



SMEW – Construction Noise and Vibration Impact Statement – Addendum 1

SMCSWSSJ-JHL-WEC-EM-PLN-000015

Document and Revision History

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1. Introduction

This Construction Noise and Vibration Impact Statement addendum has been produced to assess noise and vibration impacts associated with additional project scope relating to the location of Sydney Trains service routes. The report is an addendum to the Southwest Metro Early Works CNVIS (document ref: SMCSWSSJ-JHL-WEC-EM-REP-000002)

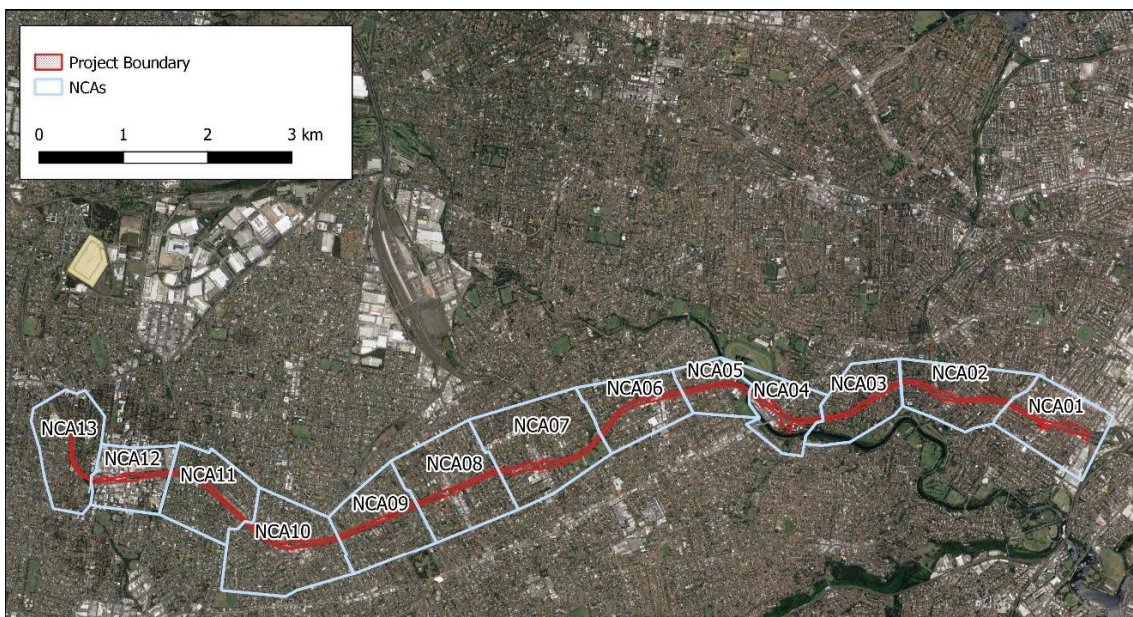
JHLOR has been engaged to relocate Sydney Trains communications service routes at a number of locations, including;

- Dulwich Hill
- Canterbury
- Lakemba
- Wiley Park
- Punchbowl and
- Bankstown

It is noted that CSR at Dulwich Hill and Canterbury is already assessed within the CNVIS, as such this addendum will further assess impacts at Lakemba, Wiley Park, Punchbowl and Bankstown. This report is to be read in conjunction with the main report and contains additional information relating to the Sydney Trains relocations scope only.

Figure 1 includes a layout of noise catchments across the Sydenham to Bankstown Project site.

Figure 1 Sydenham to Bankstown Noise Catchment Areas



JHLOR's noise consultant Wilkinson Murray has undertaken a land use survey across the Sydenham to Bankstown Project surrounds. Mapping is included within Appendix A for reference.

Works assessed within this addendum will occur in the following noise catchments;

- Lakemba – NCA8
- Wiley Park – NCA9
- Punchbowl – NCA10
- Bankstown - NCA11

The Rating Background Levels for the catchments are included in Table 1.

Table 1 Rating Background Levels

NCA	EIS background monitoring ID	Area	Day RBL 7am-6pm	Evening RBL 6pm-10pm	Night RBL 10pm-7am
NCA08	B.14	Lakemba	47	47	41
NCA09	B.16	Wiley Park	44	44	36
NCA10	B.19	Punchbowl	47	47	41
NCA11	B.20	Bankstown	47	47	39

Based on the Rating Background Levels, the target noise management levels have been developed, see Table 2

Table 2 Target Noise Management Levels

Receiver Type	Standard Hours (RBL +10dB)	Outside Recommended Standard Hours (RBL +5dB)		
	Day	Day (Saturday & Sunday)	Evening	Night
Residential NCA 08	57	52	52	46
Residential NCA 09	54	49	49	41
Residential NCA 10	57	52	52	46
Residential NCA 11	57	52	52	44

Sleep disturbance criteria for the subject NCAs are included in Table 3.

Table 3 Sleep Disturbance Criteria

NCA	Area	Night RBL 10pm-7am	Sleep disturbance screening criterion L _{AMAX}
NCA08	Lakemba	41	56
NCA09	Wiley Park	36	51
NCA10	Punchbowl	41	56
NCA11	Bankstown	39	54

2. Assessment

2.1 Noise

Wilkinson Murray have undertaken an assessment of the CSR works throughout the subject areas as part of the Southwest Metro Corridor CNVIS (document ref: SMCSWSSJ-JHL-WEC-EM-REP-000011). The results from this assessment are utilised within this addendum.

The CSR modelling scenario is based on the plant and equipment identified in Table 4 being used simultaneously. Note that the actual equipment used may vary slightly. It is unlikely that the plant and equipment below will be utilised simultaneously, as such, any modelling results are indicative only. Additional modelling will be taken prior to any out of hours works to supplement the below modelling scenario.

Table 4 Noise Modelling Scenario

Scenario	Work Period	Main Equipment Used	L _{Aeq, 15min}	L _{AMax}
CSR	Standard & OOHW	Vacuum Truck	107	114
		6t Excavator	103	
		2t tipper	101	
		Hand tools	73	
		Grinders	107	
		Multi-crane	105	
		Wacker Packer	110	
		EWP	100	

Based on the above scenario, Wilkinson Murray have modelled the worst-case noise levels within the impacted catchments, refer to Table 5, Table 6 & Table 7.

Table 5 Predicted Worst case scenario for CSR

Receiver	OOH Night NML	Predicted Worst-Case L _{Aeq,15min}	Sleep Disturbance Screening Criteria	Predicted L _{AMax}
NCA 08	46	70	56	93
NCA 09	41	79	51	101
NCA 10	56	71	56	93
NCA 11	54	68	54	89

Noise levels shaded light blue indicate exceedances above the applicable NML. Noise levels shaded green exceed the sleep disturbance screening criteria.

Table 6 Predicted Worst Case noise levels for Commercial Receivers

	NCA 08	NCA 09	NCA 10	NCA 11
CSR	66	61	68	38

Noise levels shaded light blue indicate exceedances above the applicable NML.

Table 7 Predicted Worse Case noise levels for Other Sensitive Receivers

Receiver ID	Receiver Type	NML	CSR
NCA 08_CCC_5156	Childcare Centre	60	45
NCA 08_EDU_6451	Education	60	47
NCA 08_MED_8142	Medical	60	51
NCA 08_POW_7427	Place of Worship	60	53
NCA 09_EDU_6080	Education	60	46
NCA 09_EDU_6081	Education	60	40
NCA 09_EDU_6153	Education	60	48
NCA 09_EDU_6154	Education	60	37
NCA 09_EDU_6155	Education	60	43
NCA 09_EDU_6156	Education	60	54
NCA 09_EDU_6157	Education	60	52
NCA 09_EDU_6288	Education	60	40
NCA 09_EDU_6289	Education	60	39
NCA 09_EDU_6327	Education	60	48
NCA 09_EDU_6328	Education	60	42
NCA 09_EDU_6329	Education	60	41
NCA 09_EDU_6330	Education	60	41
NCA 09_EDU_6331	Education	60	49
NCA 09_EDU_6332	Education	60	50
NCA 09_EDU_6492	Education	60	56
NCA 09_EDU_6493	Education	60	48
NCA 09_EDU_6494	Education	60	37
NCA 09_EDU_6495	Education	60	47
NCA 09_EDU_6496	Education	60	51
NCA 09_EDU_6497	Education	60	36
NCA 09_EDU_6498	Education	60	37
NCA 09_EDU_6505	Education	60	54
NCA 09_EDU_6506	Education	60	34
NCA 09_EDU_6507	Education	60	54
NCA 09_EDU_6508	Education	60	43

2.2 Vibration

No vibration intensive works are expected to occur as part of the works.

Plant may travel on platforms and near structures. A wacker packer may be used during back-fill of service routes. The vibration associated with these activities is localised and unlikely to exceed screening criteria levels included within the CNVIS main body.

3. Mitigation

In addition to mitigation measures identified within the CNVMP and CNVIS, the following mitigation will be applied for CSR works in the subject Noise Catchment Areas.

Where specific notifications and individual briefings are to occur, JHLOR will consult with sensitive receivers regarding respite, in accordance with CoA-E23.

Table 8 Additional Mitigation Measures as per Sydney Metro Construction Noise and Vibration Strategy

Scenario	Period	NCA 08	NCA 09	NCA 10	NCA 11
CSR	Standard	LB, M	LB, M	LB, M	LB, M
	OOHW 1	LB, M	M, IB, LB, RO, PC, SN	LB, M	LB, M
	OOHW 2	M, IB, LB, PC, RO, SN	AA, M, IB, LB, PC, SN	AA, M, IB, LB, PC, SN	M, IB, LB, PC, RO, SN

Notes;

Measure	Abbreviation
Alternative accommodation	AA
Monitoring	M
Individual briefings	IB
Letterbox drops	LB
Project specific respite offer	RO
Phone calls	PC
Specific notifications	SN

Noise monitoring will be undertaken nominally at the following locations, noting exact locations may change where detailed modelling, such as possession specific modelling, indicates a more impacted receiver than that listed below, or in the case of a complaint.

Table 9 Noise Monitoring Locations

NCA	Monitoring ID	Location
NCA8	SMEW8	55 Railway Parade, Lakemba 2195
NCA9	SMEW9	57 Railway Parade, Lakemba 2195
NCA10	SMEW10	42 Urunga Parade, Punchbowl 2196
NCA11	SMEW11	74 South Terrace, Bankstown 2200

4. Conclusion

The assessment indicates that the noise associated with the works is likely to exceed the noise management levels with standard mitigation measures utilised. JHLOR will engage the community through letter box drops and the community enquiries and complaints line.

Appendix A – Land Use Survey Maps



- NCA01
- NCA02
- Residential
- Commercial
- Industrial
- Education
- Place of Worship
- Childcare Centre
- Medical

Southwest Metro Corridor

Land Use Survey

NCA 02



- NCA02
 - NCA03
 - NCA04
 - NCA05
- Residential
 - Commercial
 - Industrial
 - Education
 - Place of Worship
 - Childcare Centre
 - Medical

Southwest Metro Corridor
Land Use Survey
NCA 03



- NCA05
- NCA06
- NCA07
- Residential
- Commercial
- Industrial
- Education
- Place of Worship
- Childcare Centre
- Medical

Southwest Metro Corridor

Land Use Survey

NCA 06



-  NCAs
-  Residential
-  Commercial
-  Industrial
-  Education
-  Place of Worship
-  Childcare Centre
-  Medical

Southwest Metro Corridor

Land Use Survey

NCA 08





- NCA11
 - NCA09
 - NCA10
- NCA's
 - Residential
 - Commercial
 - Industrial
 - Education
 - Place of Worship
 - Childcare Centre
 - Medical

Southwest Metro Corridor

Land Use Survey

NCA 10

Appendix B – List of noise sensitive receivers across catchments

Receiver ID	Receiver Type	Receiver Address
NCA 06_Caf_6058	Café/Bar/Restaurant	11 Amy Street, Campsie
NCA 06_Caf_6053	Café/Bar/Restaurant	115 Clissold Parade, Campsie
NCA 06_Caf_6050	Café/Bar/Restaurant	140-142 Beamish Street, Campsie
NCA 06_Caf_6052	Café/Bar/Restaurant	148a Beamish Street, Campsie
NCA 06_Caf_6054	Café/Bar/Restaurant	152 Beamish Street, Campsie
NCA 06_Caf_6051	Café/Bar/Restaurant	161-163 Beamish Street, Campsie
NCA 04_Caf_6059	Café/Bar/Restaurant	171-173 Canterbury Road, Canterbury
NCA 06_Caf_6056	Café/Bar/Restaurant	174 Beamish Street, Campsie
NCA 06_Caf_6055	Café/Bar/Restaurant	193 Beamish Street, Campsie
NCA 06_Caf_6055	Café/Bar/Restaurant	195 Beamish Street, Campsie
NCA 03_Caf_6061	Café/Bar/Restaurant	20 Crinan Street, Hurlstone Park
NCA 04_Caf_4315	Café/Bar/Restaurant	208 Canterbury Road, Canterbury
NCA 02_Caf_1647	Café/Bar/Restaurant	237 Wardell Road, Dulwich Hill
NCA 02_Caf_4700	Café/Bar/Restaurant	245 Wardell Road, Dulwich Hill
NCA 03_Caf_6060	Café/Bar/Restaurant	25 Floss Street, Hurlstone Park
NCA 02_Caf_6062	Café/Bar/Restaurant	255-257 Wardell Road, Marrickville
NCA 04_Caf_4315	Café/Bar/Restaurant	30 Tincombe Street, Canterbury

Receiver ID	Receiver Type	Receiver Address
NCA 08_OCC_6037	Childcare Centre	108-112 Haldon Street, Lakemba
NCA 06_OCC_1811	Childcare Centre	12 Campsie Street, Campsie
NCA 03_OCC_2114	Childcare Centre	12-14 Smith Avenue, Hurlstone Park
NCA 10_OCC_7037	Childcare Centre	17 Broadway, Punchbowl
NCA 08_OCC_5156	Childcare Centre	180 Lakemba Street, Lakemba
NCA 06_OCC_6000	Childcare Centre	2 Carrington Street, Campsie
NCA 10_OCC_6708	Childcare Centre	21 Dudley Street, Punchbowl
NCA 07_OCC_7012	Childcare Centre	24-25 Redman Parade, Belmore
NCA 06_OCC_1615	Childcare Centre	3 Harold Street, Campsie
NCA 01_OCC_2803	Childcare Centre	356 Victoria Road, Marrickville
NCA 10_OCC_6039	Childcare Centre	42 Urunga Parade, Punchbowl
NCA 08_OCC_8214	Childcare Centre	48-50 Taylor Street, Lakemba
NCA 03_OCC_5024	Childcare Centre	66 Garnet Street, Hurlstone Park
NCA 06_OCC_4644	Childcare Centre	70 Campsie Street, Campsie
NCA 10_OCC_5985	Childcare Centre	70 South Terrace, Punchbowl
NCA 10_OCC_5051	Childcare Centre	748 Punchbowl Road, Punchbowl
NCA 07_OCC_7759	Childcare Centre	8 Leylands Parade, Belmore
NCA 06_Edu_1956	Education	1 Harold Street, Campsie
NCA 09_EDU_6288	Education	102-112 King Georges Road, Wiley Park
NCA 06_Edu_1481	Education	12 Harold Street, Campsie
NCA 06_Edu_1965	Education	14 Duke Street, Campsie
NCA 12_EDU_6893	Education	18 East Terrace, Bankstown
NCA 02_Edu_4373	Education	194-210 Wardell Road, Marrickville
NCA 09_EDU_6154	Education	1a Hillcrest Street, Wiley Park
NCA 09_EDU_6153	Education	1b Hillcrest Street, Wiley Park
NCA 13_EDU_6861	Education	2 Winspear Avenue, Bankstown
NCA 01_Edu_1155	Education	200 Livingstone Road, Marrickville
NCA 06_Edu_1100	Education	22 Harold Street, Campsie
NCA 07_EDU_6512	Education	26-30 Etela Street, Belmore
NCA 10_EDU_5772	Education	29-47 Rossmore Avenue, Punchbowl
NCA 06_Edu_4266	Education	3 Harold Street, Campsie
NCA 07_EDU_7102	Education	31-33 Isabel Street, Belmore
NCA 08_EDU_7740	Education	33-35 Croydon Street, Lakemba
NCA 01_Edu_1133	Education	334 Illawarra Road, Marrickville
NCA 08_EDU_6451	Education	37-49 Croydon Street, Lakemba
NCA 13_EDU_6860	Education	4 Winspear Avenue, Bankstown
NCA 01_Edu_2827	Education	53 Francis Street, Marrickville
NCA 10_EDU_6117	Education	54 Kelly Street, Punchbowl
NCA 12_EDU_7029	Education	6 East Terrace, Bankstown
NCA 09_EDU_6492	Education	95 King Georges Road, Wiley Park

Receiver ID	Receiver Type	Receiver Address
NCA 09_EDU_6080	Education	97-101 King Georges Road, Wiley Park
NCA 06_Med_4625	Medical	10 Amy Street, Campsie
NCA 06_Med_1188	Medical	110 Clissold Parade, Campsie
NCA 04_Med_4568	Medical	129 Canterbury Road, Canterbury
NCA 06_Med_3444	Medical	12a Campsie Street, Campsie
NCA 06_Med_1604	Medical	147 Beamish Street, Campsie
NCA 06_Med_4765	Medical	154 Beamish Street, Campsie
NCA 06_Med_1081	Medical	17 Anglo Road, Campsie
NCA 06_Med_4446	Medical	180 Beamish Street, Campsie
NCA 03_Med_4628	Medical	19 Crinan Street, Hurlstone Park
NCA 06_Med_4652	Medical	20-24 Ninth Avenue, Campsie
NCA 06_Med_4414	Medical	2-16 Anglo Road, Campsie
NCA 03_Med_4778	Medical	23 Crinan Street, Hurlstone Park
NCA 02_Med_1086	Medical	241 Wardell Road, Dulwich Hill
NCA 06_Med_1190	Medical	247-249 Beamish Street, Campsie
NCA 06_Med_1092	Medical	261 Beamish Street, Campsie
NCA 08_MED_8142	Medical	27-31 Railway Parade, Lakemba
NCA 01_Med_2182	Medical	315-317 Illawarra Road, Marrickville
NCA 01_Med_2171	Medical	376 Illawarra Road, Marrickville
NCA 01_Med_3638	Medical	385 Illawarra Road, Marrickville
NCA 01_Med_1102	Medical	397 Illawarra Road, Marrickville
NCA 06_Med_4446	Medical	42-42a North Parade, Campsie
NCA 06_Med_4400	Medical	48 South Parade, Campsie
NCA 06_Med_2104	Medical	7 Duke Street, Campsie
NCA 10_MED_7070	Medical	759 Punchbowl Road, Punchbowl
NCA 10_POW_6870	Place of Worship	1 Catherine Street, Punchbowl
NCA 10_POW_6463	Place of Worship	11-15 Broadway, Punchbowl
NCA 09_POW_7169	Place of Worship	114-118 King Georges Road, Wiley Park
NCA 08_POW_5779	Place of Worship	154-158 Lakemba Street, Lakemba
NCA 10_POW_6196	Place of Worship	19 Myall Street, Punchbowl
NCA 10_POW_6044	Place of Worship	20 Arthur Street, Punchbowl
NCA 08_POW_7427	Place of Worship	20 Ernest Street, Lakemba
NCA 02_PoW_1130	Place of Worship	205 Livingstone Road, Marrickville
NCA 10_POW_7430	Place of Worship	25 Kelly Street, Punchbowl
NCA 06_PoW_1144	Place of Worship	26 Anglo Road, Campsie
NCA 10_POW_5771	Place of Worship	29-47 Rossmore Avenue, Punchbowl
NCA 07_POW_7103	Place of Worship	31-33 Isabel Street, Belmore
NCA 06_PoW_1411	Place of Worship	34 North Parade, Campsie
NCA 01_PoW_1106	Place of Worship	389 Illawarra Road, Marrickville
NCA 02_PoW_2504	Place of Worship	43 Robert Street, Marrickville

Receiver ID	Receiver Type	Receiver Address
NCA 13_POW_7662	Place of Worship	4-6 Weigand Avenue, Bankstown
NCA 02_PoW_2504	Place of Worship	47 Robert Street, Marrickville
NCA 07_POW_6348	Place of Worship	50-52 Etela Street, Belmore
NCA 09_POW_8212	Place of Worship	63 Railway Parade, Lakemba
NCA 03_PoW_2022	Place of Worship	67a Duntroon Street, Hurlstone Park
NCA 08_POW_7681	Place of Worship	69-75 Haldon Street, Lakemba
NCA 06_PoW_1087	Place of Worship	7 Evaline Street, Campsie