the East along Carlingford Road. 1.56km West along Carlingford Road is Carlingford town centre and highway. To the South are more 1-2 storey detached residences. To the North of the site is the Epping YMCA and Epping West Park facilities, including tennis and soccer pitches. There is also the West Epping Community Centre, West Epping Preschool and the Tanya Brooks Dance Academy immediately adjacent to the North. Nearby schools include Epping Heights Primary School (1.2km NE) Karonga School (800m NW) Carlingford Public School (1.4km SW) and Roselea Public School (1.7km NW).

The nearest secondary public school is Carlingford High School (1.7km NW). To the South the closest public school is Eastwood Public School (2.4km S).

The project will deliver:

- Construction of new buildings which will include new classrooms and administration facility
- Refurbishment and renovation work to existing buildings
- Removal of temporary classroom facilities

2.1. Secretary's Environmental Assessment Requirements

The Secretary's Environmental Assessment Requirements (SEARs) for the State Significant Development were received on 8 October 2020. An excerpt can be found below.

"During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups, relevant special interest groups, including local Aboriginal land councils and registered Aboriginal stakeholders and affected landowners. In particular, you must consult with:

- the relevant Council
- Government Architect NSW (through the NSW SDRP process)
- Transport for NSW.

Consultation should commence as soon as practicable to inform the scope of investigation and progression of the proposed development. The EIS must describe and evidence the consultation process and the issues raised and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided."

3. Consultation Approach

3.1. Consultation objectives

As set out in the Community Engagement Plan, the following community engagement objectives have been identified for this proposal:

- Promote the benefits of the project
- Build key schools community stakeholder relationships and maintain goodwill with impacted communities
- Manage community expectations and build trust by delivering on our commitments
- Provide timely information to impacted stakeholders, schools and broader communities
- Address and correct misinformation in the public domain
- Reduce the risk of project delays caused by negative third party intervention
- Leave a positive legacy in each community.

3.2. Description of consultation and communication channels and activities

The table below describes the consultation and communication channels and activities that have been undertaken and the strategic intent of each activity.

Activity	**Strategic intent**
School community engagement (Project Review Group, Meetings, workshops and design user group sessions)	Project Review Group meetings, ad-hoc meetings and workshops comprise representatives from Epping West Public School to discuss aspects of the design, consultation and construction approach and seek feedback and input from members. Design user groups seek input from end users including staff about the proposed design and its applicability.
Communications (Project webpage, Information Pack, Project Updates and Works Notifications)	Publication of project information. A screen print of the project webpage can be found at Appendix 1. A sample Project Update can be found at Appendix 2. A sample Works Notifications can be found at Appendix 3.
Contact channels (Emails and 1300 project information number)	Direct responses to stakeholder and community contact.

3.3. Consultation activities

A key factor of the project is the governance provided through the Project Reference Group (PRG), which provides feedback on critical design elements and the overall project direction. PRG meetings commenced on 19 February 2020 and has met on 11 occasions to date. PRG membership comprises of the school leadership team of Epping West Public School, project team members and a Parent and Community (P&C) representative.

Date/s	Targeted stakeholders	Consultation activity	Attendance
2020			
-	Educational Design Workshop	Workshop took place in early concept design phase	SINSW and school representatives (including Principal)
19/02/20	PRG Meeting No 0.1 – Provided an overview of the project scope, status, educational rationale workshop and reports.	PRG Meeting	Regular group meeting
18/03/20	PRG Meeting No 0.2 – Discussed program for Business Case completion, service needs, target project scope and planning pathways.	PRG Meeting	Regular group meeting
05/02/20	PRG Meeting No 0.3 – Update provided on consultants engaged to date. Master plan report and options presented to the PRG.	PRG Meeting	Regular group meeting
16/06/20	PRG Meeting No 0.4 – Update provided on consultants engaged since last PRG. Updated plans presented.	PRG Meeting	Regular group meeting
23/07/20	PRG Meeting No 0.5 – Request for SEARs prepared and awaiting approval for submission. Design status presented and design items discussed for upcoming design workshop. New Senior Project Director, Delivery introduced to PRG.	PRG Meeting	Regular group meeting
20/08/20	PRG Meeting No 0.6 - Discussed delays to lodge business case and SEARs request due to the need to redesign concept to meet budget. Revised design proposal to incorporate Admin in the new building, refurbish Building A to 3 classrooms and to remove library from scope was discussed. Removal of toilet block not included in the project scope due to budgetary constraints. New Community Engagement Manager introduced to PRG.	PRG Meeting	Regular group meeting
17/09/20	PRG Meeting No 0.7 - Informed the PRG that the revised concept design with the new Admin and the exclusion of new library from scope has been endorsed. Updated Concept Design presented to the PRG. Aboriginal Heritage Consultant engaged to commence on Aboriginal Cultural Heritage Assessment Report (ACHAR). SEARs request has been lodged with DPIE. PRG notified that Project Manager and Cost Manager engagement for the next phases were in progress.	PRG Meeting	Regular group meeting
15/10/20	PRG Meeting No 0.8 - PRG informed that SEARs response was received. SDRP review session was held and comments on the design will be addressed as part of the SSDA. PRG was informed that the Concept Design has been endorsed and the notes with the school's comments will be handed over for addressing through the Schematic Design. Schools were	PRG Meeting	Regular group meeting

Date/s	Targeted stakeholders	Consultation activity	Attendance
	notified that consultants will be starting site investigations.		
19/11/20	PRG Meeting No 0.9 - Discussed the progress of Tender Documentation for Early Contractor Involvement and confirmed Project Team is on track to release tender in early December 2020. Update provided on consultant engagements and ongoing site investigations.	PRG Meeting	Regular group meeting
16/12/20	PRG Meeting No 9.B - An email update was provided to the PRG noting that tender was released on 24th November 2020. PRG was also informed on the ongoing and planned site investigations and all council consultations undertaken in December.	PRG meeting	Regular group meeting
June 2020 to April 2021	8 meetings held with the Departments Technical Stakeholders Group including the Educational Facilities Standards and Guidelines (EFSG), ICT, Maintenance and Cleaning, Security, Work Health & Safety, Future Learning Unit, and Demountables unit.	Technical Stakeholder Groups	Regular group meeting
2021			
18/02/21	PRG Meeting No 10 - PRG informed that the Business Case was approved by Treasury in December 2020. ECI tender closed in January 2021 and is expected to be awarded in late February 2021. PRG was informed that the Heritage Constraints on site are being considered to ensure an efficient design while managing Heritage requirements. Meeting with council and TfNSW were hed to discuss offsite infrastructure works. Project Team noted that catchment boundary changes are expected but will not be publicly announced till they are finalised.	PRG Meeting	Regular group meeting
11/03/21	Head Contractor, new Design Team and School leadership team – Introduction Session	Design Consultation Workshop	Regular group meeting
18/03/21	PRG Meeting No 11 - PRG informed that tender was awarded to Hansen Yuncken. The new Design Architects will be Pedavoli Architects (PA). Site Investigations have been completed and consultants are progressing with the reports for SSDA submission. Schematic Design will be developed over the new few weeks.	PRG Meeting	Regular group meeting
25/03/21	Head Contractor, new Design Team and School leadership team – Architects presented the amendments to the current Concept Design derived from the design validation, EFSG comments, Government Architect comments, ESFG compliance, DDA and Australian standards.	Design Consultation Workshop No 0.1	Regular Group Meeting
01/04/21	Head Contractor, new Design Team and School leadership team – Architects presented the updates to the floor plans based on comments from Design Workshop 01.	Design Consultation Workshop No 0.2	Regular group meeting
TBC	PRG meetings planned once a month till construction commencement. During construction the meetings will be changed to Project Control Group meetings.	PRG Meetings	Regular group meetings

3.4. Communication actions

The table below outlines the communication actions undertaken to keep stakeholders and communities informed about this proposal.

Date	Targeted stakeholders	Communication channel and action
2020		
August 2020	School community, nearby residents	Planning Update
25 November 2020	School community, nearby residents	Works notification
December 2020	School community, nearby residents	Project Update
2021		
May 2021 – specific date tbc	School community and local community	Project Update, Information session, Information Pack, Information boards

4. Stakeholder and Community Feedback

Stakeholder and community feedback has been integral to the development of this proposal. Feedback was sought from stakeholders and communities through the consultation activities and communication channels listed in Section 3.

The project team has responded to 4 direct emails about the project.

Incoming queries identified key issues of community interest for consideration during the preparation of the Environmental Impact Statement.

Key issues included:

- Proposed building heights and proximity to existing residents.
- Relationship of project with a new primary school in Epping.
- Construction timeframes.
- Operational considerations for school during construction.
- Design elements of Special Education unit and playground.

4.1. Stakeholder meetings and correspondence

This section outlines a summary of the key consultation undertaken with stakeholders, as defined and required by the SEARs.

Stakeholder	Date/s	Feedback topics	Outcomes
Government Architects – Design Review Session 01	23/09/20	The Project Team's presentation explained the opportunities, constraints and design approaches for the school. SDRP issued advice letter outlining strategies that were supported and with advice and recommendations to be addressed in the ongoing design development of the school. The advice and recommendations focussed on masterplan, landscape, heritage, aboriginal cultural heritage and architecture.	Next meeting scheduled 26 May 2021.
Heritage NSW and RAPs - Aboriginal Heritage Consultation	Various	07/09/2020 - Step 1 – Request for contacts from statutory bodies issued and multiple parties responded. 09/09/2020 - Step 2 – Newspaper Advert printed. 22/09/2020 – Notification of the proposed project and invitation to be consulted issued to all with deadline for registration on 7/10/2020. 08/10/2020 – Copy of contact information for RAPs issued to Heritage NSW and LALC. 08/10/2020 - Proposed assessment methodology was provided to all RAPs for their review and comment. Following the receipt of responses from all RAPs, a record of the agreed outcomes and/or contentious issues was supplied to all RAPs. 11/11/2020 - Field Survey - SINSW engaged a representative from Metro Local Aboriginal Land Council in the site survey. 10/12/2020 – Copies of Draft ACHAR provided to all RAPs for their review and comment.	The correspondence addresses the SEARs requirement to complete Aboriginal Heritage Consultation. Comments from RAPs have been addressed in the ACHAR.
City of Parramatta Council – Flood correspondence	Various	17/11/20 - Initial email issued to Council requesting for comments 04/12/20 - Council responded with initial comments and request for documents 09/12/20 - Flood Analysis report issued to council 23/12/20 - Council requested new link to download report 11/01/21 - Report reissued to Council 15/02/21 - Follow up email to council for comments and a request to issue Council's Map to be included in the FAR. 05/03/21 - Follow up email to council for comments and a request to issue Council's Map to be included in the FAR. 22/03/21 - Follow up email to council for final comments and a request to issue Council's Map to be included in the FAR. 29/03/21 - Council responded confirming that the requested Council Map is no longer relevant.	The correspondence addresses the SEARs requirement to consult with the relevant local authority, however we understand that DPE will refer the development application to City of Parramatta Council for comment as part of the SSDA assessment process.
City of Parramatta Council – Council Meeting 01 (Ecology)	30/11/20	Meeting was held with Ecology Consultant, SI, Johnstaff (PM) and the City of Parramatta Council to discuss ecology related issues on the project and received positive feedback from the council.	Feedback topics taken forward to next meeting. Feedback is also referenced in the BDAR.
City of Parramatta Council – Traffic and Transport Council Meeting 01	02/12/20	Project Team provided overview of site traffic and transport issues. Discussed council proposed works planned for the area.	Feedback topics taken forward to next meeting.

City of Parramatta Council – Transport Working Group Meeting 01	03/02/21	Introduction to both parties and Epping West Public School project.	Feedback topics taken forward to next meeting.
City of Parramatta Council – Transport Working Group Meeting 02	17/03/21	Footpaths at Epping West Public School discussed.	Feedback topics taken forward to next meeting.
Government Architects – Design Review Session 02	26/05/21	Design Review Session 02 scheduled	Design Review Session 02 scheduled

5. Project response

The feedback received during consultation has been considered in the preparation of the Environmental Impact Statement. The table below provides a detailed summary of the key issues that emerged and the corresponding project response.

Key issues	Project response	Relevant report
Transport for NSW (TfNSW) and Roads and Maritime Services (RMS) both issued comments for inclusion in the SEARs for the proposed development, and these requirements have been addressed.	Transport Working Group meetings were held with the Council and representatives from TfNSW and RMS to discuss the proposed development and receive feedback on any relevant matters that required consideration prior to finalising the project. The Traffic and Transport Assessment prepared by SCT was discussed and road safety around the school was also discussed.	Traffic Impact Assessment Report
Sydney Water has issued comments for inclusion in the SEARs for the proposed development.	These requirements have been addressed.	Stormwater Management Plan, Sustainable Development Report
Heritage NSW has issued comments for inclusion in the SEARs for the proposed development.	These requirements have been addressed.	Heritage Impact Assessment Report
EPA NSW has issued comments for inclusion in the SEARs for the proposed development.	These requirements have been addressed.	Noise and Vibration Impact Assessment Report, Hazardous Materials Survey, PSI, DSI and RAP, Preliminary Waste Management Plan.
EESG has issued comments for inclusion in the SEARs for the proposed development.	These requirements have been addressed.	BDAR Waiver, Flood Assessment Report, Stormwater Management Plan, PSI, ASSMP and Salinity MP letters.
The local member is briefed on the project and the project status.	The local member is supportive of the development and proposed facilities.	N/A.

6. Next Steps

In preparing the SSD application for the Epping West Public School upgrade, the project team has met the consultation requirements prescribed by the SEARs.

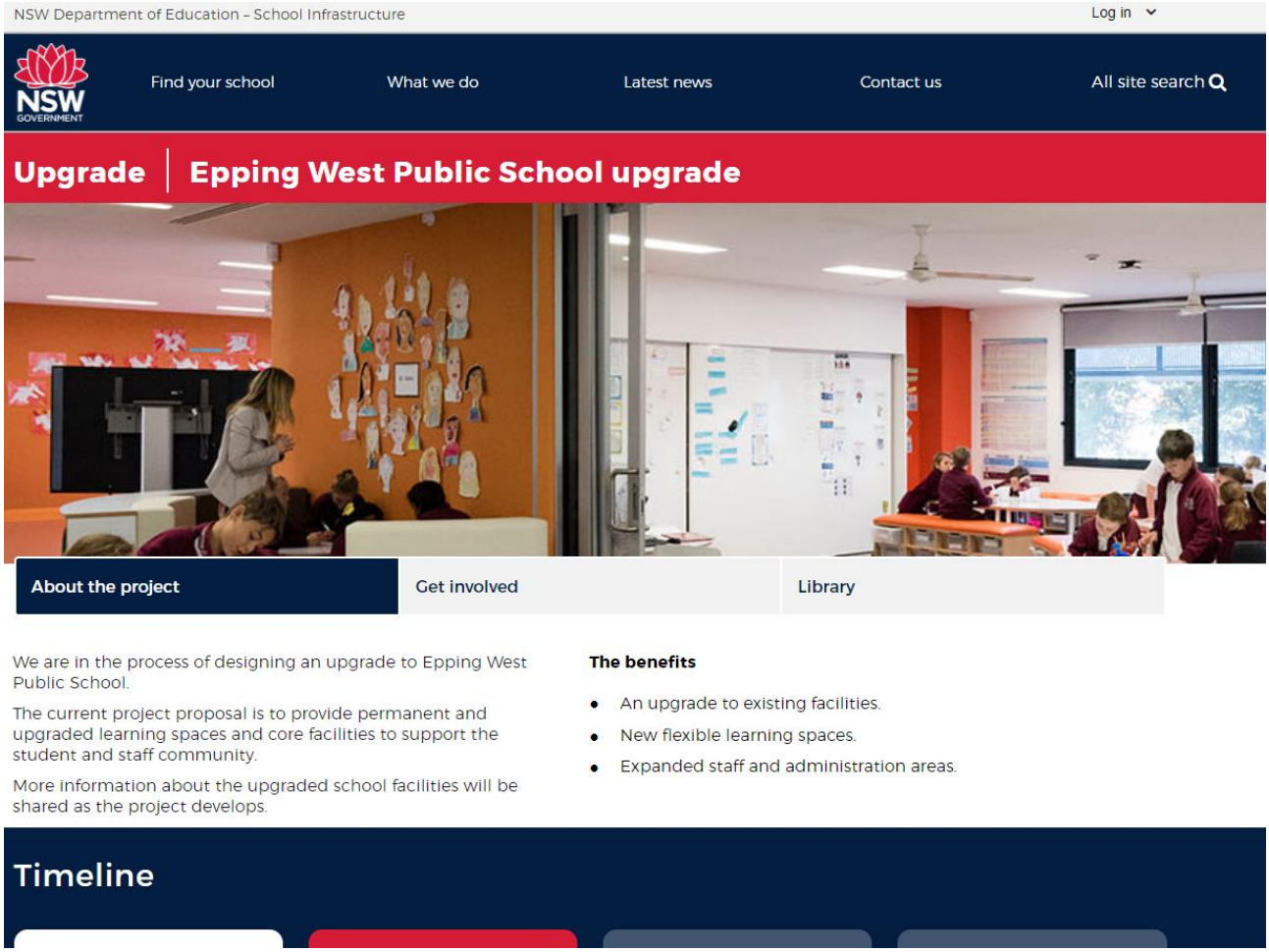
School Infrastructure NSW has demonstrated in this report the extent of engagement made with stakeholders to date. All of the designs and studies lodged with the SSDA have incorporated the feedback received to date. This engagement will continue through design development with ongoing feedback being incorporated into the designs.

Continued engagement will take place with stakeholders and communities during the statutory exhibition of the SSDA, as well as during future stages of the planning and development process.

School Infrastructure NSW will continue to update the project webpage and produce updates at key project stages for stakeholders and communities.

Appendices

Appendix 1: Project webpage screen print



Appendix 2: Project Update example

NSW Department of Education – School Infrastructure

Artist impression of the Epping West Public School upgrade

Epping Schools

Project update

December 2020

Investing in our schools

The NSW Government is investing $7 billion over the next four years, continuing its program to deliver more than 200 new and upgraded schools to support communities across NSW. This is the largest investment in public education infrastructure in the history of NSW.

The NSW Department of Education is committed to delivering new and upgraded schools for communities across NSW. The delivery of these important projects is essential to the future learning needs of our students and supports growth in the local economy.

Epping West Public School

We are planning an upgrade at Epping West Public School to to provide upgraded facilities for the school community. It is proposed to deliver new flexible learning spaces and expanded staff and administration areas.

A new primary school in Epping

Planning for the new primary school in Epping is underway. Proposed works involve the establishment of a new primary school at the former TAFE NSW campus on Chelmsford Avenue, to meet future enrolment growth. It is proposed to deliver new flexible learning spaces as well as a range of core facilities.

schoolinfrastructure.nsw.gov.au

NSW GOVERNMENT

Appendix 3: Works notification example

NSW Department of Education – School Infrastructure

Epping West Public School

Works notification

25 November 2020

We are committed to delivering an upgrade at Epping West Public School to provide upgraded facilities for the school community. It is proposed to deliver new flexible learning spaces and expanded staff and administration areas.

Upcoming investigation works

As part of planning for this project, we need to undertake some investigative works around the school site. These investigations will include:

- Traffic surveys to monitor traffic flow
- Soil investigations using small excavators

Working hours

The investigative work will take place between Monday 30 November 2020 and Friday 29 January 2021.

The traffic survey equipment will be installed between 8:00pm and 4:00am on roads surrounding the school site.

The soil investigation will take place between 7:00am and 5:00pm within the school grounds.

There will be no work taking place on Sundays, public holidays, or between Christmas and New Year.

Keeping you updated

We are here to make sure that work is completed safely and efficiently and we will minimise impacts on the community at every opportunity. Thank you for your patience while we deliver this important school infrastructure.

For more information contact:

School Infrastructure NSW
Email: schoolinfrastructure@det.nsw.edu.au
Phone: 1300 482 651
www.schoolinfrastructure.nsw.gov.au

schoolinfrastructure.nsw.gov.au

NSW GOVERNMENT

APPENDIX D – COMMUNITY COMMUNICATION STRATEGY – EPPING WEST PUBLIC SCHOOL UPGRADE

NSW GOVERNMENT Education

September 2021

School Infrastructure NSW

Community Communication Strategy

Epping West Public School Upgrade

Contents

Document Purpose

This Community Communication Strategy (CCS) has been developed to:

Successfully consider and manage stakeholder and community expectations as integral to the successful delivery of the project.

Outline interfaces with other disciplines, including safety, construction, design and environment, to ensure all activities are co-ordinated and drive best practice project outcomes.

Inform affected stakeholders, such as the local community or road users about construction activities.

Provide a delivery strategy which enables the open and proactive management of issues and communications.

Highlight supporting procedures and tools to enable the team to deliver this plan effectively.

Provide support for the broader communications objectives of School Infrastructure NSW (SINSW), including the promotion of the project and its benefits.

This Community Consultation Strategy (CCS) will be implemented through the design and construction phase of the project, and for 12 months following construction completion.

Plan review

The CCS will be revised regularly to address any changes in the project management process, comments and feedback by relevant stakeholders, and any changes identified as a result of continuous improvement undertakings. This will be done in close consultation with the SINSW Senior Project Director, appointed Project Management Company and/or Contractor and SINSW Community Engagement Manager.

Approval

The CCS is reviewed and approved by the SINSW Senior Project Director, in close consultation with Schools Operations and Performance, with final endorsement from the SINSW Community Engagement Senior Manager before being submitted to the Planning Secretary for approval.

Table 1: List of SSD requirements and where they are addressed

State Significant Developments B7	The Community Communications Strategy addresses this in section
B7 (a) Identify people to be consulted during the design and construction phase	Section 4 Section 5
B7 (b) - Set out procedures and mechanisms for the regular distribution of accessible information about or relevant to the development	Section 6 Section 7 Section 8.4
B7 (c) - Provide for the formation of community-based forums, if required, that focus on key environmental management issues for the development	Section 4
B7 (di) - Set out procedures and mechanisms: Through which the community can discuss or provide feedback to the Applicant	Section 4, PRG Section 6 Section 8.5
B7 (dii) - Set out procedures and mechanisms: Through which the Applicant will respond to enquiries or feedback from the community; and	Section 8.5
B7 (diii) - Set out procedures and mechanisms: To resolve any issues and mediate any disputes that may arise in relation to construction and operation of the development, including disputes regarding rectification or compensation	Section 8.5

In addition to these conditions, traffic, noise and vibration, visual amenity, flora and fauna, soil and water, contamination and heritage are also addressed within Section 3.

1. Context

The NSW Government is investing $7.9 billion over the next four years, continuing its program to deliver 215 new and upgraded schools to support communities across NSW. This is the largest investment in public education infrastructure in the history of NSW.

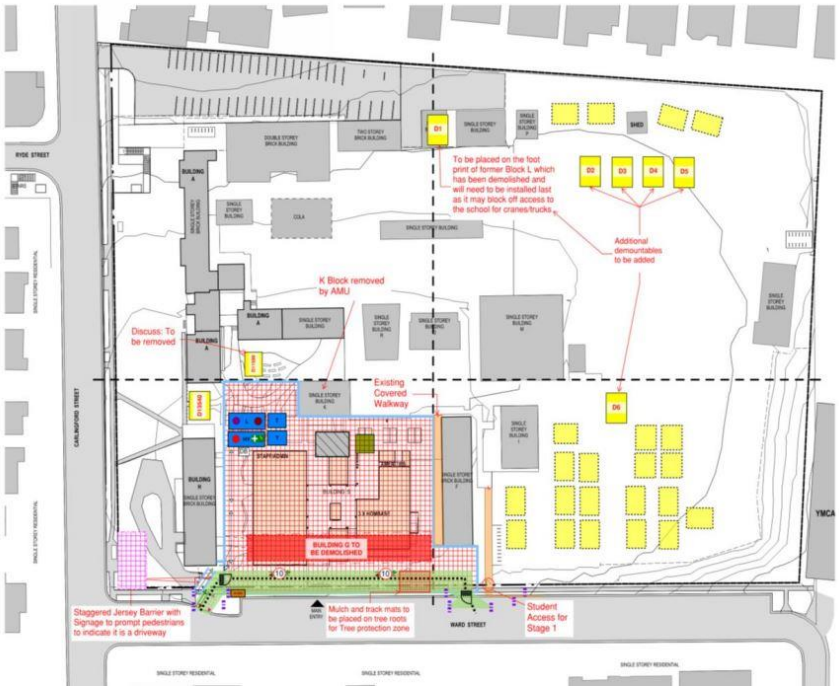
We are designing an upgrade at Epping West Public School to provide upgraded facilities for the school community

The proposed development can be described as alterations and additions to an existing educational establishment. In summary, the proposed works will include:

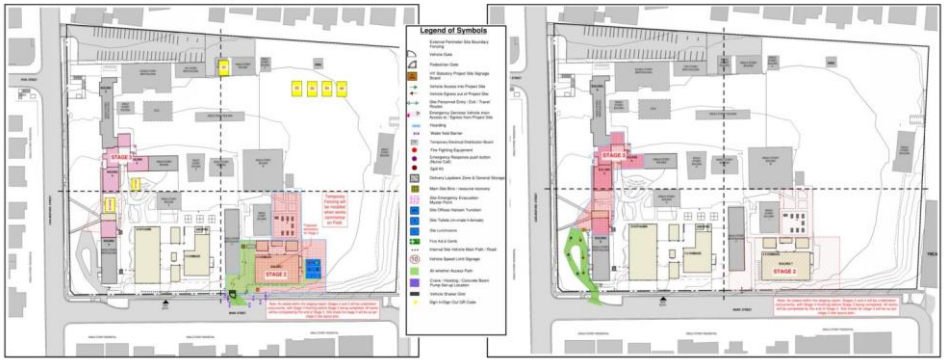
- Demolition works;
- Construction of a three (3) storey building in the south-eastern corner of the site and a two (2) storey building further north adjacent to the site's eastern boundary;
- Refurbishment and renovation works to existing buildings, with a small addition to the western side of an existing building;
- Removal of demountable buildings currently located predominantly on the northern part of the site and associated make good works to reinstate the oval and play space which is predominantly on the northern part of the site.

An existing building known as Building G (located between buildings F and H) is proposed to be demolished, Building G is a single storey classroom building.The project is expected to be delivered in stages, see diagrams below for detail (please note staging is tentative only and is subject to change):

Stage 1 - Site Layout Plan



Stage 2



Stage 3

The Epping West Public School upgrade is classified as a state significant development, and has been assessed by the Department of Planning, Industry and Environment (DPIE). Consent was provided on date TBC.

DPIE's web page on the project is here.

Commented [AD1]: Would it be sufficient to add the date draft conditions were provided here?

Commented [DS2R1]: No probably not. We can let you know the minute the consent is provided. At least the report will be reviewed and approved in that time.

2. Community Engagement Objectives

SINSW's mission is to provide school infrastructure solutions by working collaboratively with all our stakeholders to create learning environments across NSW that serve our future needs and make us all proud.

This CCS has been developed to achieve the following community engagement objectives:

- Promote the benefits of the project
- Build key school community stakeholder relationships and maintain goodwill with impacted communities
- Manage community expectations and build trust by delivering on our commitments
- Provide timely information to impacted stakeholders, schools and broader communities
- Address and correct misinformation in the public domain
- Reduce the risk of project delays caused by negative third party intervention
- Leave a positive legacy in each community.

3. Key Messages

Through each phase of the project, the key messages and means of engagement will be regularly reviewed, refined and updated. Information that is currently in the public domain is outlined below.

3.1. High level messaging

The NSW Government is investing $7.9 billion over the next four years, continuing its program to deliver 215 new and upgraded schools to support communities across NSW. This is the largest investment in public education infrastructure in the history of NSW.

3.2. Project messaging

3.2.1. Project status

The State Significant Development Application has been assessed by the Department of Planning, Industry & Environment and consent has been granted.

3.2.2. Project benefits

We are designing an upgrade at Epping West Public School to provide upgraded facilities for the school community. It is proposed to deliver new flexible learning spaces and expanded staff and administration areas. The project will deliver:

- Construction of new buildings which will include new classrooms, student amenities and core student facilities
- The main new building will also include a new administration and staff area
- Refurbishment and renovaton work to existing buildings
- Removal of temporary demountable buildings

3.2.3. High-quality learning environment

The project will provide flexible learning spaces that make use of the latest technology to enhance the learning experience for the next generation of students. Furthermore, the contemporary and sustainable facilities provide an outstanding working environment for school staff.

Flexible learning spaces are adaptable to accommodate small or large groups and facilitate students use of modern technology, while working independently and collaboratively.

3.2.4. Environmental benefits

The new school will be built in accordance with current sustainability principles. School Infrastructure NSW is committed to environmentally conscious construction and maintenance practices.

3.3. Construction phase

3.3.1. Safety

School Infrastructure NSW is committed to ensuring that work is completed safely and efficiently and with minimal impact to the local community. Prior to construction starting, any hazardous material is required to be removed from the site. This work will be carried out in accordance with regulatory requirements including the provisions of SafeWork NSW.

3.3.2. Traffic management

The construction contractor will develop a Traffic Management Plan to ensure that vehicle movements are managed with minimal disruption to the local community. All construction vehicles (excluding worker vehicles) are to be contained wholly within the site, except if located in an approved on-street work zone, and vehicles must enter the site before stopping.

3.3.3. Noise, vibration and dust

Any activity that could exceed approved construction noise management levels will be managed in strict accordance with the Protection of the Environment Operations Act 1997.

Mitigation measures will be in place to manage noise and dust levels, including hoarding to minimise the effects of noise and dust and hosing down as required to ensure the safety of the school and local community.

Construction works, including the delivery of materials to and from the site, will take place between 7am and 6pm Monday to Friday and between 8am and 1pm on Saturdays. No night work is scheduled for this project and no work will occur on Sundays or public holidays, unless required to complete certain works and as approved by Council.

Rock breaking, rock hammering, sheet piling, pile driving and similar activities may only be carried out between the following hours:

(a) 9am to 12pm, Monday to Friday;

(b) 2pm to 5pm, Monday to Friday; and

(c) 9am to 12pm, Saturday.

Activities may be undertaken outside of these hours if required:

(a) by the Police or a public authority for the delivery of vehicles, plant or materials; or

(b) in an emergency to avoid the loss of life, damage to property or to prevent environmental harm; or

(c) where the works are inaudible at the nearest sensitive receivers; or

(d) where a variation is approved in advance in writing by the Planning Secretary or his nominee if appropriate justification is provided for the works.

Notification of such activities must be given to affected residents before undertaking the activities or as soon as is practical afterwards.

3.3.4. Flora and fauna

School Infrastructure NSW is committed to ensuring construction work has a minimal impact upon flora and fauna.

School Infrastructure NSW will comply with all Development Consent Conditions relating to the protection of flora and fauna, and will comply with all relevant mitigation measures listed in the Environmental Impact Statement (EIS).

Prior to construction, a Construction Environmental Management Plan (CEMP) will be prepared to govern the completion of all construction works. The CEMP will detail measures to be taken for the protection and management of flora and fauna (including native fauna), will be prepared in accordance with relevant guidelines and performance indicators, and will be prepared to the satisfaction of the Department of Planning, Industry and Environment (DPIE).

The CEMP will be managed throughout the construction by the Head Contractor. The Head Contactor will ensure areas of native fauna are preserved through fencing and signage accordingly to avoid any damage and any conservation measures currently in place will be maintained.

The Head Contractor will also minimise the spread of weeds and grasses. This may include covering long-term stockpiles and bare areas with shade cloth or revegetating to minimise the establishment of weeds. Land clearing shall be minimal and staged to reduce the total area of cleared land at one time.

Trees will not be trimmed or removed without appropriate statutory approval. A qualified and experienced arborist will complete all vegetation removal and trimming.

All trees on site that are not approved for removal will be protected in accordance with *AS 4970-2009 – Protection of Trees on Development Sites*.

3.3.5. Soil and water

School Infrastructure NSW is committed to the appropriate management of soil and water on the construction site.

School Infrastructure NSW will comply with all Development Consent Conditions relating to soil and water management, and will comply with all relevant mitigation measures listed in the Environmental Impact Statement (EIS).

Prior to construction, a Construction Environmental Management Plan (CEMP) will be prepared to govern the completion of all construction works. The CEMP will detail measures for the management of soil and water, will be prepared in accordance with relevant guidelines and performance indicators, and will be prepared to the satisfaction of the Department of Planning, Industry and Environment (DPIE).

A suitably qualified and experienced consultant will prepare a Construction Soil and Water Management Sub-Plan (CSWMSP), which will form part of the CEMP. The CSWMSP will:

- describe erosion and sediment control measures to be implemented during construction
- provide a plan of how construction works will be managed in wet-weather events

- detail flows from the site to surrounding area
- describe the measures to be taken to manage stormwater and flood flows for small and large sized events

Erosion and sediment controls will be installed and maintained in accordance with the "Blue Book" – *Managing Urban Stormwater: Soils and Construction (4th edition)*. These controls will be implemented prior to the commencement of any other site disturbance works. A Stormwater Management Plan will be prepared by the Head Contractor and will generally outline the controls that will be implemented to manage sediment and erosion during construction. Any discharges from the site will be strictly controlled to ensure hazardous materials and contaminants are contained in accordance with the requirements of all relevant Authorities and guidance.

The site will be continually cleaned of rubble to minimise possible sediment flow during rainfall periods. Stormwater kerbs and drainage lines will be fitted with silt barriers (or the like) to slow run-off and reduce erosion/discharge from the site. Silt barriers will be replaced when 30% of their capacity has been reached and other control equipment will be inspected and maintained, particularly during heavy rainfall periods, and replaced when no longer effective.

Stormwater grate inlets surrounding the site will be covered with geotextile fabric to allow water to enter into drains whilst retaining sediments.

A rainwater harvesting system will be installed onsite and used on-site during construction. Approval will be obtained prior to the discharge of onsite stormwater to Council's stormwater drainage system or street gutter.

Only approved soil and fill types will be used onsite. Accurate records will be kept on the volume and type of fill used onsite.

All long-term soil stockpiles will be protected from wind and water erosion by coverage with anchored shade cloth or vegetation as well as being fitted with silt barriers (where appropriate). Sediment and leachate control measures must be incorporated for any stockpiled material to prevent sediment entering the stormwater system or from migrating off-site. Control measures will be established to prevent surface water run-off entering and leaving excavations and stockpile areas.

Control measures may include:

- temporary bunding or diversion drains;
- impermeable sheeting placed under and/or over stockpiles;
- silt fences/silt socks to surround stockpiles; and
- protection of existing drains with silt barriers/fencing.

These mitigation measures will be regularly inspected to ensure that they are in good condition and if necessary upgraded where their performance is deteriorating.

3.3.6. Contamination

Prior to construction, a Construction Environmental Management Plan (CEMP) will be prepared to govern the completion of all construction works. The CEMP will detail contamination management measures, will be prepared in accordance with relevant guidelines and performance indicators, and will be prepared to the satisfaction of the Department of Planning, Industry and Environment (DPIE).

The project site has been tested for contamination and is considered to be safe and suitable for the school upgrade.

An environmental assessment of the site was undertaken in 2020 and identified localised contamination in some fill material. Consultants commented that the immediate risk to human receptors is considered to be relatively low. However, site workers could come into contact with the contamination during the development works. Site remediation was recommended to minimise any risk to site workers.

Based on the findings of the assessment, consultants were of the opinion that the site could be made suitable provided the following recommendations are implemented:

- Preparing a Remediation Action Plan (RAP) to manage the contamination identified; and
- Preparing a Validation Assessment report to demonstrate the completion of remediation works.

In accordance with the recommendations above, a Remediation Action Plan has been prepared to be implemented during the construction phase of works. Consultants are of the opinion that the site can be made suitable for the proposed development provided this RAP is implemented accordingly. A site validation report and long-term

environmental management plan (if required) should be prepared on completion of remediation activities and should be submitted to the consent authority.

With the implementation of the proposed recommendations, the site can be made suitable for the proposed development having regard to the potential for contamination of the land.

If soil is encountered during the works which appears to be potentially contaminated and appears to be different from the soils otherwise encountered to date, or point sources of contamination such as buried drums or wastewater interceptors are encountered, the following procedures will apply:

- Any suspicious material/soil which has been excavated will be stockpiled on bunded, strong, impermeable plastic sheeting, protected from erosion and all seepage retained (divided into domains or stockpiles representing similar material types);
- Excavation works at that part of the site where the suspicious material (soil, asbestos containing material or physical find) was encountered will cease until an inspection is carried out by an appropriately qualified environmental consultant or its representative;
- Based on visual inspection, the environmental consultant will provide interim advice on construction health and safety, soil storage and soil disposal to allow other activities to proceed if possible; and
- Based on sampling and analysis of the material, the environmental consultant will provide advice based on a comparison of the laboratory test results to appropriate criteria relating to human health, potential environmental impacts and waste disposal.

In the context of the above, “suspicious” material would include, but is not limited to, oily materials or materials with unusual odours, drums, metal or plastic chemical containers, buried solid waste, ash, slag, coke or brightly coloured material etc. Asbestos at the site would need to be managed through the implementation of an Asbestos Management Plan. Upon discovery of any suspected asbestos containing material (ACM) at the site, an Asbestos Management Plan will be implemented with the following actions to be taken immediately:

- stop all activities that may disturb the materials;
- inform the site operator of the discovery;
- suspend work until it has been determined whether the material in question contains asbestos; and
- physically quarantine the area with a signed barrier stating “Danger Asbestos”.

The CEMP will include protocols for the management of unexpected contamination discovered during the course of construction works.

3.3.7. Visual amenity

Prior to construction, a Construction Environmental Management Plan (CEMP) will be prepared to govern the completion of all construction works. The plan will detail measures to maintain visual amenity, will be prepared in accordance with relevant guidelines and performance indicators, and will be prepared to the satisfaction of the Department of Planning, Industry and Environment (DPIE).

The CEMP will include provisions for the management of outdoor lighting. The installation and operation of outdoor lighting will comply with both AS 4282-2019 – Control of the Obtrusive Effects of Outdoor Lighting and AS 1158.3.1-2005 – Lighting for Roads and Public Spaces – Part 3.1: Pedestrian Area (Category P) Lighting.

It is noted that the existing school has mitigation measures in place and is sympathetic to the place character of the visual catchment. It is not considered necessary to implement further mitigation strategies and measures to reduce visual impact. Through construction, fully enclosed scaffolding will be a requirement for all new building elements along with façade elements requiring refurbishment, exact scope and timing will be further resolves as façade details finalise.

During the installation of structure and façade when in extreme close proximity to the site boundary additional controls may need to be in place. Activities such a crane rotation lockout, additional spotters, materials tethering etc.

The Contractor will attach a continuously printed shade-cloth banner to the external face of all boundary site fencing with graphics. The shade cloth will feature the latest NSW Government logo in accordance with the latest NSW Government Brand Guidelines and shall not include other company logos e.g. Contractor, project manager. The Contractor will ensure that:

- Shade cloth width suits site fence and is a minimum of 1.8m;
- design of site fence takes into account any additional wind loading due to the shade cloth;

- banner signage terminates a minimum of 1.0 m from adjoining neighbouring boundaries; and
- Site entry gates are left clear.

The Contractor is to remove the shadecloth and signs on Completion of the Works.

3.3.8. Heritage

Prior to construction, a Construction Environmental Management Plan (CEMP) will be prepared to govern the completion of all construction works. The plan will detail measures to protect heritage matters, will be prepared in accordance with relevant guidelines and performance indicators, and will be prepared to the satisfaction of the Department of Planning, Industry and Environment (DPIE).

The CEMP will include unexpected finds protocols for objects of Aboriginal or Historic heritage.

A Heritage Impact Assessment and an Aboriginal Cultural Heritage Assessment Report has been prepared by consultants and provides an assessment of the heritage and aboriginal archaeological potential for the site.

The school is listed as a heritage item on the Hornsby Local Environmental Plan 2013 (HLEP 2013) as item 365 'Epping West Public School—original building dated 1927 (excluding other buildings and grounds)'. The main building (Building A) is also included as an item on the Department of Education's Section 170 Heritage and Conservation Register as item 5064440, 'Epping West Public School—Building B00A'. The concept design proposes internal alteration to Building A in order to meet the EFSG requirements for educational facilities. Although the original section Building A was constructed in 1927, it has undergone several phases of extension and addition over the last nine decades. The proposed internal alterations, including the reconfiguration of internal walls, is limited to the late 1960s section of the building. Some areas of modification have also previously been undertaken in these areas of the building. The proposed works would alter the room layout in a modified addition to Building A. These works would not impact on the significant and/or original fabric of Building A, nor would it alter the external appearance of Building A and its position in the school campus. The proposed works would have a neutral heritage impact.

Demolition of Building G would have a moderate impact on Heritage at the site, although Building G is not listed as a heritage item. To help minimise or mitigate the heritage impacts of the project, the following actions will be implemented during detailed design and construction methodology development. These recommendations build on those identified in the Heritage Assessment report and heritage advice previously provided for the project:

- Heritage advice should be provided during the design development process to minimise heritage impacts through sensitive design of the proposed building massing.
- Opportunities to reduce the potential for visual impact arising from the construction of the new Building 1 should be explored in the detailed design phase.
- A revised heritage impact statement should be prepared for the detailed design and include a summary of the mitigation measures implemented during the design development process.
- A photographic archival recording should be prepared for the demolished items within the school grounds. This should be prepared in accordance with the Heritage NSW (former OEH) guidelines.
- A heritage interpretation plan should be developed and implemented as part of the project to help the school users and local community understand the significance of the site.

The site has been assessed as having areas of moderate to high potential for historical archaeological remains of local heritage significance. As the proposed development of the Epping West Public School site is currently in Concept Stage the full extent and nature of impacts to areas of historical archaeological potential is not fully identifiable based on the information available in the concept design. A revised assessment of impacts will be prepared for the detailed design and construction documentation prior to the commencement of works. This document would be able to inform of any additional assessment, report preparation or investigations requirements.

Impacts to areas of locally significant historical archaeological remains are likely to require either monitoring, testing or salvage investigations prior to the commencement of works. The extent of these requirements would be informed by the conditions of consent for the approved SSDA as well as the revised archaeological impact assessment prepared for the detailed design and construction methodology.

Consultants have assessed the aboriginal archaeological potential of the site to be nil-low and any evidence remaining on the site would not be of local or state significance. It is therefore considered unlikely that the development will disturb any areas of cultural or aboriginal heritage. In the event that a heritage or archaeological item is discovered during the course of the works, works onsite will cease and the Office of Environment and Heritage will be contacted. The area will be isolated until advice is sought from a qualified Heritage Consultant prior to work recommencing.

3.3.9. Disruptive works

Construction work for the Epping West Public School Upgrade is underway. The following activities are planned for the upcoming weeks (*works will be outlined*). You can contact us directly using the details below to discuss any aspect of this work.

3.3.10. Get involved

We are committed to working together with our school communities and other stakeholders to deliver the best possible learning facilities for students. Your feedback is important to us. For more information contact us via the details below.

Email: schoolinfrastructure@det.nsw.edu.au

Website: schoolinfrastructure.nsw.gov.au

Phone: 1300 482 651

3.4. Handover phase

3.4.1. Traffic and access

Construction work on the Epping West Public School upgrade has been completed. We are now in a position to confirm access provisions for the new school, including pick-up and drop-off arrangements.

3.5. Official school opening

An upgrade to Epping West Public School was completed today, and delivered brand new facilities including classrooms, student amenities and facilities.

Thank you for your patience during construction and we are thrilled to deliver this project for the school community.

4. Project Governance

4.1. Project Reference Group

The Department's engagement process strives to engage with key stakeholders from the school community. As part of this process, a Project Reference Group (PRG) is established early in the project with nominated representatives from the school community to ensure input from, and consultation with, impacted stakeholders.

The PRG provides key information from an operational, educational, change and logistics perspective into the planning, through the design phase of the project. The PRG will end after the completion of the project design.

The PRG will receive project briefings and key progress updates on project progress to support its responsibilities in assisting to communicate updates to school staff, parents and stakeholders in the wider local community.

The Project Reference Group will be conducted as two separate groups during the development and delivery of all projects:

(a) Project Reference Group – Planning

A nominated group (limited to 10) will participate in workshops to develop the Educational Principles and Education Rationale which will inform the Functional Design Brief. These workshops are chaired by the SINSW Senior Project Director (or delegate) and may be facilitated by an Education Consultant. This activity will inform the development of the building design.

(b) Project Reference Group – Design

The purpose of the group is to seek input and inform design processes and provide operational requirements and information to help minimise the impact of the project on school operations. These workshops are chaired by the Senior Project Director (or delegate) and may be facilitated by the appointed architectural consultant, as required. The PRG will provide key information from an operational and logistics perspective to assist project delivery.

Specifically to communications and engagement related matters, the PRG will also:

Provide a forum for discussion and exchange of information relating to the planning and delivery of the project

Identify local issues and concerns to assist the project team with the development of mitigation strategies – to manage and minimise construction and environmental impacts to the school community and local residents

Provide feedback to the communications and community engagement team on key messages and communications and engagement strategies

Provide advice on school engagement activities

Assist to disseminate communications to the school community and other stakeholders.

As per all department led delivery projects, the PRG acts as a consultative forum and not a decision-making forum for the planning and delivery of this school infrastructure.

Figure 1: Project Reference Group (PRG)

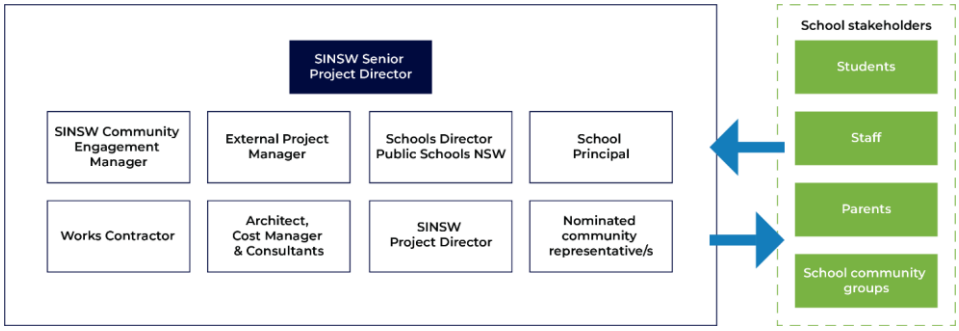
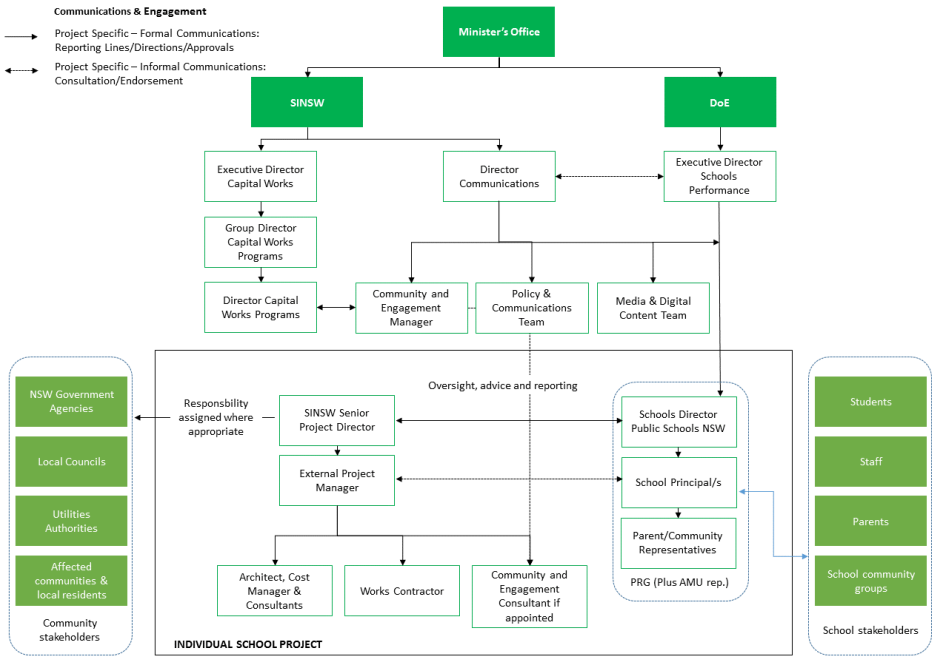


Figure 2 below maps how the department and SINSW will communicate both internally and externally.

Figure 2: SINSW Project Governance



5. Stakeholders

The stakeholder list below summarises who will be consulted during the design and construction phase via ongoing face to face meetings, communications collateral and digital engagement methods.

Table 2: Stakeholders

Stakeholders	Interest and involvement
Local Members of Parliament: Federal – Member for Bennalong (John Alexander, Liberal) State – Member for Epping (Dominic Perrottet, Liberal)	Meeting the economic, social and environmental objectives of state and federal governments Delivering increased public education capacity on time Delivering infrastructure which meets expectations Addressing local issues such as traffic, congestion and public transport solutions
Government agencies and peak bodies: Transport for NSW Roads and Maritime Services NSW Fire and Rescue NSW NSW Department of Education NSW Department of Planning, Industry and Environment NSW Environmental Protection Authority NSW Rural Fire Service Sydney Water NSW Heritage Council NSW Office of Environment and Heritage NSW Department of Premier and Cabinet	Traffic and congestion on the local road system Adequate public transport options and access Ensuring new infrastructure meets standard requirements for safety and fire evacuation Ensuring the development is compliant Ensuring the development does not impact heritage items Easing overcrowding in local schools
Local Council – City of Parramatta Councillors Bureaucrats Mayor General Manager	Schedule for construction and opening of school Plans for enrolled students during the operation of the temporary school Impacts to the local community including noise, congestion and traffic Shared use of community spaces Providing amenities to meet increase population density
School community Principal Teachers Staff Parents and carers Students Future parents within the new intake area	Safe pedestrian and traffic access to the temporary school during construction Construction impacts and how these will be minimised Quality of infrastructure and resources upon project completion How to access the new school once completed
Local community – Epping West and surrounding suburbs	Noise and truck movements during construction

Stakeholders	Interest and involvement
	Increased traffic and congestion on nearby streets Local traffic and pedestrian safety Changed traffic conditions during pick-up and drop-off Shared use of school facilities and amenities
Nearby public schools • Epping Heights Primary School • Karonga School • Carlingford Public School • Roselea Public School • Eastwood Public School • A new primary school in Epping	Impact on school resources Impact on current students Implications for teaching staff Possible impacts on enrolments Opportunities to view the new facilities
Adjoining affected landowners and businesses • Epping YMCA • Epping West Park facilities, including tennis and soccer pitches • West Epping Community Centre • West Epping Preschool • Tanya Brooks Dance Academy	Noise and truck movements during construction Increased traffic and congestion on nearby streets Local traffic and pedestrian safety Changed traffic conditions during pick-up and drop-off Shared use of school facilities and amenities Environmental impacts during construction

6. Engagement Approach

The key consideration in delivering successful outcomes for this project is to make it as easy as possible for anyone with an interest to find out what is going on. In practice, the communications approach across all levels of engagement will involve:

- Using uncomplicated language
- Taking an energetic approach to engagement
- Encouraging and educating whenever necessary
- Engaging broadly including with individuals and groups that fall into harder to reach categories
- Providing a range of opportunities and methods for engagement
- Being transparent
- Explaining the objectives and outcomes of planning and engagement processes.
- In addition to engagement with Government Departments and Agencies and Council, two distinct streams of engagement will continue for the project as follows:
- School community for existing schools being upgraded, or surrounding schools for new schools, and
- Broader local community.

This allows:

- School-centric involvement from school communities (including students, parents/caregivers, teachers, admin staff) unencumbered by broader community issues, and
- Broad community involvement unencumbered by school community wants and needs. Broad community stakeholders include local residents, neighbours and local action groups.

6.1. General community input

Members of the general public impacted by the construction phase are able to enquire and complain about environmental impacts via the following channels:

- Information booths and information sessions (including Virtual Information Sessions) held at the school or local community meeting place, and advertised at least 7 days before in local newspapers, on our website and via letterbox drops
- 1300 number that is published on all communications material, including project site signage
- School Infrastructure NSW email address that is published on all communications material, including project site signage

Refer to Section 8.5 of this document for detail on our enquiries and complaints process.

A number of tools and techniques will be used to keep stakeholders and the local community involved as summarised in table 3 below.

For reference, project high level milestones during the delivery phase include:

- Site establishment/early works
- Commencement of main works construction
- Term prior to project completion
- Project completion
- First day of school following project completion
- Official opening

Table 3: School Infrastructure NSW Communications Tools

Communications Tool	Description of Activity	Frequency
1300 community information line	The free call 1300 482 651 number is published on all communication materials and is manned by SINSW. All enquiries that are received are referred to the appointed C&E Manager and/or Senior Project Director as required and logged in our CRM. Once resolved, a summary of the conversation is updated in the CRM.	Throughout the life of the project and accessible for 12 months post completion
Advertising (print)	Advertising in local newspapers is undertaken with at least 7 days' notice of significant construction activities, major disruptions and opportunities to meet the project team or find out more at a face to face event.	At project milestones or periods of disruption
Call centre scripts	High level, project overview information provided to external organisations who may receive telephone calls enquiring about the project, most namely stakeholder councils.	Throughout the project when specific events occur or issues are raised by stakeholders
Community contact cards	These are business card size with all the SINSW contact information. The project team/ contractors are instructed to hand out contact cards to stakeholders and community members enquiring about the project. Cards are offered to school administration offices as appropriate. Directs all enquiries, comments and complaints through to our 1300 number and School Infrastruture NSW email address.	Throughout the life of the project and available 12 months post completion
CRM database	All projects are created in SINSW's Customer Relationship Management system – Darzin - at project inception. Interactions, decisions and feedback from stakeholders are captured, and monthly reports generated. Any enquiries and complaints are to be raised in the CRM and immediately notified to the Senior Project Director, Project Director and Community Engagement Manager.	Throughout the life of the project and updated for 12 months post completion
Display boards	A0 size full colour information boards to use at info sessions or to be permanently displayed in appropriate places (school admin office for example).	As required
Door knocks	Provide timely notification to nearby residents of upcoming construction works, changes to pedestrian movements, temporary bus stops, expected impacts and proposed mitigation. Provide written information of construction activity and contact details.	As required prior to periods of construction impacts
Face-to-face meetings/briefings	Activities include meeting, briefings and "walking the site" to engage directly with key stakeholders, directly impacted residents and business owners and the wider community.	As required

Communications Tool	Description of Activity	Frequency
FAQs	Set of internally approved answers provided in response to frequently asked questions. Used as part of relevant stakeholder and community communication tools. These are updated as required, and included on the website if appropriate.	Throughout the life of the project
Information booths	Information booths are held locally and staffed by a project team member to answer any questions, concerns or complaints on the project. Info booths are scheduled from the early stages of project delivery through to project completion. Information booths are to be held both at the school/ neighbouring school, as well for the broad community: School information booths are held at school locations at times that suit parents and caregivers, with frequency to be aligned with project milestones and as required. Community information booths are usually held at local shopping centres, community centres and places that are easily accessed by the community. They are held at convenient times, such as out of work hours on weekdays and Saturday's. Collateral to be provided include community contact cards, latest project notification or update, with internal FAQs prepared. All liaison to be summarised and loaded in the CRM. Notice of at least 7 days to be provided.	At project milestones and as required
Information sessions (drop in, includes Virtual Information sessions)	Information sessions are a bigger event than an info booth, held at a key milestone or contentious period. We have more information on the project available on display boards/ screens and an information pack handout – including project scope, planning approvals, any impacts on the school community or residents, project timeline, FAQs. SINSW can also host these Information Sessions online hosted via the project webpage as a 'Virtual Information Session'. Members from the project and communications team will be available to answer questions about the project. In person, these events occur after school hours on a week day (from 3pm – 7pm to cover working parents). All liaison summarised and loaded on the CRM.	As required
Information pack	A 4 page A4 colour, fold out flyer that can include: Project scope Project update FAQs Contact information	As required

Communications Tool	Description of Activity	Frequency
	Project timeline To be distributed at info sessions or at other bigger events/ milestones in hard copy and also made available electronically.	
Media releases/events	Media releases are distributed upon media milestones. They promote major project milestones and activities and generate broader community awareness.	Media milestones: Project announcement Concept design completed Planning approval lodged Planning approval granted Construction contract tendered Construction contract awarded SOD turning opportunity Handover Official opening
Newsletters	Available in hard copy and electronic format. A monthly or quarterly newsletter providing updated information on project scope, benefits, construction progress, achievement of project milestones and other project related issues of interest. Similar to an info pack in content, but used as a regular high level update for the community.	As required, related to high level project milestones
Notifications	A4, single or double sided, printed in colour that can include FAQs if required Notifications are distributed under varying templates with different headings to suit different purposes: **Works notification** are used to communicate specific information/ impacts about a project to a more targeted section of the community. This template doesn't have an image so it can be more appropriately targeted for matters like hazardous material. **Project update** is used when communicating milestones and higher level information to the wider community i.e. project announcement, concept design/DA lodgement, construction award, completion. Always includes the project summary, information booths/ sessions if scheduled, progress summary and contact info.	As required according to the construction program. Distibuted via letterbox drop to local residents and via the school community at least 5-7 days prior to construction activities or other milestones throughout the life of the project. Specific timings indicated in table 5 – Section 8.
Photography, time-lapse photography and videography	Captures progress of construction works and chronicles particular construction activities. Images to be used in notifications, newsletters and report, on the website and Social Media channels, at information sessions and in presentations.	Project completion (actual photography and video of completed project)

Communications Tool	Description of Activity	Frequency
	Once the project is complete, SINSW will organise photography of external and internal spaces to be used for a range of communications purposes.	Prior to project completion - artist impressions, flythrough, site plans and contruction progress images are used
Presentations	Details project information for presentations to stakeholder and community groups.	As required
Priority correspondence	Ministerial (and other) correspondence that is subject to strict response timeframes. Includes correspondence to the Premier, Minister, SINSW and other key stakeholders. SINSW is responsible for drafting responses as requested within the required timeframes.	As required
Project Reference Group	SINSW facilitated Project Reference Group sessions providing information on the design solution, construction activities, project timeframes, key issues and communication and engagement strategies.	Meets every month or as required More information on the PRG is detailed in Section 4
Project signage	A0 sized, durable aluminium signage has been installed at Epping West Public School. Provides high level information including project scope, project image and SINSW contact information. Fixed to external fencing/ entrances etc. that are visible and is updated if any damage occurs.	Throughout the life of the project and installed for 12 months post completion
Site visits	Demonstrate project works and progress and facilitate a maintained level of interest in the project. Includes media visits to promote the reporting of construction progress.	As required
School Infrastructure NSW email address	Provide stakeholders and the community an email address linking direct to the Community Engagement team. Email address (schoolinfrastructure@det.nsw.edu.au) is published on all communications materials.	Throughout the life of the project
School Infrastructure NSW website	A dedicated project page for Epping West Public School is located on the SINSW website - https://www.schoolinfrastructure.nsw.gov.au/projects/e/epping-west-public-school-upgrade.html.	Updated at least monthly and is live for at least 12 months post completion of the project
Welcome pack/ thank you pack	At project completion the following flyers are utilised: ▪ **Welcome pack** – project completion for school community - A 2 to 4 page A4 flyer which is provided to the school community on the first day/week they are returning to school when new facilities are opening, or attending a new school. Includes project overview, map outlining access to the school and key locations, FAQs, contact information. ▪ **Thank you pack** – A 2 to 4 page A4 flyer tailored to the local residents to thank them for their patience and support of the project.	Project completion only

7. Engagement Delivery Timeline

The following engagement delivery timeline maps tailored communications tools and activities by key milestone.

Table 4: Engagement timeline

Project Phase / milestone	Target Audiences	Proposed communication tools / activities / purpose as per Table 3	Timing / implementation
Main Construction works, including but not limited to: Remediation Works commenced Key impact periods – noise, dust, traffic, vibration	Local community and neighbours School community	Sod turn Webpage update Media release (if required) Project Update or Information Pack Information Session (TBC) Works notifications	Late 2021 (at key construction events as required, as per our notification process in Table 5)
Term prior to project completion	Local community and neighbours School community	Webpage update Media telease (if required) Project Update or Information Pack Information Session (TBC) Works notification (including summer holiday works notification)	Late 2021 to early 2023
Handover and welcome to new school	Local community and neighbours School community	Webpage update Media telease (if required) Welcome Pack (including photography) Welcome Signs / Maps Information Session (TBC) Works notification	Early 2023
Opening	Local community and neighbours School community	Official opening ceremony	January 2023
Post-opening	All	Website remains live Project signage remains installed 1300 phone and email still active, and CRM still maintained for complaints and enquiries.	Early 2024 (at least 12 months post construction completion)

8. Protocols

8.1. Media engagement

SINSW manages all media relations activities, and is responsible for:

Responding to all media enquiries and instigating all proactive media contact.

Media interviews and delegation to SINSW media spokespeople who are authorised to speak to the media on behalf of the project

Informing the Minister's Office and SINSW project team members and communications representatives of all media relations activities in advance and providing the opportunity to participate in events where possible.

8.2. Site visits

SINSW in partnership with Schools Operations and Performance organises and hosts guided project site tours and media briefings as required by the Minister's Office. The Project Team will ensure the required visitor site inductions are undertaken and that all required Personal Protective Equipment (PPE) is worn.

For media site visits and events, SINSW creates, or contributes to, the production of an event pack. This will include an event brief, media release, speaking notes and Q&As.

8.3. Social, online and digital media

SINSW initiates and maintains all social and online media channels. These channels can include Facebook, Twitter, LinkedIn and the website. The SINSW Online Content Team upload to the SINSW website.

8.4. Notification process

Notifications (titled works notifications or project updates as per Table 3) are SINSW's prescribed notification requirement and are the primary mechanism to inform the community and key stakeholders about the impact of school construction on the local area. Notifications provide advance warning of activities and planned disruptions, as per the notice periods in Table 5 below, allowing stakeholders and community members to plan for the impacts and make alternative arrangements where required. Notifications are distributed in person via door knocks, via letterbox drop, via the school and electronically via email.

The C&E Manager advises the project team of the relevant notification requirements and timeframes to be met. The team obtains the information necessary to meet these timeframes by:

Having oversight of the project delivery program

Visiting site as required

Attending and participating in construction meetings, planning meetings, and Risk and Opportunity workshops.

Table 5: Notifications periods

Works activity	Minimum community notification period
Notification to communities following major incident	Same day
Emergency works/unforeseen events	Same day
Contamination management and notification	Within 48 hours
Upcoming works notification (minimum disruption)	5- 7 days
Invitation/notification of community event (e.g. info booth)	5 – 7 days
Notifications regarding traffic changes, parking impacts, road closures, major detours	10 – 14 days
Pedestrian route changes and other impacts	10 – 14 days

Works activity	Minimum community notification period
Notifications regarding operational changes for the school community (school drop-off points, entry and exit points)	10 - 14 days
Major construction impacts (out of hours/ significant noise/ demolition)	10 – 14 days
Major impacts to school community e.g. relocation to temporary school	6 months

8.5. Enquiries and complaints management

SINSW manages enquiries (*called interactions in our CRM, Darzin*), and complaints in a timely and responsive manner.

Prior to project delivery, a complaint could be related to lack of community consultation, design of the project, lack of project progress, etc.

During project delivery, a complaint is defined as in regards to construction impacts – *such as* – safety, dust, noise, traffic, congestion, loss of parking, contamination, loss of amenity, hours of work, property damage, property access, service disruption, conduct or behaviour of construction workers, other environmental impacts, unplanned or uncommunicated disruption to the school.

If a phone call, email or face- to- face complaint is received during construction, they must be logged in our CRM, actively managed, closed out and resolved by SINSW within 24-48 hours.

As per our planning approval conditions, a complaints register is updated monthly and is publicly available on the project's website page on the SINSW website.

If the complainant is not satisfied with SINSW response, and they approach SINSW for rectification, the process will involve a secondary review of their complaint as per the outlined process.

Complaints will be escalated when:

An activity generates three complaints within a 24-hour period (separate complainants).

Any construction site receives three different complaints within a 24-hour period.

A single complainant reports three or more complaints within a three day period.

A complainant threatens to escalate their issue to the media or government representative.

The complaint was avoidable

The complaint relates to a compliance matter.

Complaints will be first escalated to the Senior Manager, Community and Engagement or Director of Communications for SINSW as the designated complaints handling management representatives for our projects. Further escalation will be made to the Executive Director, Office of the Chief Executive to mediate if required.

If a complaint still cannot be resolved by SINSW to the satisfaction of the complainant, we will advise them to contact the NSW Ombudsman - https://www.ombo.nsw.gov.au/complaints.

The below table summarises timeframes for responding to enquiries and complaints, through each correspondence method:

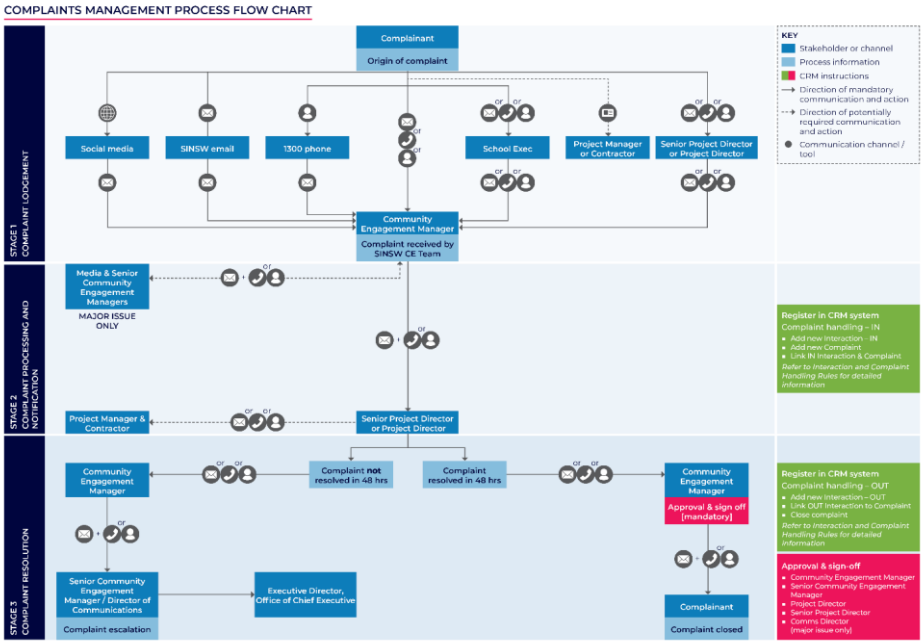
Table 6: Complaint and enquiry response time

Complaint	Acknowledgement times	Response times
Phone call during business hours	At time of call – and agree with caller estimated timeframe for resolution.	Complaint to be closed out within 48 hours. If not possible, continue contact, escalate as required and resolve within 7 business days.
Phone call after hours*	Within two (2) hours of receiving message upon returning to office.	Following acknowledgement, complaint to be closed out within 48 hours. If not possible, continue contact,

Complaint	Acknowledgement times	Response times
		escalate as required and resolve within 7 business days.
Email during business hours	At time of email (automatic response)	Complaint to be closed out within 48 hours. If not possible, continue contact, escalate internally as required and resolve within 7 business days.
Email outside of business hours	At time of email (automatic response)	Complaint to be closed out within 48 hours (once return to business hours). If not possible, continue contact, escalate internally as required and resolve within 7 business days.
Interaction/ Enquiry		
Phone call during business hours	At time of call – and agree with caller estimated timeframe for response.	Interaction to be logged and closed out within 7 business days.
Phone call after hours	Within two (2) hours of receiving message upon returning to office.	Interaction to be logged and closed out within 7 business days.
Email during business hours	At time of email (automatic response)	Interaction to be logged and closed out within 7 business days.
Email outside of business hours	At time of email (automatic response)	Interaction to be logged and closed out within 7 business days.
Letter	N/A	Interaction to be logged and closed out within 10 business days following receipt.

The below diagram outlines our internal process for managing complaints.

Figure 3 - Internal Complaints Process



8.5.1. Disputes involving compensation and rectification

School Infrastructure NSW is committed to working with the school and broader community to address concerns as they arise. Where disputes arise that involve compensation or rectification, the process for resolving community enquiries and complaints will be followed to investigate the dispute. Depending upon the results of the investigation, School Infrastructure NSW may seek legal advice before proceeding.

8.6. Incident management

An incident is an occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance. Material harm is harm that:

(a) involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial; *or*

(b) results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment).

8.6.1. Roles and responsibilities following an incident

In the event of an incident, once emergency services are contacted, the incident must be immediately reported to the SINSW Senior Project Director who will inform:

SINSW Executive Director

SINSW C&E Manager

SINSW Senior Manager, C&E

SINSW Communications Director

SINSW Communications Director will:

Lead and manage all communications with the Minister's office in the event of an incident, with assistance as required

Direct all communications with media to the SINSW Media Manager in the first instance for management

Notify all other key project stakeholders of an incident.

The school and local community will be notified within 24 hours in the event of an incident, as per our notification timelines in Table 5.

The SINSW Senior Project Director will issue a written incident notification to Department of Planning, Industry & Environment (DPIE) (compliance@planning.nsw.gov.au) and Local Council immediately following the incident to set out the location and nature of the incident.

This must be followed within seven days following the incident of a written notification to the Department of Planning, Industry and Environment (compliance@planning.nsw.gov.au) that:

(a) identifies the development and application number;

(b) provides details of the incident (date, time, location, a brief description of what occurred and why it is classified as an incident);

(c) identifies how the incident was detected;

(d) identifies when SINSW became aware of the incident;

(e) identify any actual or potential non-compliance with conditions of consent;

(f) describes what immediate steps were taken in relation to the incident;

(g) identifies further action(s) that will be taken in relation to the incident; and

(h) provides the contact information for further communication regarding the incident (the Senior Project Director).

Within 30 days of the date on which the incident occurred or as otherwise agreed to by the Planning Secretary, SINSW will provide the Planning Secretary and any relevant public authorities (as determined by the Planning Secretary) with a detailed report on the incident addressing all requirements below:

(a) a summary of the incident;

(b) outcomes of an incident investigation, including identification of the cause of the incident;

(c) details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence; and

(d) details of any communication with other stakeholders regarding the incident.

8.7. Reporting process

Throughout the project, data will be recorded on participation levels both face to face and online, a record of engagement tools and activities carried out in addition to queries received and feedback against emerging themes.

Stakeholder and community sentiment will be evaluated throughout to ensure effectiveness of the engagement strategy and to inform future activities.

Reporting will include but not be limited to:

Stakeholder engagement reporting – numbers of forums, participation levels and a summary of the outcomes Community sentiment reporting – outputs of all community engagement activities, including numbers in attendance at events, participation levels and feedback received against broad themes

Online activity – through the project website and via social media

Media monitoring – as part of the proactive media campaign

Engagement risk register - to be updated regularly.