Figure 4-7 Additional properties eligible for consideration of at-property acoustic treatment

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Table 4-1 Southern interchange and Hills M2 Motorway integration works – predicted daytime traffic noise levels (with NWM2WB08 North and South)

ID	Address	Usage	Criterion (dB(A))	Year of Opening (2019) $L_{Aeq(15hour)}$ (dB(A))			Design Year (2029) $L_{Aeq(15hour)}$ (dB(A))			Acute	Eligible
				No Build	Build	Increase	No Build	Build	Increase		
3759	27 Coral Tree Drive, Carlingford	Residential	60	57	60	3	58	61	3	No	Yes
3777	25 Coral Tree Drive, Carlingford	Residential	60	57	60	3.1	58	61	3.1	No	Yes
3793	23 Coral Tree Drive, Carlingford	Residential	60	58	61	2.9	59	62	2.9	No	Yes
3823	21 Coral Tree Drive, Carlingford	Residential	60	58	61	2.6	59	62	2.6	No	Yes
3842	22 Coral Tree Drive, Carlingford	Residential	60	58	61	3.1	59	62	3.1	No	Yes
3860	20 Coral Tree Drive, Carlingford	Residential	60	58	61	2.5	59	61	2.5	No	Yes

Table 4-2 Southern interchange and Hills M2 Motorway integration works – predicted night-time traffic noise levels (with NWM2WB08 North and South)

ID	Address	Usage	Criterion (dB(A))	Year of Opening (2019) $L_{Aeq(15hour)}$ (dB(A))			Design Year (2029) $L_{Aeq(15hour)}$ (dB(A))			Acute	Eligible
				No Build	Build	Increase	No Build	Build	Increase		
3759	27 Coral Tree Drive, Carlingford	Residential	55	55	57	2.1	56	58	2.1	No	Yes
3777	25 Coral Tree Drive, Carlingford	Residential	55	55	58	2.2	56	58	2.2	No	Yes
3793	23 Coral Tree Drive, Carlingford	Residential	55	56	58	2	57	59	2	No	Yes
3823	21 Coral Tree Drive, Carlingford	Residential	55	56	58	1.6	57	59	1.6	No	No
3842	22 Coral Tree Drive, Carlingford	Residential	55	56	58	2.2	57	59	2.2	No	Yes
3860	20 Coral Tree Drive, Carlingford	Residential	55	56	58	1.6	57	59	1.6	No	No

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4.5 Construction noise mitigation and management measures

4.5.1 Description

Potential construction noise impacts have been raised as a significant issue in submissions, particularly from local communities living close to construction sites. Submissions have also raised the need to apply all feasible and reasonable noise mitigation and management measures during the construction period.

To assist in consideration of potential construction noise issues, Table 7-60 to Table 7-77 of the environmental impact statement have been reproduced in the following pages of this report, and updated to include more detail about the magnitude and extent of potential noise impacts. The tables have been updated to list the number of receivers expected to receive construction noise between rating background levels (RBLs) (ie existing background noise) and noise management levels (NMLs) (ie the thresholds above which further consideration of feasible and reasonable noise mitigation measures is required). For those receivers expected to be affected by construction noise above noise management levels, receivers have been broken down into groups based on the extent of exceedance of the rating background levels in 10 dB(A) bands.

The construction noise assessment tables presented on the following pages are:

- For construction activities during standard construction hours:
  - **Table 4-36** summarises construction noise impacts from the Hills M2 Motorway integration work and southern interchange (cf. Table 7-60 in the environmental impact statement).
  - **Table 4-37** summarises construction noise impacts from the Coral Tree Drive switching station site (cf. Table 7-61 in the environmental impact statement).
  - **Table 4-38** summarises construction noise impacts from the Darling Mills Creek compound (C2) (cf Table 7-62 in the environmental impact statement).
  - **Table 4-39** summarises construction noise impacts from the Barclay Road compound (C3) (cf Table 7-63 in the environmental impact statement).
  - **Table 4-40** summarises construction noise impacts from the Yale Close compound (C4) (cf Table 7-64 in the environmental impact statement).
  - **Table 4-41** summarises construction noise impacts from the southern interchange compound (C5) (cf Table 7-65 in the environmental impact statement).
  - **Table 4-42** summarises construction noise impacts from the Wilson Road compound (C6) (cf Table 7-66 of the environmental impact statement).
  - **Table 4-43** summarises construction noise impacts from the Trelawney Street compound (C7) (cf Table 7-67 of the environmental impact statement).
  - **Table 4-44** summarises construction noise impacts from the Pioneer Avenue compound (C8) (cf Table 7-68 of the environmental impact statement).
  - **Table 4-45** summarises construction noise impacts from the northern interchange compound (C9) (cf Table 7-69 of the environmental impact statement).
  - **Table 4-46** summarises construction noise impacts from the Bareena Avenue compound (C10) (cf Table 7-70 of the environmental impact statement).

- **Table 4-47** summarises construction noise impacts from the Junction Road compound (C11) (cf Table 7-71 of the environmental impact statement). This table also includes updated construction noise impact assessment outcomes for additional laydown activities to be carried out at this site (refer to **Section 7.5** of this report).
- **Table 4-48** summarises construction noise impacts from the northern interchange and M1 Pacific Motorway tie-in works (cf Table 7-72 of the environmental impact statement).

- For nominated construction activities outside of standard construction hours:
  - **Table 4-49** summarises construction noise impacts from the Hills M2 Motorway integration bridgeworks (cf Table 7-33 of the environmental impact statement).
  - **Table 4-50** summarises construction noise impacts from tunnelling support sites (cf Table 7-74 of the environmental impact statement).
  - **Table 4-85** summarises ground-borne noise impacts from tunnelling activities (cf Table 7-75 of the environmental impact statement).
  - **Table 4-52** summarises sleep disturbance impacts from the Hills M2 Motorway integration bridgeworks (cf Table 7-76 of the environmental impact statement).
  - **Table 4-53** summarises sleep disturbance impacts from tunnelling support sites (cf Table 7-77 of the environmental impact statement).

Noise and vibration mitigation, monitoring and management measures to be applied to the project during construction and operation are summarised in Table 7-85 of the environmental impact statement. These measures apply to all aspects of the project, unless expressly stated otherwise (for example, in the case of site or activity specific measures).

During construction, a Construction Noise and Vibration Management Plan(s) would be developed and implemented for each construction site/ activity, or each group of construction sites/ activities. These plans would detail site/ activity specific mitigation measures, taking into account the number and sensitivity of potentially affected receivers, the nature and duration of relevant construction activities, and the availability of feasible and reasonable mitigation measures.

As a general guide, the approach taken during the construction of the North West Rail Link and the Hills M2 Motorway Upgrade would be adapted and applied to the NorthConnex project. This approach would require review of the predicted construction noise impacts summarised in **Table 4-36** to **Table 4-53** of this report, including any refinements to that assessment as a result of detailed design, and identification of receiver specific mitigation and management measures depending on the level of predicted construction noise impact relative to rating background levels (RBLs). Proposed receiver specific mitigation and management measures as a function of construction noise impact above rating background levels are summarised in **Table 4-35**.

Table 4-3 Proposed receiver specific construction noise mitigation and management measures

Predicted construction noise impact	Proposed receiver specific mitigation and management measures (refer to descriptions of measures provided after this table)
Airborne noise during standard construction hours (Table 2-66 to Table 2-78)	
For receivers affected by construction noise more than 0 dB(A) but less than 10 dB(A) above the applicable rating background level.	No additional receiver specific mitigation and management measures beyond those specified in Table 7-85 of the environmental impact statement.
For receivers affected by construction noise more than 10 dB(A) but less than 20 dB(A) above the applicable rating background level.	Letterbox drop
For receivers affected by construction noise more than 20 dB(A) but less than 30 dB(A) above the applicable rating background level.	Letterbox drop Noise monitoring
For receivers affected by construction noise more than 30 dB(A) above the applicable rating background level.	Letterbox drop Noise monitoring
Acutely affected receivers (equal to or more than 75 dB(A))	Letterbox drop Noise monitoring Respite periods
Airborne noise outside of standard construction hours (Table 2-79 and Table 2-80)	
For receivers affected by construction noise more than 0 dB(A) but less than 5 dB(A) above the applicable rating background level.	No additional receiver specific mitigation and management measures beyond those specified in Table 7-85 of the environmental impact statement.
For receivers affected by construction noise more than 5 dB(A) but less than 10 dB(A) above the applicable rating background level.	Letterbox drop
For receivers affected by construction noise more than 10 dB(A) but less than 20 dB(A) above the applicable rating background level.	Letterbox drop
For receivers affected by construction noise more than 20 dB(A) but less than 30 dB(A) above the applicable rating background level.	Letterbox drop Noise monitoring
For receivers affected by construction noise more than 30 dB(A) above the applicable rating background level.	Letterbox drop Noise monitoring Individual briefing Receiver specific notifications Receiver specific contact Respite periods Alternative accommodation
Acutely affected receivers (equal to or more than 75 dB(A))	Letterbox drop Noise monitoring Individual briefing

	Receiver specific notifications Receiver specific contact Respite periods Alternative accommodation
Ground-borne noise (Table 2-81)	
For receivers affected by ground-borne noise more than 0 dB(A) but less than 5 dB(A) above the evening ground-borne noise criterion.	No additional receiver specific mitigation and management measures beyond those specified in Table 7-85 of the environmental impact statement.
For receivers affected by ground-borne noise more than 5 dB(A) but less than 10 dB(A) above the evening ground-borne noise criterion.	Letterbox drop
For receivers affected by ground-borne noise more than 0 dB(A) but less than 5 dB(A) above the night time ground-borne noise criterion.	Letterbox drop Noise monitoring Receiver specific notifications
For receivers affected by ground-borne noise more than 5 dB(A) but less than 10 dB(A) above the night time ground-borne noise criterion.	Letterbox drop Noise monitoring Receiver specific notifications Receiver specific contact Alternative accommodation
Sleep disturbance impacts (Table 2-82 and Table 2-83)	
For receivers affected by sleep disturbance impacts more than 0 dB(A) but less than 10 dB(A) above the applicable sleep disturbance criterion.	Letterbox drop Receiver specific notifications Receiver specific contact Respite periods
For receivers affected by sleep disturbance impacts more than 10 dB(A) but less than 20 dB(A) above the applicable sleep disturbance criterion.	Letterbox drop Noise monitoring Individual briefing Receiver specific notifications Receiver specific contact Alternative accommodation
For receivers affected by sleep disturbance impacts above the awakening reaction criterion.	Letterbox drop Noise monitoring Individual briefing Receiver specific notifications Receiver specific contact Alternative accommodation

The receiver specific construction noise mitigation and management measures listed in **Table 4-35** would be developed and document in more detail during preparation of the Construction Noise and Vibration Management Plan(s). As a general guide, these measures are likely to include:

- **Letterbox drop** – notification of construction activities as part of periodic community updates distributed across areas surrounding construction activities.
- **Noise monitoring** – receiver or catchment specific noise monitoring used to confirm the construction noise performance of the project and to proactively inform, where relevant, review and update noise mitigation and management measures, and site construction practices.
- **Individual briefing** – offers of individual briefings about relevant construction activities and potential impacts with potentially affected receivers.
- **Receiver specific notifications** – individual correspondence to potentially affected receivers providing information on construction activities and potential impacts specific to the situation.
- **Receiver specific contact** – individual phone calls, emails of visits to potentially affected receivers providing information on construction activities and potential impacts specific to the situation.
- **Respite periods** – programming of feasible and reasonable respite periods for potentially affected receivers.
- **Alternative accommodation** –offers of reasonable alternative accommodation for receivers potentially affected by construction activities conducted at night (from 10 pm to 7 am). Alternative accommodation would be subject to consultation with the affected receiver and would take into account the duration and intensity of the potential impact.

4.5.2 Environmental assessment

This clarification does not alter the environmental assessment or predicted impacts, as presented in the environmental impact statement.

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Table 4-4 Construction noise – Hills M2 Motorway integration works and southern interchange (standard construction hours)

NCA	RBL (dB(A))	Number of receivers 0-10 dB(A) above RBL	NML	Number of receivers 10-20 dB(A) above RBL	Number of receivers 20-30 dB(A) above RBL	Number of receivers ≥ 30 dB(A) above RBL	Number of acutely affected receivers (≥75 dB(A))
Traffic management, set-up and line-marking							
NCA08	44	18	54	6	1	0	0
NCA10	44	210	54	87	17	0	0
NCA11	51	68	61	38	9	0	4
NCA12	39	134	49	73	30	5	0
NCA13	49	30	59	4	0	0	0
NCA14	53	48	63	16	0	0	0
NCA15	53	16	63	1	0	0	0
Total	-	524	-	225	57	5	4
Demolition							
NCA08	44	57	54	13	5	0	0
NCA10	44	245	54	93	12	2	2
NCA11	51	122	61	47	10	3	9
NCA12	39	200	49	103	40	17	6
NCA13	49	33	59	4	0	0	0
NCA14	53	42	63	19	5	0	2
NCA15	53	42	63	7	1	0	1
Total	-	741	-	286	73	22	20
Road widening							
NCA08	44	44	54	0	0	0	0
NCA10	44	153	54	83	12	2	2
NCA11	51	122	61	47	10	3	9
NCA12	39	153	49	69	21	9	2
NCA13	49	30	59	4	0	0	0
NCA14	53	39	63	18	5	0	2
Total	-	541	-	221	48	14	15
Bridgeworks							
NCA12	39	155	49	79	30	8	4
NCA13	49	19	59	6	2	0	0
NCA15	53	42	63	7	1	0	1
Total	-	216	-	92	33	8	5

NCA	RBL (dB(A))	Number of receivers 0-10 dB(A) above RBL	NML	Number of receivers 10-20 dB(A) above RBL	Number of receivers 20-30 dB(A) above RBL	Number of receivers ≥ 30 dB(A) above RBL	Number of acutely affected receivers (≥75 dB(A))
Intelligent Transport Systems works							
NCA08	44	18	54	10	3	0	0
NCA10	44	115	54	57	8	1	1
NCA11	51	63	61	32	8	1	7
NCA12	39	200	49	105	36	10	2
NCA13	49	22	59	6	0	0	0
NCA14	53	54	63	18	0	0	0
NCA15	53	13	63	5	0	0	0
Total	-	485	-	233	55	12	10
Earthworks, pavement and temporary median works							
NCA08	44	84	54	16	5	1	1
NCA09	44	16	54	2	0	0	0
NCA10	44	262	54	106	13	3	3
NCA11	51	145	61	56	11	5	9
NCA12	39	180	49	103	50	21	8
NCA13	49	45	59	14	1	0	0
NCA14	53	51	63	23	6	0	5
NCA15	53	51	63	8	1	0	1
Total	-	843	-	328	87	30	27
Re-surfacing asphalt works							
NCA08	44	76	54	18	6	0	0
NCA09	44	6	54	0	0	0	0
NCA10	44	193	54	105	41	1	1
NCA11	51	83	61	32	16	2	11
NCA12	39	157	49	86	39	16	2
NCA13	49	47	59	4	0	0	0
NCA14	53	78	63	26	0	0	0
NCA15	53	10	63	3	0	0	0
Total	-	650	-	274	102	19	14

Table 4-5 Construction noise – Coral Tree Drive switching station (standard construction hours)

NCA	RBL (dB(A))	Number of receivers 0-10 dB(A) above RBL	NML	Number of receivers 10-20 dB(A) above RBL	Number of receivers 20-30 dB(A) above RBL	Number of receivers ≥ 30 dB(A) above RBL	Number of acutely affected receivers (≥75 dB(A))
Site establishment and earthworks							
NCA08	44	3	54	0	0	0	0
NCA10	44	62	54	27	9	2	2
Total	-	65	-	27	9	2	2
Building construction works							
NCA08	44	51	54	17	0	0	0
NCA10	44	75	54	31	9	1	1
Total	-	126	-	31	9	1	1

Table 4-6 Construction noise – Darling Mills Creek compound (C2) (standard construction hours)

NCA	RBL (dB(A))	Number of receivers 0-10 dB(A) above RBL	NML	Number of receivers 10-20 dB(A) above RBL	Number of receivers 20-30 dB(A) above RBL	Number of receivers ≥ 30 dB(A) above RBL	Number of acutely affected receivers (≥75 dB(A))
Site establishment and earthworks							
NCA14	53	9	63	4	1	0	1
Total	-	9	-	4	1	0	1

Table 4-7 Construction noise – Barclay Road compound (C3) (standard construction hours)

NCA	RBL (dB(A))	Number of receivers 0-10 dB(A) above RBL	NML	Number of receivers 10-20 dB(A) above RBL	Number of receivers 20-30 dB(A) above RBL	Number of receivers ≥ 30 dB(A) above RBL	Number of acutely affected receivers (≥75 dB(A))
Site establishment and earthworks							
NCA13	49	24	59	3	0	0	1
Total	-	24	59	3	0	0	1

Table 4-8 Construction noise – Yale Close compound (C4) (standard construction hours)

NCA	RBL (dB(A))	Number of receivers 0-10 dB(A) above RBL	NML	Number of receivers 10-20 dB(A) above RBL	Number of receivers 20-30 dB(A) above RBL	Number of receivers ≥ 30 dB(A) above RBL	Number of acutely affected receivers (≥75 dB(A))
Site establishment and earthworks							
NCA12	39	103	49	54	21	4	3
Total	-	103	49	54	21	4	3

Table 4-9 Construction noise – Southern interchange compound (C5) (standard construction hours)

NCA	RBL (dB(A))	Number of receivers 0-10 dB(A) above RBL	NML	Number of receivers 10-20 dB(A) above RBL	Number of receivers 20-30 dB(A) above RBL	Number of receivers ≥ 30 dB(A) above RBL	Number of acutely affected receivers (≥75 dB(A))
Site establishment and earthworks							
NCA08	44	100	54	47	16	7	7
NCA10	44	64	54	25	12	14	14
Total	-	164	-	72	28	21	21
Tunnel support							
NCA08	44	51	54	17	0	0	0
NCA10	44	75	54	31	6	0	0
Total	-	126	-	48	6	0	0
Building construction							
NCA08	44	44	54	19	1	0	0
NCA10	44	42	54	17	0	0	0
Total	-	86	-	36	1	0	0
Ventilation shaft							
NCA08	44	8	54	0	0	0	0
NCA10	44	17	54	5	1	0	0
Total	-	25	-	5	1	0	0

Table 4-10 Construction noise – Wilson Road compound (C6) (standard construction hours)

NCA	RBL (dB(A))	Number of receivers 0-10 dB(A) above RBL	NML	Number of receivers 10-20 dB(A) above RBL	Number of receivers 20-30 dB(A) above RBL	Number of receivers ≥ 30 dB(A) above RBL	Number of acutely affected receivers (≥75 dB(A))
Site establishment and earthworks							
NCA07	41	265	51	122	41	22	18
Total	-	265	-	122	41	22	18
Tunnel support							
NCA07	41	154	51	73	22	1	0
Total	-	154	-	73	22	1	0
Building construction works							
NCA07	41	199	51	88	22	1	0
Total	-	199	-	88	22	1	0

Table 4-11 Construction noise – Trelawney Street compound (C7) (standard construction hours)

NCA	RBL (dB(A))	Number of receivers 0-10 dB(A) above RBL	NML	Number of receivers 10-20 dB(A) above RBL	Number of receivers 20-30 dB(A) above RBL	Number of receivers ≥ 30 dB(A) above RBL	Number of acutely affected receivers (≥75 dB(A))
Site establishment and earthworks							
NCA06	47	156	57	54	14	11	14
Total	-	156	-	54	14	11	14
Tunnel support							
NCA06	47	39	57	20	4	0	0
Total	-	39	-	20	4	0	0
Building construction works							
NCA06	47	60	57	26	2	2	3
Total	-	60	-	26	2	2	3

Table 4-12 Construction noise – Pioneer Avenue compound (C8) (standard construction hours)

NCA	RBL (dB(A))	Number of receivers 0-10 dB(A) above RBL	NML	Number of receivers 10-20 dB(A) above RBL	Number of receivers 20-30 dB(A) above RBL	Number of receivers ≥ 30 dB(A) above RBL	Number of acutely affected receivers (≥75 dB(A))
Site establishment and earthworks							
NCA06	47	27	57	9	0	0	0
Total	-	27	-	9	0	0	0

Table 4-13 Construction noise – Northern interchange compound (C9) (standard construction hours)

NCA	RBL (dB(A))	Number of receivers 0-10 dB(A) above RBL	NML	Number of receivers 10-20 dB(A) above RBL	Number of receivers 20-30 dB(A) above RBL	Number of receivers ≥ 30 dB(A) above RBL	Number of acutely affected receivers (≥75 dB(A))
Site establishment and earthworks							
NCA04	51	38	61	20	6	9	12
NCA05	41	42	51	25	0	0	0
Total	-	80	-	45	6	9	12
Tunnel support							
NCA04	51	28	61	12	1	0	0
NCA05	41	72	51	24	0	0	0
Total	-	100	-	36	1	0	0

Table 4-14 Construction noise – Bareena Avenue compound (C10) (standard construction hours)

NCA	RBL (dB(A))	Number of receivers 0-10 dB(A) above RBL	NML	Number of receivers 10-20 dB(A) above RBL	Number of receivers 20-30 dB(A) above RBL	Number of receivers ≥ 30 dB(A) above RBL	Number of acutely affected receivers (≥75 dB(A))
Site establishment and earthworks							
NCA02	56	58	66	19	0	1	9
NCA03	53	37	63	8	0	0	0
Total	-	95	-	27	0	1	9
Tunnel support							
NCA02	56	25	66	14	0	1	1
NCA03	53	13	63	5	0	0	0
Total	-	38	-	19	0	1	1
Ventilation shaft							
NCA02	56	37	66	12	0	1	1
NCA03	53	11	63	3	0	0	0
Total	-	48	-	15	0	1	1

Table 4-15 Construction noise – Junction Road compound (C11) (standard construction hours)

NCA	RBL (dB(A))	Number of receivers 0-10 dB(A) above RBL	NML	Number of receivers 10-20 dB(A) above RBL	Number of receivers 20-30 dB(A) above RBL	Number of receivers ≥ 30 dB(A) above RBL	Number of acutely affected receivers (≥75 dB(A))
Site establishment and earthworks							
NCA01	56	24	66	14	6	0	7
NCA02	56	6	66	2	0	0	0
Total	-	30	-	16	6	0	7
Laydown activities							
NCA01	56	3	66	0	0	0	0
NCA02	56	0	66	0	0	0	0
Total	-	0	-	0	0	0	0

Table 4-16 Construction noise – Northern interchange an M1 Pacific Motorway tie-in works (standard construction hours)

NCA	RBL (dB(A))	Number of receivers 0-10 dB(A) above RBL	NML	Number of receivers 10-20 dB(A) above RBL	Number of receivers 20-30 dB(A) above RBL	Number of receivers ≥ 30 dB(A) above RBL	Number of acutely affected receivers (≥75 dB(A))
Traffic management, set-up and line-marking							
NCA01	56	6	66	0	0	0	0
NCA02	43	19	53	9	6	0	8
NCA03	41	32	51	18	9	0	8
NCA04	41	62	51	47	29	8	27
NCA05	35	35	45	23	14	8	5
Total	-	154	-	97	58	16	48
Demolition							
NCA01	56	6	66	0	0	0	0
NCA02	43	20	53	12	7	3	10
NCA03	41	19	51	12	2	1	3
NCA04	41	42	51	24	10	3	8
NCA05	35	104	45	44	11	5	5
Total	-	191	-	92	30	12	26
Road widening							
NCA01	56	6	66	0	0	0	0
NCA02	43	20	53	12	7	3	10
NCA03	41	18	51	11	3	1	3
NCA04	41	42	51	24	10	3	8
NCA05	35	104	45	44	11	5	5
Total	-	190	-	91	31	12	26
Earthworks, pavement and temporary median works							
NCA01	56	8	66	0	0	0	0
NCA02	43	29	53	17	6	4	10
NCA03	41	30	51	21	11	5	15
NCA04	41	73	51	41	16	18	30
NCA05	35	135	45	55	12	6	5
Total	-	275	-	134	45	33	60
Re-surfacing asphalt works							
NCA01	56	14	66	0	0	0	0
NCA02	43	44	53	20	9	0	11

NCA	RBL (dB(A))	Number of receivers 0-10 dB(A) above RBL	NML	Number of receivers 10-20 dB(A) above RBL	Number of receivers 20-30 dB(A) above RBL	Number of receivers ≥ 30 dB(A) above RBL	Number of acutely affected receivers (≥75 dB(A))
NCA03	41	60	51	33	13	0	12
NCA04	41	136	51	61	21	16	26
NCA05	35	101	45	44	12	5	4
Total	-	355	-	158	55	21	53

Table 4-17 Construction noise – Hills M2 Motorway integration works (outside of standard construction hours)

NCA	RBL (dB(A))	Number of receivers 0-5 dB(A) above RBL	NML	Number of receivers 5-10 dB(A) above RBL	Number of receivers 10-20 dB(A) above RBL	Number of receivers 20-30 dB(A) above RBL	Number of receivers ≥ 30 dB(A) above RBL	Number of acutely affected receivers (≥75 dB(A))
Bridgeworks								
NCA11	37	21	42	13	8	0	0	0
NCA12	33	152	38	17	78	31	11	2
NCA13	33	152	38	36	57	7	2	0
NCA14	35	138	40	36	54	8	0	0
NCA15	38	98	43	17	54	7	1	0
Total	-	561	-	119	251	53	14	2

Table 4-18 Construction noise – tunnelling support (outside of standard construction hours)

NCA	RBL (dB(A))	Number of receivers 0-5 dB(A) above RBL	NML	Number of receivers 5-10 dB(A) above RBL	Number of receivers 10-20 dB(A) above RBL	Number of receivers 20-30 dB(A) above RBL	Number of receivers ≥ 30 dB(A) above RBL	Number of acutely affected receivers (≥75 dB(A))
Southern interchange compound								
NCA08	39	25	44	16	2	0	0	0
NCA10	36	30	41	19	15	1	0	0
Total	-	55	-	35	17	1	0	0
Wilson Road compound								
NCA07	30	243	35	8	94	14	3	0
Total	-	243	-	8	94	14	3	0
Trelawney Street compound								
NCA06	39	35	44	22	15	0	0	0
Total	-	35	-	22	15	0	0	0
Northern interchange compound								
NCA04	41	8	46	5	2	0	0	0
NCA05	35	2	40	1	0	0	0	0
Total	-	10	-	6	2	0	0	0

Table 4-19 Ground-borne noise assessment – tunnelling activities

Period	Criteria (dB(A))	Number of receivers 0-5 dB(A) above criteria	Number of receivers 5-10 dB(A) above criteria
Evening	40	28	0
Night	35	90	28

Table 4-20 Sleep disturbance – Hills M2 Motorway integration bridgeworks

NCA	Sleep disturbance criteria (dB(A))	Number of receivers 0-10 dB(A) above sleep disturbance criteria	Number of receivers 10-20 dB(A) above sleep disturbance criteria	Awakening reaction criteria (dB(A))	Number of receivers above awakening reaction criteria
NCA11	52	1	0	65	0
NCA12	48	75	36	65	3
NCA13	48	41	7	65	0
NCA14	50	49	2	65	0
NCA15	53	46	7	65	1
Total	-	212	52	-	4

Table 4-21 Sleep disturbance – tunnelling support sites

NCA	Sleep disturbance criteria (dB(A))	Number of receivers 0-10 dB(A) above sleep disturbance criteria	Number of receivers 10-20 dB(A) above sleep disturbance criteria	Awakening reaction criteria (dB(A))	Number of receivers above awakening reaction criteria
Southern interchange compound					
NCA08	54	5	0	65	0
NCA10	51	18	0	65	0
Total	-	23	0	-	0
Wilson Road compound					
NCA07	45	87	33	65	1
Total	-	87	33	-	1
Trelawney Street compound					
NCA06	54	22	2	65	1
Total	-	22	2	-	1
Northern interchange compound					
NCA04	56	5	0	65	0
Total	-	5	0	-	0

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carbon
neutral


australian
made


recycled