MEMORANDUM



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TO: Lizza Young DATE: 29 June 2022

COMPANY: Colliers Project Management **EMAIL:** Lizza.Young@colliers.com

FROM: Renzo Arango

SUBJECT: MODs Mulgoa Rise Primary School & Hawkesbury Centre of Excellence: Noise

Intrusion from Construction Works For Permanent Facilities

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Lizza,

This memorandum discusses the findings of the noise intrusion assessment conducted for noise emissions generated by construction activities of the permanent school facilities, onto the temporary facilities.

This assessment is undertaken for the temporary facilities at Mulgoa Rise Primary School and Hawkesbury Centre of Excellence.

1. Mulgoa Rise Primary School

It is planned for the temporary facilities to be operational starting January 2023. In accordance with information provided by the building contractor for the permanent school facilities (Richard Crookes Constructions), it is noted that the only works remaining from January 2023 till project completion are the following:

- Services and finishes
- External works (landscaping and public domain)
- Commissioning

Based on this information, internal noise levels have been predicted for those emitted by construction activities related to the permanent facilities. A summary of the predicted internal noise levels is provided in Table 1. Assessment outcomes are also listed in this table, and from these the following is noted:

- Provided that façade doors and windows can remain closed during construction works for services and finishes, there is not likelihood of noise impact within temporary educational spaces.
- During external works, there is also not likelihood of noise impact within educational spaces
 provided that façade doors and windows can remain closed, and construction works are
 undertaken beyond 40m from the school premises. For work to be undertaken within 40m of the
 temporary school premises, it is advised that these should be coordinated with school staff so
 these are only undertaken outside school operational times (i.e. between 7:00 am and 8:00 am, or
 after 3:00 pm).

Table 1 Summary of predicted noise intrusion levels and relevant assessment outcomes

Tasks	Equipment	Sound Power Levels (dBA re 1pW)	Predicted Internal Noise Level at Temporary Facilities		Assessment Outcomes	
			Support Learning Space S1	Homebase 6	Support Learning Space S1	Homebase 6
Services & finishes	Welder	101	35-45 	30-35	Compliance	Compliance
	Saw cutter	109				
	Dump truck	109				
	Power hand tools	109				
	Handheld nail gun	101				
External works	Power hand tools	109	40-65	35-45	Non-compliance occurs when works are conducted within 40m of affected school facility	Compliance
	Skid steer	110				
	Tractor	112				

Notes:

2. Hawkesbury Centre of Excellence

As per Mulgoa Rise Primary School, it is also planned for the temporary facilities to be operational starting January 2023. In accordance with information provided by the building contractor for the permanent school facilities (Richard Crookes Constructions), it is noted that the only works remaining from January 2023 till project completion are the following:

- Services and miscellaneous internal works
- External works (landscaping and public domain)
- Commissioning and handover management

Therefore, internal noise levels have been predicted for those emitted by construction activities related to the permanent facilities. A summary of the predicted internal noise levels is provided in Table 2. Assessment outcomes are also listed in this table, and from these it is observed that compliance will be achieved for all construction works provided that façade doors and windows can remain closed while these works are undertaken.

Internal noise level is estimated assuming a noise reduction of 25 dB between external and internal noise levels. This noise reduction typically corresponds to acoustically unsealed doors and windows (i.e. doors and windows which exclude acoustic rubber seals along frame and bottom thresholds)

Table 2 Summary of predicted noise intrusion levels and relevant assessment outcomes

Tasks	Equipment	Sound Power Levels (dBA re 1pW)	Predicted Internal Noise Level at Temporary Facilities		Assessment Outcomes	
			Homebase 1	Homebase 5	Homebase 1	Homebase 5
Services	Welder	101	30-35	30-35	Compliance	Compliance
& misc. internal works	Saw cutter	109				
	Dump truck	109				
	Power hand tools	109				
	Handheld nail gun	101				
External works	Power hand tools	109	30-40	30-40	Compliance	Compliance
	Skid steer	110				
	Tractor	112				

Notes:

3. Conclusions

Based on our discussion in Sections 1 and 2, the following is concluded regarding noise intrusion from noise levels generated by construction activities of the permanent school facilities, onto the temporary facilities:

- For Mulgoa Rise Primary School:
 - External doors and windows should remain closed while construction works are undertaken.
 - For work to be undertaken within 40m of the temporary school premises, it is advised that
 these should be coordinated with school staff so these are only conducted outside operational
 times of temporary school facilities.
- For Hawkesbury Centre of Excellence: External doors and windows should remain closed while construction works are undertaken.

^{1.} Internal noise level is estimated assuming a noise reduction of 25 dB between external and internal noise levels. This noise reduction typically corresponds to acoustically unsealed doors and windows (i.e. doors and windows which exclude acoustic rubber seals along frame and bottom thresholds)