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UPPER SOUTH CREEK ADVANCED WATER RECYCLING CENTRE

Construction Noise and Vibration Impact Statement - AWRC

21 August 2023

John Holland

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Sydney Melbourne Brisbane Gold Coast Kuwait Singapore
Renzo Tonin & Associates ABN 29 117 462 861
Level 1/418A Elizabeth St SURRY HILLS NSW 2010 | PO Box 877 STRAWBERRY HILLS NSW 2012
P (02) 8218 0500 F (02) 8218 0501 sydney@renzotonin.com.au www.renzotonin.com.au

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Prepared for:	John Holland
Address:	Level 3, 65 Pirrama Road Pyrmont NSW 2009
Attention:	Darragh O'Brien

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1 Introduction

1.1 Purpose and application

This Construction Noise and Vibration Impact Statement (CNVIS) has been prepared on behalf of John Holland for the construction of the Upper South Creek (USC) Advanced Water Recycling Centre (AWRC) project (the Project). This CNVIS has been prepared to satisfy Planning Approval (SSI 8609189) Condition E48.

1.2 Overview

The USC AWRC project will provide wastewater services and recycled water for the Aerotropolis and South West Growth Areas. The Project includes the construction of a new Advance Water Recycling Centre and both treated water and brine pipelines. The brine pipeline will run 24km connecting the existing Malabar wastewater system at Lansdowne to the AWRC at Kemps Creek. The treated water pipeline will run 17km from the AWRC to the Nepean River at Wallacia. An overview of the Project extent is presented in Figure 1-1, Figure 1-2, Figure 1-3 and Figure 1-4.

Figure 1-1: Overview of Project extent 1

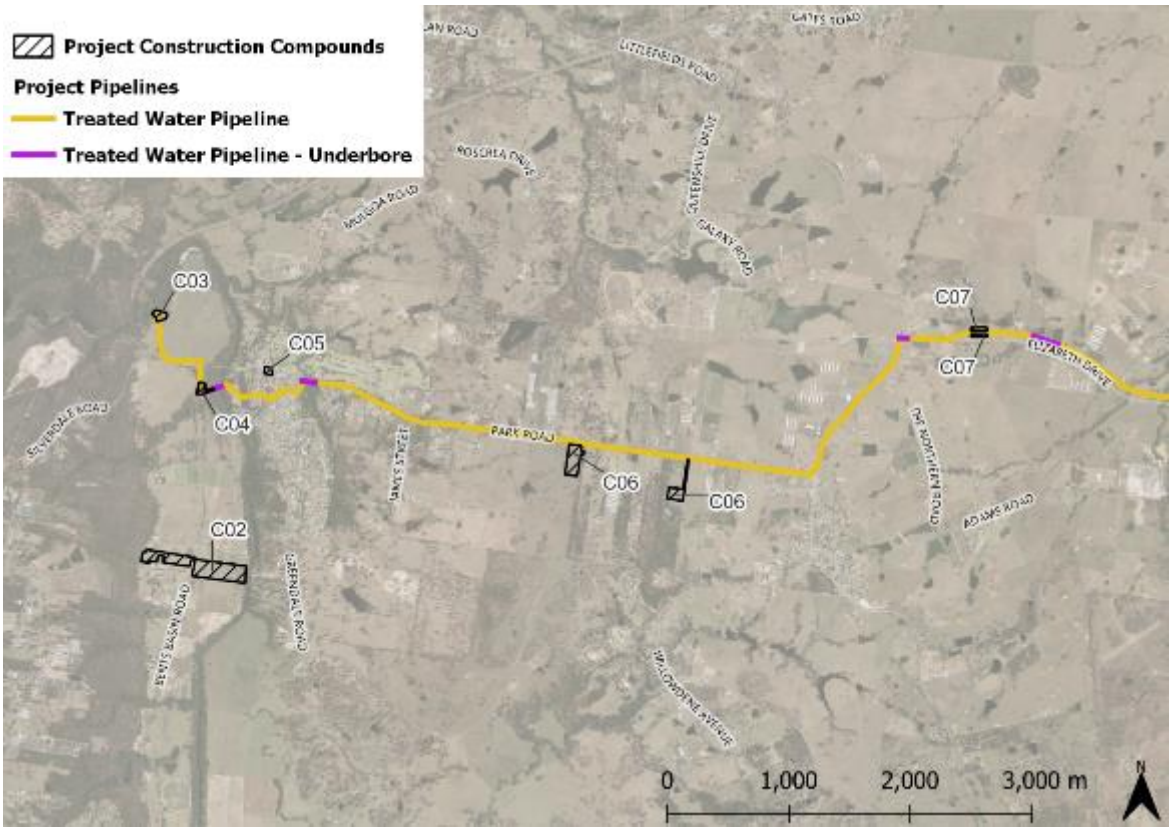


Figure 1-2:Overview of Project extent 2

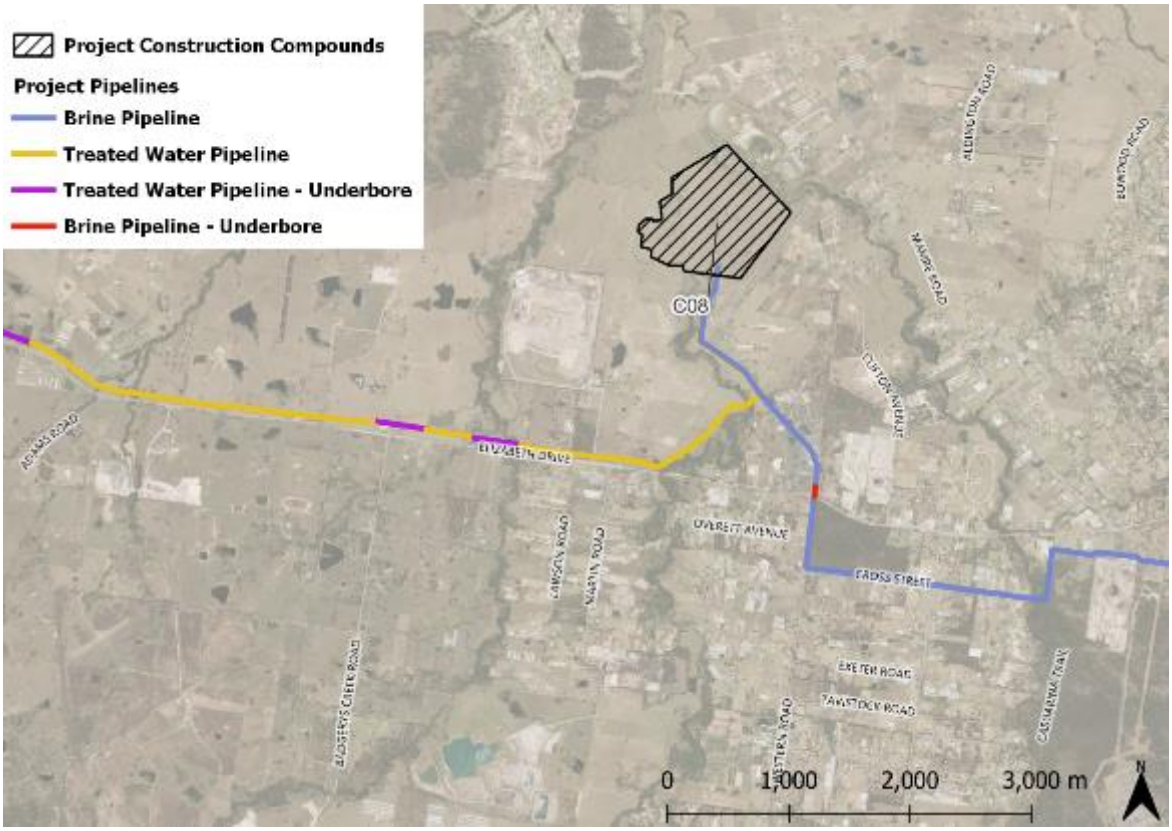


Figure 1-3:Overview of Project extent 3

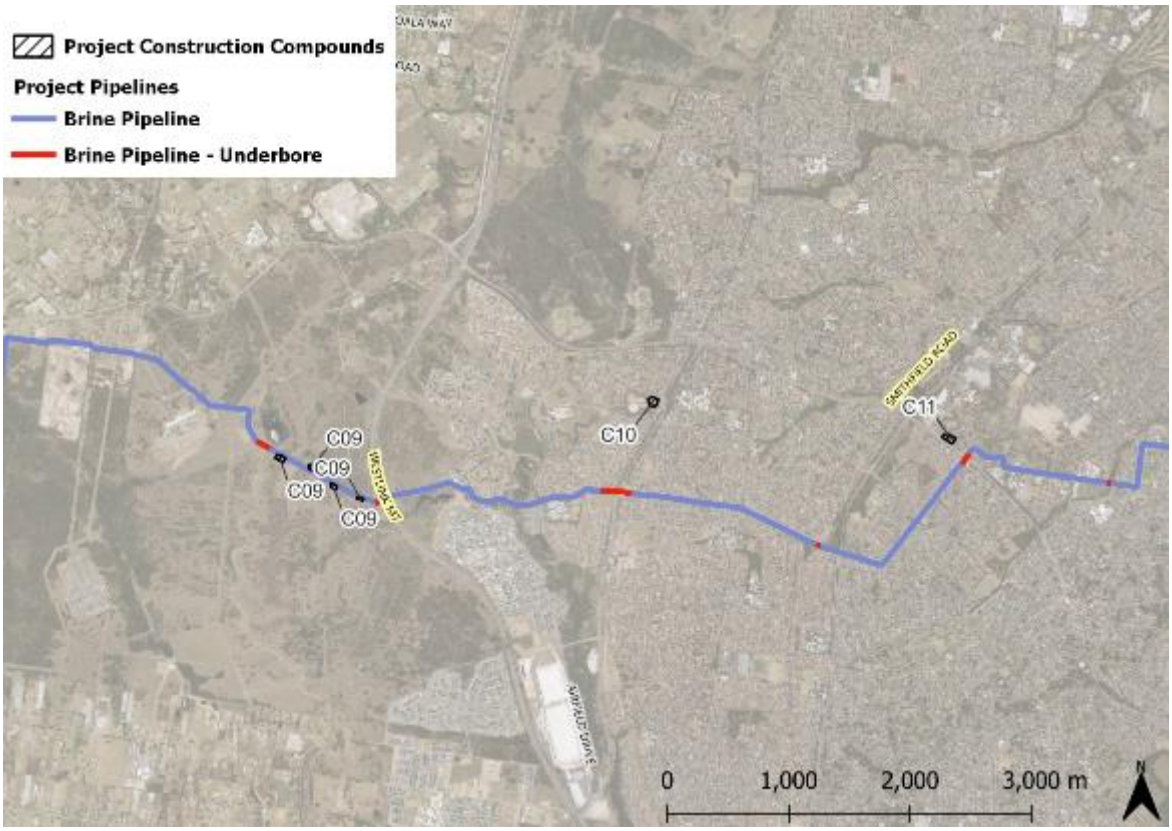
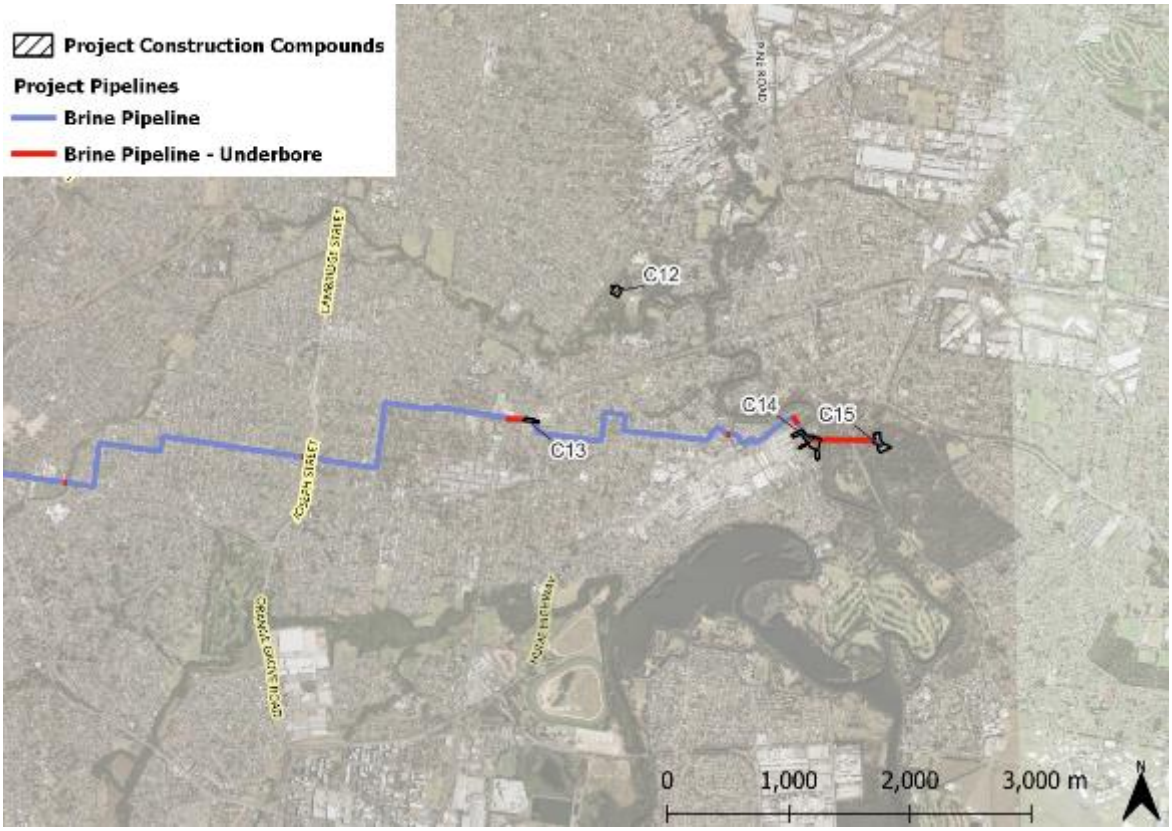


Figure 1-4:Overview of Project extent 4



The aim of this assessment is to identify work which exceeds the noise management levels, vibration criteria and/or ground borne noise levels (Section 4) at residences outside standard construction hours (Section 2.2) or where receivers may be highly noise affected. The CNVIS includes specific mitigation measures which have been identified through consultation with affected sensitive land uses. These mitigation measures will be implemented for the duration of the Works. The CNVIS will help John Holland to minimise the impact of construction noise and vibration on sensitive receivers and demonstrate compliance with relevant Conditions of Approval, the Upper South Creek AWRC Environmental Impact Statement (EIS)[3], the Environmental Mitigation Measures (EMMs) included in the USC AWRC EIS Submissions Report (EIS RtS) [4], USC AWRC EIS Submissions Report – Project Amendments (Amendment RtS) and Construction Noise and Vibration Management Plan (CNVMP) (USCP-JHG-MPL-ENV-0007).

1.3 Construction Noise and Vibration Impact Statement

This CNVIS provide a quantitative noise and vibration assessment of activities and/ or locations where construction work will occur. They clarify details provided in the EIS Noise and Vibration technical Report [3], updated to include the more detailed information available at the detailed design and construction planning stage of the Project. This CNVIS is structured to meet the requirements of Condition of Approval E48, including specific mitigation measures to be implemented for the duration of the assessed works, identified through consultation with affected sensitive land user(s).

This CNVIS provides a noise and vibration assessment of the AWRC works that are required to be completed within and outside of standard construction hours. Works associated with construction of the pipelines are assessed in a separate CNVIS (TM588-12F02 CNVIS Pipelines).

The works covered by this CNVIS will be undertaken in accordance with the CEMP (incorporating the CNVMP).

1.4 Quality assurance

The work documented in this report was carried out in accordance with the Renzo Tonin & Associates Quality Assurance System, which is based on Australian Standard / NZS ISO 9001. Appendix A contains a glossary of acoustic terms used in this report.

2 Construction works and hours

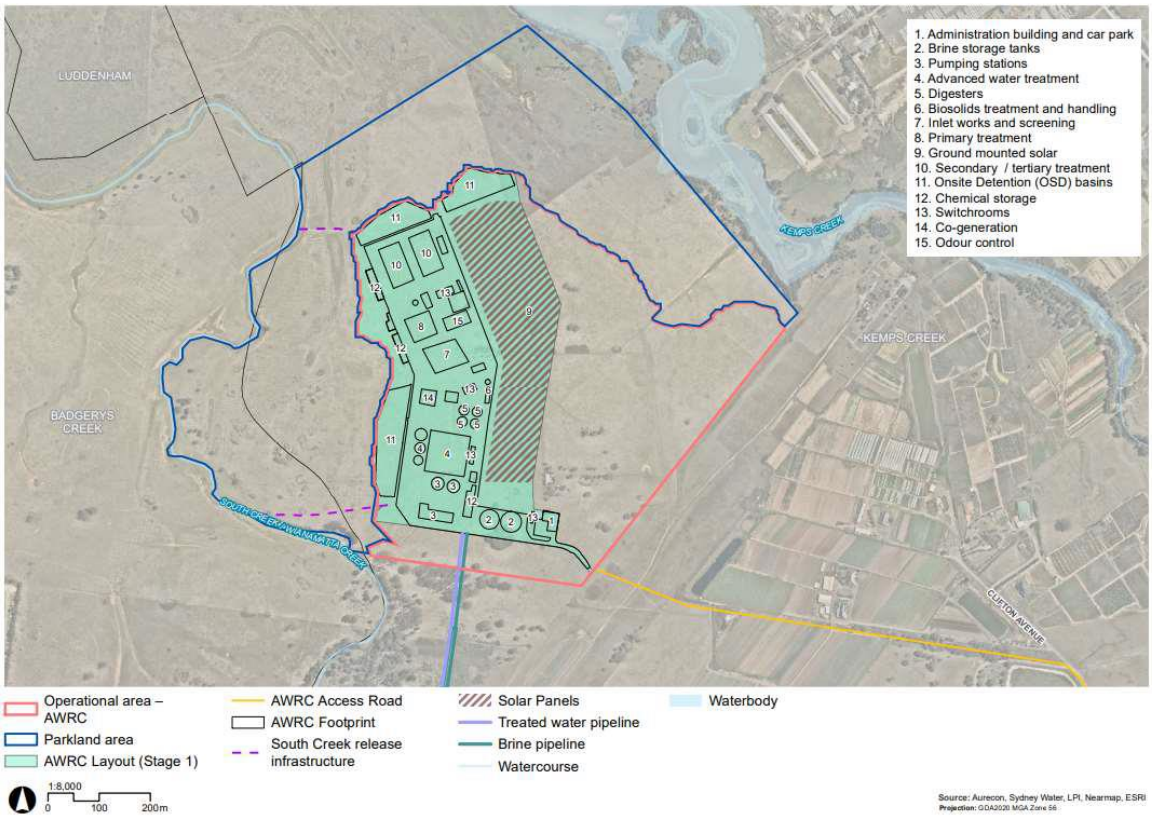
2.1 Construction works addressed in this CNVIS

2.1.1 Location of worksite

The AWRC worksite includes a western worksite and an eastern worksite.

The AWRC worksite is located between Kemps Creek and Pyrmont South Creek, West of Mamre Road. Figure 2-1 shows the worksite location.

Figure 2-1: AWRC worksite



2.1.2 Construction works

The AWRC works will be delivered through the following sub-stages:

- Site Establishment
- Site Earthworks
- Civil Works
- AWRC Structure Construction

- Mechanical and Electrical Installation
- Landscaping and Rehabilitation
- Concrete Pours (OOH)
- OSOM Deliveries

The works are proposed to be undertaken during standard construction hours. Some works will also be completed outside standard construction hours, where this is necessary and the out of hours works (OOHW) are justified (see Section 2.2.1). The timing and location of the works are summarised in Table 1.

Table 1: Summary of construction works under this CNVIS

Activity/ work area	Aspect	Construction hours	Location of activity[1]	Timing of activity
AWRC Site	Site Establishment and Mobilisation	Standard hours (D)	Operational area – AWRC	8 weeks
	Site Earthworks	Standard hours (D)	Operational area – AWRC	16 weeks
	Civil Works	Standard hours + OOHW (D/E)	AWRC Layout (Stage 1)	80 weeks
	AWRC Structure Construction	Standard hours (D)	AWRC Layout (Stage 1)	40 weeks
	Mechanical Electrical Installation	Standard hours (D)	AWRC Layout (Stage 1)	70 weeks
	Landscaping and Rehabilitation	Standard hours (D)	Operational area – AWRC + Parkland area	64 weeks
	Concrete Pours OOH	OOHW (D/E)[2]	AWRC Layout (Stage 1)	80 weeks
	OSOM Deliveries	OOHW (E/N)[2]	Operational area – AWRC	88 weeks

Notes: 'OOHW' means Out of Hours works, or work outside the standard construction hours (see Section 2.2)

'OOHW(D)' is the OOH 'Day' period,; 8am to 6pm Sunday

'OOHW(E)' is the 'Evening' period, 6pm to 10pm Monday to Sunday

'OOHW(N) is the OOH 'Night' period, 10pm to 7am Sunday/Monday to Thursday/ Friday; 10pm to 8am Friday/Saturday and Saturday/ Sunday

1. Locations based off work areas shown in Figure 2-1
2. Works conducted as required and where justified

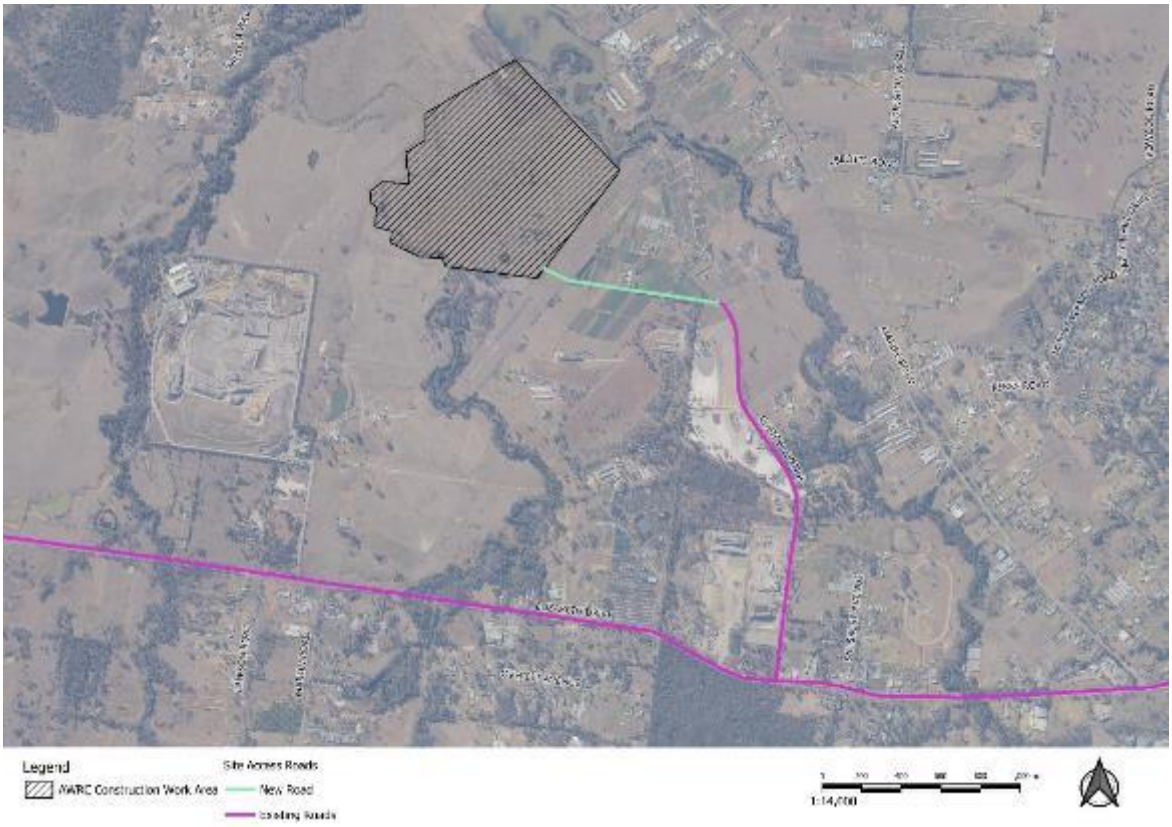
A detailed summary of the construction activities assessed in this report is presented in Section 5.1 and in Table C.1 of APPENDIX C.

2.1.3 Construction traffic

When construction related traffic moves on the public road network, a different noise assessment methodology is appropriate as vehicle movements would be regarded as additional road traffic on public roads rather than as part of the construction site's activities.

The primary access and egress route will be via an access road into the West side of the worksite via Clifton Avenue, Elizabeth Drive and recently constructed road (unnamed road) off Clifton Avenue. The proposed access routes are shown in Figure 2-2

Figure 2-2: AWRC worksite heavy vehicle route



Elizabeth Drive is an arterial road with typically moderate to high traffic volume, including heavy vehicles. Clifton Avenue and the unnamed road off Clifton Avenue are local roads with typically low traffic volume. The worksite will generate additional traffic movements in the form of:

- Light vehicle movements generated by construction personnel travelling to and from work
- Heavy vehicle movements generated by:
  - Delivery vehicles bringing raw materials, plant, and equipment to the site (typically standard hours, except for oversized deliveries)
  - Concrete trucks bringing concrete to the site (typically standard hours)

Construction traffic noise, related to the public road network, is addressed in Section 8.

2.2 Construction Hours

Construction hours for the Project are outlined in Conditions of Approval E40, E41 and E42. Table 2 consolidates the information provided in these Conditions regarding construction working hours for the Project.

Table 2: Working hours for construction worksites

CoA	Construction Activity[9]	Monday to Friday	Saturday	Sunday / Public holiday
E40	Standard construction	07:00 to 1800	08:00 to 13:00	No work[1]
E41	Highly noise intensive works[2]	08:00 to 18:00 (plus respite[2])	08:00 to 13:00 (plus respite[2])	No work[1]
E42(a)	Safety and emergency work	At all times	At all times	At all times
E42 (b)	Low noise impact work[3]	At all times	At all times	At all times
E42 (c)	Works approved under an EPL or Out-of-Hours Work Protocol or through negotiated agreement with directly affected residents and sensitive land user(s)	At all times	At all times	At all times

Notes:

1. No work unless permitted and approved.
2. Minimum respite from highly noise intensive works of not less than one (1) hour between each continuous block of works not exceeding three (3) hours.
3. Construction that causes $L_{Aeq(15\ minute)}$ noise levels no more than 5dB(A) above the Rating Background Level (RBL) at any residence; and/or no more than the 'noise affected' NMLs specified in Table 3 of the ICNG at other sensitive land user(s). Construction that causes continuous/impulsive/intermittent vibration values at the most affected residence, no more than the preferred values for human exposure to vibration, specified in Table 2.2 and Table 2.4 of the AVTG.

2.2.1 Justification for OOHW

Works will mostly be completed during standard construction hours. Some of the works require the use of plant and deliveries that are oversize and/or over mass (OSOM) and are subjected to curfews. In these instances works may be outside the hours specified in Condition E40 (Table 2). Therefore, works may need to be undertaken outside of standard construction hours, as per Condition E42(a), (b) and (c).

All reasonable and feasible mitigation and management measures will be implemented to reduce noise from the works with the aim of achieving the relevant NMLs.

Out-of-hours work under CoA E42(c) would be undertaken through the Project's Out of Hours Works Protocol [2] (OOHW Protocol) or under the Environment Protection Licence (EPL) number 21800 for works subject to an EPL.

2.2.2 Assessment periods

The assessment of construction noise and vibration depends on the time of day. Assessment periods are defined to align with standard construction hours (as defined in Condition E40) and key out of hours works (OOHW) periods, with OOHW periods later in the night and in the early morning being more sensitive. The standard hours and OOHW periods for construction works are depicted in Table 3. The OOHW periods are further defined as OOHW Period 1 and 2, based on the CNVS [1].

Construction traffic is assessed over a fifteen-hour day period, between 7am and 10pm (typically standard hours plus OOHW Period 1) and a nine-hour night period, between 10pm and 7am (typically OOHW Period 2). This is consistent with the NSW Road Noise Policy [7] and the CNVS [1].

Table 3: Assessment periods

Day/ Time	12am – 1am	1am – 2am	2am – 3am	3am – 4am	4am – 5am	5am – 6am	6am – 7am	7am – 8am	8am – 9am	9am – 10am	10am – 11am	11am – 12pm	12pm – 1pm	1pm – 2pm	2pm – 3pm	3pm – 4pm	4pm – 5pm	5pm – 6pm	6pm – 7pm	7pm – 8pm	8pm – 9pm	9pm – 10pm	10pm – 11pm	11pm – 12am
Monday to Friday																								
Saturday																								
Sunday or Public Holiday																								

Notes:

1. White cells are standard construction hours
2. Light Blue is OOHW Period 1
3. Dark Blue is OOHW Period 2

3 Existing environment

3.1 Land use survey

To assess and manage construction noise and vibration impact, a Land Use Survey has been undertaken to satisfy Condition E39. The Land Use Survey identifies existing land use and development along the Project alignment, including a mix of residential, commercial and industrial uses; along with other noise and vibration-sensitive businesses, such as Hotels and childcare facilities. Heritage receivers have been identified in the EIS [3] and in the land use survey.

The Land Use Survey is maintained in a Geographic Information System (GIS) established for the Project and was used in the preparation of this CNVIS. The land use at the time of issue of this CNVIS is identified on an aerial photograph in Figure 3-1 (and in APPENDIX B). The land use revision date is shown in the top left corner of the drawing.

3.2 Noise Catchment Areas

Further to the Land Use Survey, residential areas have been divided into Noise Catchment Areas (NCAs) based on those established in the EIS [3] for the Project. NCAs group individual sensitive receivers by common traits, such as existing noise environment and location in relation to the Project works. NCAs relevant to the AWRC worksite are identified in Figure 3-1.

3.3 Baseline noise levels

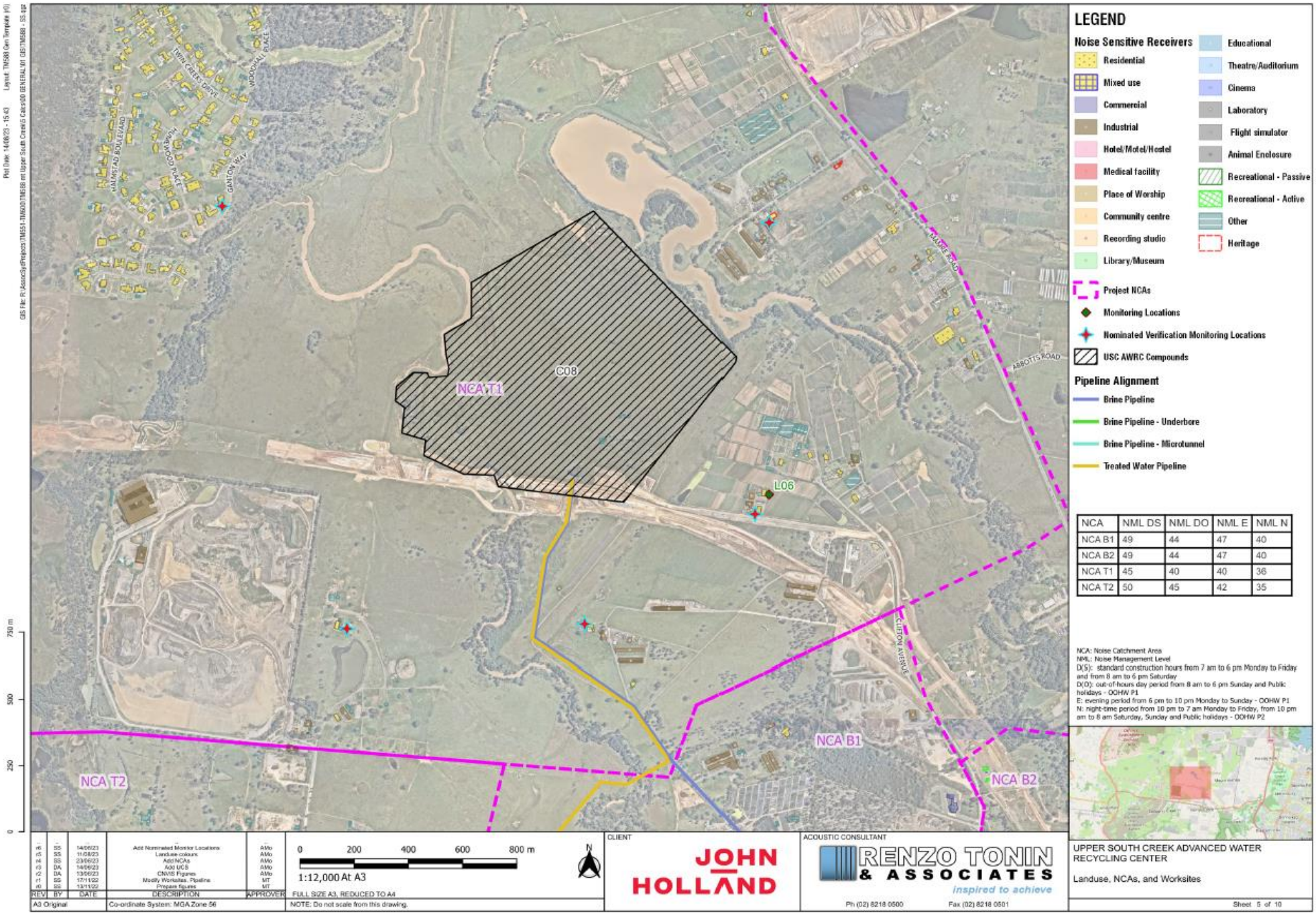
As part of the EIS process, receivers within the vicinity of the Project were divided into NCAs, which reflect the land uses and the nature and types of receivers within the vicinity of the Project. Noise monitoring results in the M12 Motorway EIS and assumed background noise levels listed in AS 1055.3:1997 were used in the EIS to determine RBLs and ambient noise levels (L_{Aeq}) for each NCA. The RBL represents the average minimum background sound level for each measurement period, averaged over the measurement days. The RBLs and average ambient noise levels for the day, evening and night assessment periods are summarised in Table 4 and in Table B.1 in APPENDIX B.

Table 4: Summary of baseline noise monitoring data from EIS

Monitor ID (EIS)	Rating Background Noise (RBL)[1]			Ambient Noise Level ($L_{Aeq(15min)}$)[1]			Representative NCA
	Day[2]	Eve[2]	Ngt[2]	Day[2]	Eve[2]	Ngt[2]	
L06[3]	35	35	31	45	40	36	NCA T1
L12[3]	40	37	30	50	42	35	NCA T2
L14[3]	42	39	33	52	44	38	NCA T3
L05[3]	39	42	35	49	47	40	NCA B1
L05[3]	39	42	35	49	47	40	NCA B2
L03[3]	54	48	37	49	47	40	NCA B3

Notes:
1. RBL and LAeq noise levels determined with reference to NPfI procedures
2. Day is 7.00am to 6.00pm; Eve (evening) is 6.00pm to 10.00pm; Ngt (night) is 10.00pm to 7.00am
3. Monitoring conducted for the M12 EIS and adopted in the Project EIS
4. Background noise estimates provided in the EIS with reference to AS1055 and NPfI
5. Background noise estimates with reference to AS1055 and NPfI

Figure 3-1:Noise Catchment Areas applicable to the AWRC worksite



NCA	NML DS	NML DO	NML E	NML N
NCA B1	49	44	47	40
NCA B2	49	44	47	40
NCA T1	45	40	40	36
NCA T2	50	45	42	35

NCA: Noise Catchment Area
NML: Noise Management Level
D(S): standard construction hours from 7 am to 6 pm Monday to Friday and from 8 am to 6 pm Saturday
D(O): out-of-hours day period from 8 am to 6 pm Sunday and Public holidays - OOHW P1
E: evening period from 6 pm to 10 pm Monday to Sunday - OOHW P1
N: night-time period from 10 pm to 7 am Monday to Friday, from 10 pm am to 8 am Saturday, Sunday and Public holidays - OOHW P2

4 Construction noise and vibration objectives

Construction noise and vibration objectives are detailed in the CNVMP. A summary of the objectives as applicable to the AWRC worksite is provided in Table 5.

Table 5: Summary of construction noise and vibration objectives

Impact	Relevant guideline	Construction noise/ vibration objective
Airborne noise	NSW Interim Construction Noise Guideline (ICNG) [5] CNVS [1]	Construction noise management levels (NMLs) for residential receivers are based on long-term noise logging conducted on behalf of Sydney Metro to quantify ambient noise levels for the EIS [2]. During standard construction hours, a highly affected noise objective of $L_{Aeq(15min)}$ 75dB(A) applies at all residential receivers. The NMLs for 'other' sensitive receivers are from the ICNG, as reported in Section 2.2 of the CNVS. Receivers are considered 'noise affected' where construction noise levels are greater than the noise management levels identified in Table B.1 of APPENDIX B. Where construction activities are tonal or impulsive in nature and are described in the ICNG as being particularly annoying, a +5dB(A) correction must be added to the activity noise. Construction related activities that could exceed the NMLs shall be identified and managed in accordance with the noise and mitigation and management measures set out in Section 9.
Sleep disturbance	NSW Interim Construction Noise Guideline (ICNG) [5] CNVS [1]	Initial screening level • L_{AFmax} ≤ 55 dB(A) or RBL + 15 dB (whichever is greater) Where noise events are found to exceed the initial screening level, further analysis will be made to identify: • the likely number of events that might occur during the night assessment period, and • Whether events exceed an 'awakening reaction' level of 55 dB(A) L_{AFmax} (internal) that equates to NML of 65 dB(A) externally (assuming open windows).
Ground-borne noise	NSW Interim Construction Noise Guideline (ICNG) [5] CNVS [1]	Receivers are considered 'ground-borne noise affected' where construction noise levels are greater than the noise management levels identified in Table B.2 of APPENDIX B.
Construction traffic	ICNG refers to the NSW Road Noise Policy (RNP) [7] CNVS [1]	Construction traffic impact initial screening test: • Traffic noise levels increase ≤ 2 dB(A) because of construction traffic Where traffic noise levels increase by more than 2 dB(A): • Freeway/arterial/sub-arterial road - 60 dB $L_{Aeq(15hour)}$ day and 55 dB $L_{Aeq(9hour)}$ night • Existing local road - 55 dB $L_{Aeq(1hour)}$ day and 50 dB $L_{Aeq(1hour)}$ night

Impact	Relevant guideline	Construction noise/ vibration objective
Vibration – disturbance to building occupants	NSW 'Environmental Noise Management Assessing Vibration: A Technical Guideline' (AVTG) [8] CNVS [1]	To assess the potential for vibration impact on human comfort, an initial screening test will be done based on peak velocity units, as this metric is also used for the cosmetic damage vibration assessment. The initial screening test values are: • Critical areas - 0.28 mm/s (day or night) • Residential buildings - 0.56 mm/s (15h day); 0.40 mm/s (9h night) • Offices, schools, educational institutions and places of worship - 1.10 mm/s (day or night) • Workshops - 2.20 mm/s (day or night). If the predicted vibration exceeds the initial screening test, the total estimated Vibration Dose Value (i.e. eVDV) will be determined based on the level and duration of the vibration event causing exceedance as detailed in Section 2.3.1 of the CNVS and Section 2.4 of the AVTG.
Vibration – structural damage to buildings	British Standard BS 7385-2:1993 'Evaluation and measurement for vibration in buildings'[12] German Standard DIN 4150-3: 2016-12, Structural vibration - Effects of vibration on structures [13] CNVS [1]	A conservative vibration damage screening level (peak component particle velocity) per receiver type is detailed in Section 2.4 of the CNVS and outlined below: • Reinforced or framed structures: 25.0 mm/s • Unreinforced or light framed structures: 7.5 mm/s. Heritage buildings and structures found to be structurally unsound (following inspection) would adopt a more conservative vibration damage screening level (peak component particle velocity): • Heritage structures (structurally unsound): 2.5 mm/s (initial screening level). Where the predicted and/or measured vibration is greater than shown above, a more detailed analysis of the building structure, vibration source, dominant frequencies and dynamic characteristics of the structure will be completed to determine the applicable vibration limit.

5 Construction airborne noise impacts

5.1 Noise prediction methodology

Assessment of airborne noise impacts from the construction works were determined by predicting noise levels using a Cadna-A computer noise model developed for this Project. The Cadna-A noise model incorporates ground elevation contours, building heights, the built environment, and atmospheric conditions to predict the contribution of each noise source at identified sensitive receiver locations and allows for the prediction of the total noise from a worksite for the various construction stages.

Key details regarding the construction work locations, the likely plant and equipment, and hours of operation were informed by the Design and Construction Teams.

A summary of the noise model input parameters is detailed in Table 6.

Table 6: Summary of noise modelling parameters

Parameters	Inputs
Calculation method	ISO 9613-2:1996 implementing quality standard ISO 17534-1:2015
Location of noise sources	0.5m to 2m above the ground depending on the equipment or plant in use
Height of receivers	1.5m above ground level to represent 1.5m above ground floor level Additional 3m height for every additional floor assessed (i.e. 4.5m above ground for first floor, 7.5m for second floor etc.)
Ground topography	1m digital ground contours
Sound power levels of plant and equipment	Detailed in Table C.1 in APPENDIX C. Activity timing, number of plant and hours of operation also in Table C1.
Ground absorption	0.5
Noise barriers and screening	Noise barriers are not being installed as part of these works and are therefore not included in the noise predictions. Existing buildings providing shielding to receivers has been included in the noise model.
Acoustic sheds/ enclosures	Not considered in the assessment as they are not being built.
Noise source corrections	Noise source penalty corrections have been applied in accordance with Section 4.5 of the NSW Interim Construction Noise Guideline (ICNG).

The noise predictions in this report represent a realistic worst-case scenario when construction occurs at a works location close to residences and other sensitive receivers. At each receiver, noise levels will vary during the construction period based on:

- the position of equipment within the worksite and distance to the receiver;
- the construction activities being undertaken;
- the noise levels of plant items and equipment
- temporary noise barriers/ construction hoarding.

Predicted noise levels presented in APPENDIX D are the maximum noise levels for each building. Actual noise levels will often be less than the predicted levels presented in this report.

5.2 Predicted noise levels

Noise impacts during construction works have been predicted and compared to the noise management levels (NMLs). A receiver is considered construction noise affected when the predicted construction noise level is above the NML.

Table 8 and Table 9 present a summary of the number of residential receivers and 'other sensitive receivers (respectively) likely to be noise affected by the proposed activities. The tables are colour coded to indicate how much the predicted noise level is above the NML and the corresponding perceived noise impact, based on the CNVS, as noted in Table 7.

Table 7: Key to the predicted construction noise results tables

Assessment	Time of day	Key			
$L_{Aeq(15min)}$	Standard hours[1]	0-10 dB(A) over NML (light blue) Clearly audible	11-20 dB(A) over NML (mid blue) Moderately intrusive	>20 dB(A) above NML (dark blue) Highly intrusive	
	Outside standard hours	1-5 dB(A) above NML (green)	6-15 dB(A) above NML (yellow)	16-25 dB(A) above NML (orange)	>25 dB(A) above NML (purple)
Sleep disturbance	Night only	L_{Amax} above 55 dB(A) or RBL plus 15 dB, whichever is the greater (yellow)		L_{Amax} above 65 dB(A)	

Notes: 1. Highly noise affected (HNA) which is greater than 75dB(A) during standard construction hours is shown with **Bold** text and applies to residential receiver buildings only.

Table 8 summarises the number of construction noise affected residential receivers (i.e. receivers where predicted L_{Aeq} noise levels for construction works are above the NML) and the likely perceived noise impact.

Table 9 presents the number of construction noise affected other sensitive receivers. Detailed predicted L_{Aeq} noise levels for all receivers in each NCA are presented in Table D.1 of APPENDIX D.

The impacts presented below and in Table D.1 are the maximum predicted noise levels for each activity based on the plant and equipment operating in the closest location relative to the receiver, for the AWRC worksite. The cumulative impact from both construction of the AWRC and pipeline occurring concurrently is unlikely to add more than 2 dB(A) to the overall airborne construction noise level if no high noise plants (i.e. demo saw, rockhammer and jackhammer) are operated for the pipeline construction. To allow for changes to the construction program, cumulative impacts from the worksites can be reviewed in the Appendix D spreadsheet on a case-by-case basis, based on the activities likely to be occurring concurrently.

Table 8: Number of receiver buildings over the airborne noise management level (all NCAs) – residential receivers

Worksite	Construction activity	Assessment reference[1]	Duration of Activity	Highly noise affected[2]	Day (standard hours)				Day (outside standard hours)				Evening[2]				Night[2]				Sleep disturbance[2]	
				L_{Aeq}	L_{Aeq}				L_{Aeq}				L_{Aeq}				L_{Aeq}				L_{Amax}	L_{Amax}
				> 75 dB(A)	1 – 10 dB(A)	11 – 20 dB(A)	21-30 dB(A)	> 30 dB(A)	1 – 5 dB(A)	6 – 15 dB(A)	16-25 dB(A)	> 25 dB(A)	1 – 5 dB(A)	6 – 15 dB(A)	16-25 dB(A)	> 25 dB(A)	1 – 5 dB(A)	6 – 15 dB(A)	16-25 dB(A)	> 25 dB(A)	> 55 or RBL+15 dB(A)	> 65 dB(A)
AWRC	Site Establishment and Mobilisation	SE	8 weeks	0	8	0	0	0	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]
	Site Earthworks	EW	16 weeks	0	16	0	0	0	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]
	Civil Works	CW	80 weeks	0	1	0	0	0	7	1	0	0	7	1	0	0	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]
	AWRC Structure Construction	SC	40 weeks	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mechanical Electrical Installation	MI	70 weeks	0	0	0	0	0	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	0	0	0	0	0	0
	Landscaping and Rehabilitation	LR	64 weeks	0	2	0	0	0	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]
	Concrete Pours (OOH)	CP	80 weeks	0	-[3]	-[3]	-[3]	-[3]	1	0	0	0	1	0	0	0	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]
	OSOM Deliveries	OSOM	88 weeks[4]	0	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	-[3]	2	0	0	0	8	2	0	0	0	0

Note: Construction noise level cells are shaded based upon the predicted worst case NML exceedance in accordance with the key presented in Table 7

1. For detail, refer to Table C1 in APPENDIX C
2. Highly noise affected applies to residential receivers, as per the ICNG.
3. No works scheduled during this period as per Table C1.
4. Impacts would not be continuous for the stated duration.

Table 9: Number of other sensitive receivers over the airborne noise management levels (all NCAs)

Stage	Construction activity	Assessment reference	Duration of Activity	Number of receivers above NML						
				Commercial[1]	Childcare[1]	Educational[1]	Recreational[1]	Places of worship[1]	Hotel/Motel/ Hostel[1]	Other[1]
AWRC	Site Establishment and Mobilisation	SE	8 weeks	0	0	0	0	0	0	0
	Site Earthworks	EW	16 weeks	0	0	0	0	0	0	0
	Civil Works	CW	80 weeks	0	0	0	0	0	0	0
	AWRC Structure Construction	SC	40 weeks	0	0	0	0	0	0	0
	Mechanical Electrical Installation	MI	70 weeks	0	0	0	0	0	0	0

Stage	Construction activity	Assessment reference	Duration of Activity	Number of receivers above NML						
				Commercial[1]	Childcare[1]	Educational[1]	Recreational[1]	Places of worship[1]	Hotel/Motel/ Hostel[1]	Other[1]
	Landscaping and Rehabilitation	LR	64 weeks	0	0	0	0	0	0	0
	Concrete Pours (OOH)	CP	80 weeks	0	0	0	0	0	0	0
	OSOM Deliveries	OSOM	88 weeks	0	0	0	0	0	0	0

Note: Highly noise affected does not apply to OSRs, as per the ICNG.

1. Commercial, recreational and other sensitive receivers have been assessed against the respective NMLs (see Table B1 in APPENDIX B), and exceedances have been presented in the count table. 'Other' includes industrial receivers, television or recording studios. For more detail on specific impacts to receivers refer to Appendix D (Table D.1)

5.2.1 Standard construction hours

The results summarised in Table 8 and Table 9 show that residential and other sensitive receivers may be construction noise affected during each assessed scenario except the mechanical electrical installation works at the AWRC during standard construction hours. No residential receivers are predicted to be highly noise affected (i.e exposed to construction noise above $L_{Aeq(15min)}$ 75 dB(A)).

Mitigation and management measures to reduce construction noise levels towards the standard construction hours NML are summarised in Section 9.

5.2.2 Out of hours work

The results summarised in Table 8 and Table 9 show that there will be construction noise affected residential receivers where works are undertaken outside standard construction hours. During the civil works up to 8 residential receivers are predicted to exceed NML during the day and evening out-of-hours by up to 6 dB(A). During the OOH concrete pours 1 residential receiver (146B CLIFTON AVENUE, KEMPS CREEK, NSW) is predicted to marginally exceed NML during the day and evening out-of-hours by up to 1 dB(A). During the OSOM deliveries 10 residential receivers are predicted to exceed NML during the evening and night out-of-hours by up to 8 dB(A).

Mitigation and management measures to reduce construction noise levels towards the out-of-hours hours NML are summarised in Section 9.

5.2.3 Sleep disturbance

The results summarised in Table 8 show that there are no residential receivers expected to experience construction noise levels above the sleep disturbance criteria by the works undertaken at the AWRC worksite during the night period.

Notwithstanding this, mitigation and management measures to reduce construction noise levels towards the sleep disturbance are summarised in Section 9.

6 Ground-borne noise impacts

The nearest residential receiver is 350 m from the AWRC worksite. On this basis, the potential impact of ground-borne noise from the construction activities is expected to be negligible. Therefore, the risk of annoyance due to ground-borne noise is considered low and has not been addressed further in this CNVIS.

7 Construction vibration impacts

7.1 Vibration assessment methodology

7.1.1 Vibration intensive activities

From the plant and equipment listed in APPENDIX C, the site establishment activities with dominant vibration generating plant and equipment include:

Table 10: AWRC vibration intensive activities and plant items

Activity/ work area	Aspect	Vibration intensive plant
AWRC site	Site Establishment and Mobilisation	Vibratory roller
	Site Earthworks	Vibratory roller
	Civil Works	Vibratory roller
	AWRC Structure Construction	Piling rig
	Mechanical Electrical Installation	Nil
	Landscaping and Rehabilitation	Plate compactor

Potential vibration generated to receivers is dependent on separation distances, the intervening soil and rock strata, dominant frequencies of vibration, and the receiver structure. The recommended minimum working distances for vibration intensive plant presented in Table 11 are taken from a database of vibration levels measured at various sites or obtained from other sources (e.g. BS5228-2:2009). They are not specific to the Project works as final vibration levels are dependent on many factors including the actual plant used, its operation and the intervening geology between the activity and the receiver.

Potential impacts are identified by determining the buildings/ structures likely to be within the recommended minimum working distances, taking into consideration the vibration intensive plant in use, location of works and distance to nearest affected receiver buildings/ structures.

7.1.2 Minimum working distances for vibration intensive plant

Site specific minimum working distances for vibration significant plant items must be measured on site where plant and equipment is likely to operate close to or within the recommended minimum working distances for cosmetic damage (Table 11).

Table 11: Recommended minimum working distances (m) for managing vibration impact based on screening criteria

	Minimum working distances for vibration intensive plant, m		
Vibration sensitive receiver	Vibratory roller	Piling rig	Plate compactor
Structural damage to buildings			
Reinforced or frame structures[1]	5	5	5
Unreinforced or light framed structures[1, 2]	5	10	5

Vibration sensitive receiver	Minimum working distances for vibration intensive plant, m		
	Vibratory roller	Piling rig	Plate compactor
Structurally unsound heritage structures[1, 2]	15	15	5
Disturbance to building occupants			
Critical areas[4,7]	105	40	20
Residences – Day	55	30	10
Residences – Night	75	35	15
Offices[6,7]	30	20	5
Workshops[7]	15	15	5

Notes: 1. Initial screening test criteria reduced by 50% due to potential dynamic magnification in accordance with BS7385.

2. In accordance with CNVMP, a site inspection should determine whether a heritage structure is structurally unsound.

3. Minimum working distances are in 5m increments only to account for the intrinsic uncertainty of this screening method. Jackhammers/ plate compactors are likely to have minimum working distances smaller than 5 m.

4. Examples include hospital operating theatres and precision laboratories where sensitive operations are occurring.

5. Daytime is 7 am to 10 pm; Night-time is 10 pm to 7am.

6. Examples include offices, schools, educational institutions, and place of worship.

7. Applicable when in use.

7.2 Vibration assessment

From the vibration assessment no structures have been identified to be affected by construction vibration. More detailed results are presented in APPENDIX E. The figures in APPENDIX E identify the minimum working distances for vibration over aerial photographs that also show the work areas and the land uses.

7.2.1 Structural damage

There are no structures identified at risk of cosmetic damage from vibration intensive works at the AWRC worksite. No heritage buildings are within the minimum working distance for 'unsound' heritage structures.

Generally, where plant is required to operate within minimum working distances, works will be paused and the construction methodology will be revised to ensure the vibration intensive plant only operates outside the minimum working distance. Alternatively, vibration monitoring is recommended to determine site specific minimum working distances to verify that vibration levels achieve compliance with the structural damage objectives as outlined in Section 4.

Where plant is required to operate within minimum working distances, vibration monitoring is recommended to determine site specific minimum working distances and/or verify that vibration levels achieve compliance with the structural damage objectives, as outlined in Section 9.6.2.

If the monitoring above identifies that vibration is likely to exceed the structural damage objectives, a different construction method with lower source vibration levels should be considered.

7.2.2 Human annoyance

The Assessing Vibration: a technical guideline [6] notes that inside dwellings, adverse comments often arise when occupants can perceive (feel) vibration, particularly when the vibration arises from a source located outside their home (or outside their control) and assume that the vibration has the potential to damage their building or contents.

However, it is noted that vibration levels required to cause minor cosmetic damage are typically 10 times higher than levels that will cause disturbance to building occupants. Many building occupants assume that building damage is occurring when they feel vibration or observe rattling of loose objects. However, the level of vibration at which people perceive vibration or at which loose objects may rattle is far lower than vibration levels that can cause damage to structures.

At properties near the worksite, it is possible that the nearest receivers will be able to feel vibration levels when vibration-generating equipment is being utilised. It is important to note that human comfort levels are much lower than vibration levels likely to result in property damage and people therefore may be disturbed by vibration with no potential to result in property damage.

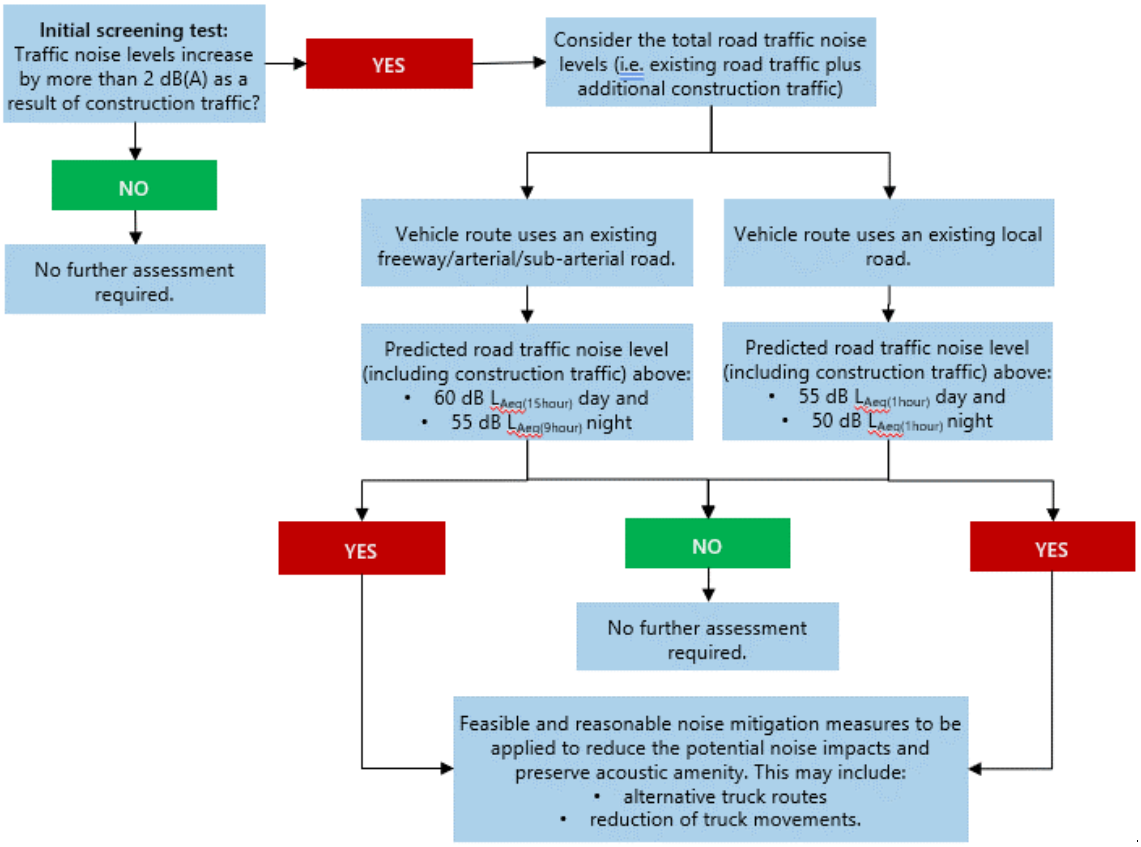
From the construction vibration assessment, there are no properties that may be exposed to vibration above the screening limit for human annoyance. The above assessment is based on vibration-generating equipment being operating constantly at the closest location to nearby receivers. When vibration-generating equipment operates further from the closest point, the predicted vibration levels will reduce along with the probability of adverse comment.

8 Construction traffic noise assessment

8.1 Traffic noise assessment methodology

Construction related traffic has the potential to temporarily increase road traffic noise levels at receivers which are adjacent to or near construction haulage routes. The construction road traffic noise assessment procedure is outlined in Figure 8-1.

Figure 8-1: Construction Road Traffic Noise assessment procedure



The potential impact of construction road traffic noise to nearby residential receivers has been estimated using the US Department of Transportation Federal Highway Administration's Traffic Noise Model (TNM) method, as implemented in CadnaA. When assessing local roads, the average 1-hour traffic volume for the 'assessment period' (i.e. day or night) to predict the L_{Aeq} noise levels for the 'assessment period'. The posted speed limit of the road has been adopted as the vehicle speed.

8.1.1 Traffic volume distribution

Consistent with the Traffic and Transport Technical Report prepared for the EIS, the following assumptions for traffic volume distribution have been adopted:

- All heavy vehicle construction traffic trips during the Day are two-way and distributed evenly throughout the Project's standard construction hours, and

- 50% of construction worker traffic arrives during the AM peak (defined as 7.30-8.30am in the Traffic and Transport Technical Report) and departs in the PM peak, with the remaining 50% evenly split across the shoulder periods (one hour prior to and following the peak hour).

In addition, as a conservative assumption for this assessment, it is assumed that each worker arrives in their own vehicle.

It is noted that staff may arrive at the site before 7am, which would be classified as during the Night period. Based on the adopted traffic volume assumptions, 12.5% of construction worker traffic would arrive between 6.30am and 7.00am.

8.1.2 Traffic volumes

Details of Projected heavy vehicle movements associated with the construction works were provided by John Holland and are summarised in Table 12.

Table 12: Construction generated traffic, total during assessment period

Worksite	Activity/ Work Area	Day (7am to 10pm)		Night (10pm to 7am)	
		Heavy vehicles	Light vehicles[1]	Heavy vehicles[2]	Light vehicles[3]
AWRC	Site Establishment and Mobilisation	61	18	1	4
	Site Earthworks	85	26	1	5
	Civil Works	87	35	1	6
	AWRC Structure Construction	112	35	1	6
	Mechanical Electrical Installation	65	35	1	6
	Landscaping and Rehabilitation	62	35	1	6

Notes

Volumes have been rounded to the nearest whole vehicle.

1. Light vehicle movements during the day are based on the projected number of staff on site, assuming one car per worker and the traffic volume distribution described in Section 8.1.1.
2. Vehicle movements during the night would be due to oversized deliveries which may be required where it is not possible to conduct the delivery during the day.
3. Includes 1 light vehicle associated with OSOM delivery, plus 12.5% of the light vehicles associated with staff arriving to the site (refer Section 8.1.1)

8.2 Predicted construction traffic noise

8.2.1 Elizabeth Drive

The EIS, Submissions Report and Amendment Report provided a qualitative assessment of construction traffic noise impacts during day and night periods. These documents state that the road traffic noise increase due to construction traffic on busy roads (such as Elizabeth Drive) would be negligible.

According to Appendix C of the Traffic and Transport Technical Report prepared for the EIS, Elizabeth Drive carries an average of 12,039 vehicles per day between Clifton Avenue and Western Road (based on RMS survey data from 2015). Construction road traffic would increase the traffic volume on Elizabeth Drive by approximately 1%, which would have a negligible impact on road traffic noise.

There may be limited heavy vehicle movement after 10 pm when OOHW is triggered by ROL or similar (e.g. oversized deliveries). Consistent with the EIS commentary on road traffic noise impacts on busy roads, the limited deliveries required by the Project during the night is anticipated to have a negligible impact on road traffic noise from Elizabeth Drive.

8.2.2 Clifton Avenue

Clifton Avenue is a local road linking Elizabeth Drive to the AWRC site. The EIS states the number of vehicles during the AM and PM peak hours, but does not identify the average daily number of vehicles using this road. However, as Clifton Avenue is a local road servicing a limited number of houses (before commencement of the Project), it is likely that total road traffic on Clifton Avenue is low and the road traffic noise may increase by 2 dB(A) or more due to construction traffic.

Construction road traffic noise has been assessed with consideration of the following:

- The nearest residence to Clifton Avenue is 442 Clifton Avenue, approximately 15m from the edge of the southbound carriageway.
- Vehicle speed is 50 km/h (posted speed limit).
- The highest Day $L_{Aeq1hour}$ from existing traffic on Clifton Avenue occurs during the PM peak hour (not explicitly specified in the Traffic and Transport Technical Report but understood to be before 10pm).
- Existing PM peak hour traffic volumes are listed in the Traffic and Transport Technical Report as 15 northbound and 28 southbound (traffic survey 2020). 5% of existing traffic is assumed to be heavy vehicles.
- The highest construction road traffic noise impact from the Project would occur during AWRC structure construction.
- Negligible road traffic on Clifton Avenue during the Night.

Predicted road traffic noise levels at 442 Clifton Avenue are predicted to meet the road traffic noise targets and are summarised in Table 13.

Table 13: Predicted road traffic noise levels – 442 Clifton Avenue

Scenario	Target dB $L_{Aeq1hour}$	Existing road traffic noise dB $L_{Aeq1hour}$	Construction road traffic noise dB $L_{Aeq1hour}$	Total road traffic noise dB $L_{Aeq1hour}$	Complies?
PM peak hour	55 (Day)	47	51	52	Yes
OSOM delivery	50 (Night)	-	42	42	Yes
Staff arrival before 7am	50 (Night)	-	34	34	Yes

8.3 Construction traffic noise mitigation and management

Construction road traffic will be managed in accordance with the Project's Construction Traffic Management Plan. Management measures that may result in traffic noise reductions at sensitive receivers, and have been considered in this assessment, are identified in this section.

8.3.1 Alternative routes

Use of additional or alternative roads can alleviate road traffic noise impacts to receivers along a local road. However, no alternative routes exist which allow for construction traffic to access the AWRC. An additional or alternative route to the AWRC from Elizabeth Drive would require the construction of a new road, which would result in additional construction noise impacts, delays to delivery of the project and acquisition of property. These costs are not considered to be reasonable and this mitigation measure has not been adopted.

8.3.2 Scheduling of deliveries

Construction traffic noise impacts will be managed by generally limiting heavy vehicle movements to standard construction hours. Outside standard construction hours, heavy vehicles would be limited before 10 pm as much as reasonably practical, especially where traffic conditions inhibit the use of the primary egress route (see Section 2.1.3).

8.3.3 Traffic reduction

Traffic reduction measures aim to reduce the number of vehicles used by staff to access the site, which can alleviate potential congestion, parking issues and noise. While the predicted road traffic noise from light vehicles is predicted to meet the target level of 50 dB $L_{Aeq1hour}$, traffic reduction measures should be adopted where it is feasible and reasonable to do so.

Staff should be encouraged to travel to and from the site in ways that minimise road traffic in accordance with Construction Traffic Management Plan (e.g. car-pooling, use of public transport, cycling/walking).

9 Mitigation and management measures

9.1 High noise impact activities

9.1.1 Standard respite periods (CoA E41 and EPL)

Highly noise intensive works are defined in the Conditions of Approval as works which are defined as annoying under the ICNG, including:

a) use of power saws, such as used for cutting timber, rail lines, masonry, road pavement or steel work;

b) grinding metal, concrete or masonry;

c) rock drilling;

d) line drilling;

e) vibratory rolling;

f) bitumen milling or profiling;

g) jackhammering, rock hammering or rock breaking;

h) rail tamping and regulating; and

i) impact piling.

EPL 21800 defines *High Noise Impact Activities and Works as construction works which exceed the applicable NML at sensitive receiver locations and are:*

- *Identified as particularly annoying in section 4.5 of the ICNG [5]; and/or,*
- *Works identified as 'Highly Noise Intensive Works' in a planning approval for the activities in this licence; and/or,*
- *Any other activity identified by the EPA, and advised to the licensee, following an assessment of the character of the noise emitted by the activity based on the Noise Policy for Industry, Fact Sheet C considerations [6].*

Activities during site establishment, site earthworks, civil works and AWRC structure construction works include some of the activities listed in the ICNG e.g. use of power saws and jackhammering. Where verification monitoring finds highly noise intensive works exceed the applicable NML, respite will be provided by limiting activities as follows to satisfy CoA E41 and the EPL Condition L4.2:

- Between the hours of 8:00am to 6:00pm Monday to Friday
- Between the hours of 8:00am to 1:00pm Saturday, and

- In continuous blocks not exceeding three hours each with a minimum respite from those activities or works of not less than one hour.

For the purposes of this requirement 'continuous' includes any period during which there is less than one-hour respite between ceasing and recommencing any of the work that is subject to this requirement.

9.2 Consultation with affected receivers

CoA E48 and E49 require consultation with noise and/or vibration affected sensitive land users to assist in determining site-specific mitigation measures.

Consultation has been carried out with receivers identified as being above the nominated NML. The consultation piece is included as Appendix F. Further consultation will be carried out with sensitive receivers throughout the works to ensure that reasonable and feasible mitigation measures are being incorporated. This consultation will be recorded and included to future revisions of the CNVIS.

Mitigation measures which have been identified may include managing noise impact and appropriate respite periods for out-of-hours works; scheduling high noise impact works around sensitive periods where feasible and reasonable; alternative methods of compaction to reduce vibration, substitution of plant and equipment to ones with a lower sound power level, offers of movie or dinner vouchers; alternative accommodation offers. Consultation is also being undertaken to understand stakeholders' noise and vibration expectations and preferences for timing of high impact noise respite. This is consistent with requirements in CoA Conditions E55.

A summary of the consultation program is provided below:

- Consultation with relevant community members on construction works, including site establishment, earthworks and AWRC works.
    - Consultation with noise affected receivers identified in APPENDIX D to ensure additional management measures are provided (if required, refer to Section 9.4).
    - Consultation with potentially noise and/ or vibration affected community, religious, educational institutions and noise and vibration-sensitive businesses and critical working areas (such as theatres, laboratories and operating theatres) to satisfy CoA E46 and ensure events resulting in noise levels above the NMLs are not timetabled within sensitive periods or make alternative arrangements where this cannot be avoided.
    - Consultation with community that are construction noise and/or vibration affected on a regular basis on respite during out-of-hours work. To satisfy CoA E55, this consultation will include:
        - a progressive schedule for periods of likely out-of-hours work;
        - a description of the potential work, location and duration of the out-of-hours work;

  - the noise characteristics and likely noise levels of the work; and
  - likely mitigation and management measures which aim to achieve the relevant NMLs under CoA E44, including the circumstances of when respite or relocation offers will be available and details about how the affected community can access these offers (see Section 9.4 and 9.3).

- Consultation with the owners of properties identified as at risk of exceeding the screening criteria for cosmetic damage, to satisfy Condition E49, will receive the following:
  - Property condition survey offer letter,
  - Community updates as shaft excavation progresses and the expected vibration impacts,
  - Where requested, specific meetings with stakeholders.

Consultation will continue and mitigation measures implemented as applicable to the stage of work.

9.3 Noise and vibration control and management measures

Noise and vibration control and management measures to reduce potential noise impacts will be implemented during the construction works, where reasonable and feasible. In accordance with the ICNG and consistent with the CNVS, feasible noise mitigation measures are those work practices or measures to reduce noise that are capable of being put into practice or of being engineered and are practical to build given Project constraints such as safety and maintenance requirements. Reasonable noise mitigation measures are those feasible noise mitigation measures that are considered reasonable in the circumstances, based on a judgement that the overall noise benefits outweigh the overall adverse social economic and environmental effects, including the cost of implementing the measure. To make such a judgement, consideration is to be given to noise level impacts, duration of impacts, noise mitigation benefits, cost effectiveness of noise mitigation and community views.

Table 14 outlines the noise and vibration control measures that will be implemented on site during the construction works, where feasible and reasonable.

Table 14: Site noise control measures

Control measure	Description of the control measure	Feasible mitigation test	Deemed feasible?	Reasonable mitigation test	Deemed reasonable?	Adopted?	Justification and commentary
At source control measures							
Site planning and layout	Locate noise-generating activities away from sensitive receivers, where practicable. Plan traffic flow, parking, loading/unloading, and other vehicle movements to keep vehicles away from sensitive receivers where possible and to minimise reversing movements.	The site has been designed and constructed to include this (see Figure C1).	Yes	- Potential benefit of 5-10 dB(A). - Sufficient noise reduction could be achieved at enough receivers. - Deemed to be cost effective. - Outweighs the identified social, economic and environmental effects.	Yes	Yes	Fixed noise sources such as the water treatment plant is located away from more sensitive receivers. Traffic flow is one-directional.
Noise control kits	Plant that is brought to site for works should meet the sound power limits identified in Table C1 of this assessment. The Sound Power Level of any new plant will be verified during the initial week of its operation on site, the results of verification monitoring will be documented using Soteria. Where plant are above limits then the plant may require installation of 'noise control kits' to comply with the noise limits in this assessment. Such 'noise control kits' comprise: • high performance 'residential-grade' exhaust mufflers, • additional engine cowling / enclosure lined inside with sound absorbent industrial-grade foam, and • air intake and discharge silencers / louvres.	This measure could be feasibly implemented. Subject to availability for each equipment item.	Yes	- Potential benefit of 5-10 dB(A). - Sufficient noise reduction could be achieved at enough receivers. - Deemed to be cost effective. - Outweighs the identified social, economic and environmental effects. - Deemed to be cost effective. - Outweighs the identified social, economic and environmental effects.	Yes	Yes, subject to noise testing on site	The need to fit 'noise control kits' onto the identified plant, will be confirmed once each plant item is tested prior to its regular use on site, or alternative the plant will be swapped for lower noise plant. (see Table C2)
Limit equipment in use	Only the equipment necessary during each stage of the works will be used.	This measure could be feasibly implemented.	Yes	- Routine measure for Project team. - Sufficient noise reduction could be achieved at enough receivers. - Cost effective.	Yes	Yes	Excess equipment will be avoided where it is not needed for the works and where it is reasonable to do without it. (see Table C1 for specific limitations)
Timing of equipment in use	Where practicable, activities and plant will be scheduled/limited as outlined in Table C1 and C2 (APPENDIX C) of this assessment For example, for OOHW under ROL - limit all high noise activities (jackhammer, power tools etc) to standard hours, where practicable or to before midnight where the works cannot be undertaken during standard hours.	This measure is not feasible for all works as there is limited time for works to be completed under ROL (or similar).	Not for all works	- Sufficient noise reduction could be achieved at enough receivers and cost effective etc, - Note that some of the OOHW are unavoidable due to the high risk to construction personnel or public safety triggering ROL.	Not for all works	Not for all works	Where practicable, the timing of works will be managed to reduce noise levels during more sensitive periods (i.e. after 10pm and after 12am; and not before 7am). Noisy plant that supports OOHW, but does not require OOH operation (e.g. jackhammer) will be limited to standard hours use only within the worksite or off site, where practicable), providing a 5-15 dB reduction in noise levels.

Control measure	Description of the control measure	Feasible mitigation test	Deemed feasible?	Reasonable mitigation test	Deemed reasonable?	Adopted?	Justification and commentary
Limit activity duration	Any equipment not in use for extended periods shall be switched off. For example, heavy vehicles will switch engines off when not in use.	This measure could be feasibly implemented.	Yes	-- Routine measure for Project team. Sufficient noise reduction could be achieved at enough receivers. - Deemed to be cost effective. - Outweighs the identified social, economic, and environmental effects.	Yes	Yes	Equipment that is not directly needed for works at a given time will be switched off.
Equipment selection	Use quieter and less noise/vibration emitting construction methods where feasible and reasonable, for example use rock saw to separate shaft excavation area from existing ground where practicable, to provide a reduction in GBN and vibration; vibratory rollers can, where practicable, be operated with the vibratory mode switched off to reduce vibration impact.).	This measure could be feasibly implemented. To be determined on a case-by-case basis.	Yes	- Sufficient noise or vibration reduction could be achieved at enough receivers. - Deemed to be cost effective. - Outweighs the identified social, economic, and environmental effects.	Yes	Yes	Project team shall review plant and equipment on a case-by-case basis and find opportunities to use items with lower noise/vibration impacts.
Use regularly serviced equipment	Ensure that plant and equipment used on-site is regularly serviced in accordance with the manufacturer's specifications.	This measure could be feasibly implemented.	Yes	- Sufficient noise or vibration reduction could be achieved at enough receivers. - Deemed to be cost effective. - Outweighs the identified social, economic, and environmental effects.	Yes	Yes	Plant and equipment shall be kept in good working condition and will be serviced regularly.
Alternative construction methods to reduce vibration	Alternative, less vibration generating construction methods will be reviewed where vibration significant works found to be within the site-specific minimum working distance of a structure, as determined by site vibration monitoring.	This measure could be feasibly implemented. To be determined on a case-by-case basis.	Yes	- Sufficient vibration reduction could be achieved at identified structure to reduce the risk of structural damage from vibration significant works. - Deemed to not be cost-effective	No	No	Vibration impacts are predicted to be low, and further refinement of construction methodology to reduce vibration is considered to be unreasonable.
Truck movements	Where practicable, avoid the use of park air brakes at night. Set up relevant traffic management measures to minimise the use of air brakes when leaving site. Air brake silencers are to be correctly installed and fully operational for any heavy vehicles (as per CNVMP). Minimise unnecessary acceleration on site and avoid vigorous slamming of truck doors.	This measure could be feasibly implemented.	Yes	- Sufficient noise reduction could be achieved at enough receivers. - Deemed to be cost effective. - Outweighs the identified social, economic, and environmental effects.	Yes	Yes	Drivers will be reminded to drive responsibly at all times on-site and off-site, especially when accessing and departing the site. Limits on truck numbers, namely for OOHW period, are identified in Table C1 and Table C2.
Non-tonal reversing alarms	Alternative reverse alarms, such as 'quackers' will be installed on all vehicles & mobile plant regularly used on site and on all vehicles & mobile plant required for OOHW.	This measure could be feasibly implemented.	Yes	- Sufficient noise reduction could be achieved at enough receivers. - Deemed to be cost effective. - Outweighs the identified social, economic, and environmental effects.	Yes	Yes	Project team will mandate use of non-tonal reversing alarms on equipment.
Building condition surveys	Undertake building dilapidation surveys on all buildings located within the minimum working distances established for cosmetic damage prior to commencement of activities with the potential to cause property damage (see Section 7.2.1)	This measure could be feasibly implemented.	Yes	Deemed to be cost effective. Outweighs the identified social, economic and environmental effects.	No	No	No buildings have been identified within the MWD for cosmetic damage, therefore this measure is not deemed necessary.

Control measure	Description of the control measure	Feasible mitigation test	Deemed feasible?	Reasonable mitigation test	Deemed reasonable?	Adopted?	Justification and commentary
Path mitigation measures							
Acoustic shed	An existing acoustic shed with sound insulation/absorption specifications designed by Renzo Tonin & Associates will be utilised on the site.	The site has been designed and constructed to include this.	Yes	- Potential benefit of at least 20 dB(A). - Insufficient noise reduction could be achieved at enough receivers. - Deemed to not be cost effective.	No	No	An acoustic shed will not provide significant noise reduction to enough receivers. Therefore, it will not be adopted.
Noise barriers or temporary noise screens	Erection of noise barriers around the perimeter of the site to shield sensitive receivers from noisy activities.	This measure is generally feasible, provided there is sufficient space to complete the works.	Yes, where there is sufficient space	- Potential benefit of 5-10 dB(A). - Insufficient noise reduction could be achieved at enough receivers. - Deemed to not be cost effective.	No	No	Due to the large distances between the construction site and the nearest receivers, noise barriers will not provide significant noise reduction to enough receivers. Therefore, it will not be adopted. This will be reviewed should works be situated closer to receivers.
Use plant and equipment as temporary noise barriers	Orient plant and equipment around noisy equipment to provide attenuation.	This measure is generally feasible, provided there is sufficient space to complete the works.	Yes, where there is sufficient space	- Limited benefit if item is irregularly shaped - Deemed to be cost effective	Yes	Yes	Although the potential benefit is limited, there is little additional cost to consider careful placement of plant/equipment to shield noisy works. This would be subject to site constraints and will be reviewed on-site on a case-by-case basis.
Enclosures	Temporary enclosures containing key stationary noise-generating activities and/or items such as generators. The enclosure may be incorporated into the plant design (e.g. generator housing) or built on site, such as an 'acoustic tent', i.e. a structure hung with temporary noise screens (e.g. Echo-barrier, FlexShield or similar).	This measure could be feasibly implemented. Limitations as per temporary noise screens above.	Yes	- Potential benefit of 10-20 dB(A). - Insufficient noise reduction could be achieved at enough receivers. - Deemed to not be cost effective.	No	No	Enclosures will not provide significant noise reduction to enough receivers, and the additional time and impacts associated with enclosure construction are not justified. Therefore, it will not be adopted.
At-receiver							
At-property treatments	Design and installation of architectural treatments to sensitive receiver buildings to reduce internal noise levels to key rooms.	This measure could be feasibly implemented.	Yes	- Provides reduction for airborne noise only. Airborne noise from worksites will be mitigated by the establishment of construction hoardings as noise barriers. - Does not mitigate GBN or vibration - Short term highly noise intrusive works or OOHW will be managed - Not cost effective.	No	No	The existing on-site mitigation is considered sufficient to manage noise impacts from this worksite.

Control measure	Description of the control measure	Feasible mitigation test	Deemed feasible?	Reasonable mitigation test	Deemed reasonable?	Adopted?	Justification and commentary
Relocation of receivers during high impact works	Long term relocation of the occupants of identified properties be considered for highly GBN and vibration affected receivers adjacent to the western shaft.	This measure could be feasibly implemented.	Yes	- Deemed to not be cost effective. - Does not outweighs the identified social, economic and environmental effects.	No	No	No properties were identified to be highly GBN and vibration affected. Therefore, it will not be adopted.
Noise management measures							
Site inductions & Toolbox Talks	All employees, contractors and subcontractors will receive a Project induction. The environmental component may be covered in toolboxes and should include (but is not limited to): • location of nearest sensitive receivers • relevant Project specific and standard noise and vibration mitigation measures; • permitted hours of work; • OOHW Procedure and Form • construction employee parking areas.	This measure could be feasibly implemented.	Yes	Routine task for Project team.	Yes	Yes	Inductions and toolbox talks will continue to be conducted for the Project.
Community consultation - disseminating information	Provide information to community of construction activity and potential impacts (see Section 9.2).	This measure could be feasibly implemented.	Yes	Routine task for Project team.	Yes	Yes	Updates will be distributed regularly for the duration of the project.
Community consultation - active communication with nearby sensitive receivers	Seek feedback from community to identify more sensitive times of the day, or particularly sensitive days (see Section 9.2). An example is identifying when student exams (such as Higher School Certificate exams, end of semester exams) will take place.	This measure could be feasibly implemented.	Yes	Routine task for Project team.	Yes	Yes	Project team shall proactively contact nearby sensitive receivers, particularly those which may have special requirements (e.g. recording studios).
Behavioural practices	No swearing or unnecessary shouting or loud stereos/radios on site. No dropping of materials from height, throwing of metal items and slamming of doors.	This measure could be feasibly implemented.	Yes	Routine task for Project team.	Yes	Yes	Project team shall monitor site behaviour and advise supervisors if issues arise or additional behavioural practices are needed.
Noise monitoring	Noise monitoring to be conducted at key locations to quantify noise impacts at sensitive receivers.	This measure could be feasibly implemented.	Yes	Deemed to be cost effective. Outweighs the identified social, economic and environmental effects.	Yes	Yes	Noise monitoring shall be carried out as detailed in this assessment.
Update CNVIS	Regular updates of the CNVIS to account for changes in noise and vibration management strategies.	This measure could be feasibly implemented.	Yes	Can be reasonably undertaken by Project team where required.	Yes	Yes	Updates to the CNVIS will be carried out where required and will be reviewed regularly.

Control measure	Description of the control measure	Feasible mitigation test	Deemed feasible?	Reasonable mitigation test	Deemed reasonable?	Adopted?	Justification and commentary
Provision of respite evenings and nights	Where OOHW are required under CoA E42(c), such as works under ROL, respite evenings and nights will be provided in accordance with the CNVS. Where after all reasonable and feasible noise mitigation measures have been implemented there are still receivers noise affected during the OOHW period, works will be programmed to ensure that works and activities do not result in noise levels exceeding NMLs at the same noise sensitive receivers on more than: • 2 consecutive evenings and/or nights at any time; and • 3 evenings and/or nights per week; and • 10 evenings and/or nights per month. Furthermore, high noise impact works will be completed before 11:00pm Sunday to Thursday and 12:00am (midnight) Friday and Saturday where reasonable and feasible.	This measure could be feasibly implemented and updated to reflect EPL conditions, if required.	Yes	Works would be able to be undertaken at night, with respite achieved at enough receivers on nights where works are not undertaken. Deemed to be cost effective. Outweighs the identified social, economic, and environmental effects.	Yes	Yes	Works will be planned to minimise consecutive nights of works affecting the same sensitive receiver.
Respite coordination	Consult with proponents of other construction works in the vicinity of the worksite and take reasonable steps to coordinate works to minimise cumulative impacts of noise and vibration and maximise respite for affected sensitive receivers (e.g. aligning respite evenings).	This measure could be feasibly implemented, if required.	Yes	Sufficient noise reduction could be achieved at enough receivers. Deemed to be cost effective. Outweighs the identified social, economic and environmental effects.	Yes	Yes	Respite coordination shall be conducted with neighbouring projects.
Implement additional management measures	Identify and implement additional management measures outlined in this assessment.	This measure could be feasibly implemented.	Yes	Consistency with CNVS	Yes	Yes	Additional management measures to be identified on a case-by-case basis and with consideration of the standard mitigation and management measures outlined in this report.

9.4 Additional management measures

Section 5 of the CNVS directs that in instances where, after the application of all reasonable and feasible mitigation and management measures (refer to Section 9.3), the $L_{Aeq(15minute)}$ airborne construction noise and/ or $L_{Aeq(15minute)}$ ground-borne noise levels are still predicted to exceed the relevant NMLs, or if vibration monitoring at representative locations still exceeds relevant vibration objectives for human annoyance, additional management measures can be applied to further limit the risk of annoyance from construction noise and vibration. The CNVS suggests the Project should consider implementing additional management measures such as:

- **Alternative accommodation** (**AA**) options may be provided for residents living close to construction works that are likely to incur unreasonably high impacts over an extended period of time (more than 2 consecutive days). Alternative accommodation will be determined on a case-by-case basis.
- **Monitoring** (**M**) of noise or vibration may be conducted at the affected receiver(s) or a nominated representative location where it has been identified that specific construction activities are likely to exceed the relevant noise or vibration objectives. Monitoring can be in the form of either unattended logging or operator attended surveys. The purpose of monitoring is to inform the relevant personnel when the noise or vibration goal has been exceeded so that additional management measures may be implemented.
- **Individual briefings** (**IB**) are used to inform stakeholders about the impacts of high noise activities and mitigation and management measures that will be implemented. Communications representatives from the contractor would visit identified stakeholders at least 48 hours ahead of potentially disturbing construction activities. Individual briefings provide affected stakeholders with personalised contact and tailored advice, with the opportunity to comment on the Project.
- **Letter box drops** (**LB**) in the form of a newsletter produced and distributed to the local community via letterbox drop or email via the Project mailing list. The newsletter will provide an overview of current and upcoming works across the Project and other topics of interest. The objective is to engage, inform and provide Project-specific messages. Advanced warning of potential disruptions (e.g. traffic changes or noisy works) can assist in reducing the impact on the community.
- **Project specific respite offers** (**RO**) provide residents subjected to lengthy periods of noise or vibration respite from an ongoing impact.
- **Phone calls and emails** (**PC**) detailing relevant information about construction works would be made to identified noise or vibration affected stakeholders within 7 days of proposed work to provide tailored advice and the opportunity for stakeholders to provide comments on the proposed work and specific needs etc.
- **Specific notifications** (**SN**) would be letterbox dropped or hand distributed to identified stakeholders no later than 7 days ahead of construction activities that are likely to exceed the

noise objectives. This form of communication is used to support periodic notifications, or to advertise unscheduled works.

In addition, all potentially impacted receivers will be kept informed of the nature of works to be carried out, the expected noise levels and duration, as well as be given appropriate enquiries and complaints contact details.

9.4.1 Additional airborne noise management measures

The steps to be carried out to determine the additional airborne noise management measures to be implemented are identified in Figure 9-1.

Figure 9-1: Additional airborne noise management measures

Construction hours	Receiver perception	dB(A) above RBL*	dB(A) above ANML	Additional management measures
Standard Hours Monday-Friday (7am-6pm) Saturday (8am-1pm)	Noticeable	5 to 10	0	-
	Clearly Audible	> 10 to 20	< 10	-
	Moderately intrusive	> 20 to 30	> 10 to 20	PN, V
	Highly intrusive	> 30	> 20	PN, V
	75dBA or greater	N/A	N/A	PN, V, SN
OOHW Period 1 Monday-Friday 6pm-10pm Saturday (7am-8am, 1pm-10pm) Sunday/PH (8am-6pm)	Noticeable	5 to 10	< 5	-
	Clearly Audible	> 10 to 20	5 to 15	PN
	Moderately intrusive	> 20 to 30	> 15 to 25	PN, V, SN, RO
	Highly intrusive	> 30	> 25	PN, V, SN, RO, RP#, DR#
OOHW Period 2 Monday-Saturday (12am-7am, 10pm-12am) Sunday/PH (12am-8am, 6pm-12am)	Noticeable	0 to 10	< 5	PN
	Clearly Audible	> 10 to 20	5 to 15	PN, V
	Moderately intrusive	> 20 to 30	> 15 to 25	PN, V, SN, RP, DR
	Highly intrusive	> 30	> 25	PN, V, SN, AA, RP, DR

Notes: PN = Project notification; V = Verification monitoring; RP = Respite Period; AA = Alternative accommodation; SN = Specific notification, individual briefings, or phone call; DR = Duration Reduction; RO = Project specific respite offer

* SWLs used for the purpose of estimating noise impact shall be increased by 5dBA where works will include: power saws for the cutting of timber, masonry & steel; grinding of metal, concrete or masonry; rock/line drilling; bitumen milling & profiling; jack hammering, rock hammering & rock breaking; or impact piling as a correction factor for noise with special audible characteristics. It is noted that this correction factor is automatically calculated under Step 2 of the Construction Noise Estimator Tool (see APPENDIX E).

Respite periods and duration reduction are not applicable when works are carried out during OOHW Period 1 Day only (i.e. Saturday 6am-7am & 1pm-6pm, Sundays / Public Holidays 8am-6pm)

Figure 9-1 presents a summary of the additional management measures applicable for construction activities where, after application of all reasonable and feasible mitigation options, construction noise levels are still above the NMLs.

Prior to the commencement of works, receivers identified in APPENDIX D.3 will be notified to advise that noise from the works may at times be audible. Additional airborne noise management measures will be implemented as per Table D.3. Additional airborne noise management measures

9.4.2 Additional vibration management measures

If vibration monitoring at representative locations still exceeds relevant vibration objectives for human annoyance, the appropriate additional management measures [1], are presented in Figure 9-2, should be provided.

Figure 9-2: Additional vibration management measures

Construction hours	Receiver perception	above VML	Additional management measures
Standard Hours Monday-Friday (7am-6pm) Saturday (8am-1pm)	Human disturbance	> HVML	PN, V, RO
	Building damage	> DVML	V, AC
OOHW Period 1 Monday-Friday (6pm-10pm) Saturday (7am-8am, 1pm-10pm) Sunday/PH (8am-6pm)	Human disturbance	> HVML	PN, V, SN, RO, RP, DR
	Building damage	> DVML	V, AC
OOHW Period 2 Monday-Saturday (12am-7am, 10pm-12am) Sunday/PH (12am-8am, 6pm-12am	Human disturbance	> HVML	PN, V, SN, RO, AA, RP, DR
	Building damage	> DVML	V, AC

Notes:
PN = Project notification
V = Verification of monitoring
DR = Duration Reduction
RP = Respite Period
SN = Specific notification, individual briefings, or phone call
AA = Alternative accommodation
RO = Project specific respite offer
AC = Alternative construction methodology

HVML: vibration management level for human disturbance

DVML: vibration management level for cosmetic damage to buildings or structures

9.5 Managing site specific activities and cumulative noise impacts

9.5.1 Construction noise and vibration management tool (Gatewave)

This CNVIS has established the overall impacts associated with the proposed works. A 3D construction noise and vibration management tool (Gatewave, www.gatewave.com.au) is being developed specifically for the Project to allow specific work areas and activities to be assessed as construction works progress. It also allows cumulative noise impact from other aspects of the Project or, where relevant noise from other construction projects, to be assessed and managed in accordance with relevant conditions of approval.

Gatewave will be used regularly to plan, assess and manage works progressively.

Gatewave incorporates ground elevation contours, building heights, the built environment and atmospheric conditions to predict construction noise in accordance with the International Standard ISO 9613-2:1996 implementing quality standard ISO 17534-1:2015. All sensitive receivers identified by the land use survey are integrated into the Gatewave tool.

9.6 Real-time and attended noise monitoring

To provide real time noise monitoring data to assess and confirm whether noise emission from site is within the predicted noise levels identified in this CNVIS, long-term, unattended noise monitoring will occur at fixed locations at the AWRC worksite.

Noise and vibration monitoring shall follow the procedures outlined in the CNVMP. Note that monitoring at properties may be undertaken from the property boundary to limit any inconvenience to property owners. Monitoring should be undertaken at a minimum of two of the most affected locations nominated in Table 15.

9.6.1 Airborne noise

Attended noise monitoring is to be undertaken to verify that noise levels resulting from construction works are in accordance with the levels predicted in this report, subject to obtaining the property owner/occupier's consent to access the property (where required). The Sound Power Level of any new plant brought on site will be verified during the initial week of its operation, the results of verification monitoring will be documented using Soteria. Noise monitoring will be completed in publicly accessible areas on or near the nominated receivers, typically at ground floor level. Where, following community consultation, specific sensitive receivers are identified for additional monitoring, access to the property will be sought through the Stakeholder and Community Relations team.

In accordance with the CNVMP, the locations in Table 15 are nominated for verification noise monitoring, subject to safety and site constraints. These locations are also shown in Figure 3-1.

Table 15: Nominated verification monitoring locations

Type of monitoring	NCA/ Receiver type	Nominated receiver address
Attended	NCA T1	146B CLIFTON AVENUE, KEMPS CREEK, NSW
Attended	NCA T1	203-229 CLIFTON AVENUE, KEMPS CREEK, NSW
Attended	NCA T1	1669A ELIZABETH DRIVE, BADGERYS CREEK, NSW
Attended	NCA T1	16 GANTON WAY, LUDDENHAM, NSW
Attended	NCA T1	919-929 MAMRE ROAD, KEMPS CREEK, NSW

Note: To be confirmed subject to suitability of location and agreement from property owner.

APPENDIX D.3 identifies the activities where monitoring should be carried out for each NCA and additional locations, should any of the above monitoring locations be unsuitable.

9.6.2 Vibration monitoring

Attended vibration monitoring is not required as the nearest sensitive receivers to the construction works are beyond the minimum working distances in Table 11. Notwithstanding this, vibration monitoring will be conducted in accordance with the CNVMP in response to complaints, where appropriate.

9.6.3 Complaints handling

All noise and vibration related complaints received and responded to will be managed in accordance with the CEMP and the Community Communication Strategy prepared under Condition B2. Each complaint shall be investigated and where noise and/or vibration levels are established as exceeding the set limits, appropriate amelioration measures shall be put in place to mitigate future occurrences. Management measures may include modification of construction methods such as using smaller equipment and establishment of minimum working distances as mentioned above and/or use of additional temporary screening. Mitigation measures / controls will be implemented in consultation with the complainant.

10 Conclusion

Construction works associated with the USC AWRC have been described in this CNVIS to identify potential environmental risks associated with construction noise and vibration. Construction noise and vibration objectives have been established consistent with the Conditions of Approval for the Project and the EIS.

Construction airborne noise

During AWRC works (i.e. earthworks and AWRC construction) the predicted noise levels indicate the nearest sensitive receivers will not be construction noise affected during standard construction hours. No receivers are likely to be highly noise affected by the construction works.

During AWRC works (i.e. earthworks and AWRC construction), out-of-hours works will only occur as permitted under the planning approval and or in accordance with the Project's Out of Hours Works Protocol or under the Environment Protection Licence (EPL) number 21800 for works subject to an EPL. The nearest residential receivers are likely to be construction noise affected by the OOH civil works in the absence of additional mitigation measures and controls.

Noise mitigation and management measures, including noise monitoring requirements, have been presented in Section 9 to aid in providing additional noise reduction benefits where noise levels are above the NMLs.

Construction ground-borne noise

Due to the distance between the AWRC site and the nearest sensitive receivers, ground-borne noise is unlikely to be perceived during construction.

Construction vibration

No building/structures have been identified as within the recommended minimum working distance for cosmetic damage during the works. No residential receivers have been identified as within the minimum working distance for human comfort during the works.

Vibration mitigation and management measures have been presented in Section 9 to reduce the risk of damage to buildings near the worksite and to manage annoyance from construction vibration.

Construction traffic

The predicted noise impacts are assessed as low and meet the nominated road traffic noise goals.

References

[1] Transport for NSW Construction Noise and Vibration Strategy (ref: ST-157/4.1) April 2019

[2] Upper South Creek AWRC Stage 1 OOHW Protocol November 2021

[3] Aurecon Arup Upper South Creek Advanced Water Recycling Centre - Technical Report 1: Noise and Vibration Impact Assessment April 2021

[4] USC Submissions Report – Appendix B Updated Management Measures

[5] Department of Environment and Climate Change 2009 NSW Interim Construction Noise Guideline (ICNG)

[6] Environment Protection Authority 2017 NSW Noise Policy for Industry (NPfI)

[7] Department of Environment, Climate Change and Water 2011 NSW Road Noise Policy (RNP)

[8] Department of Environment Conservation NSW 2006 Assessing Vibration; a technical guideline

[9] Environment Protection Authority 2000 NSW Industrial Noise Policy (INP)

[10] British Standard BS 6472-2008, Evaluation of human exposure to vibration in buildings (1-80Hz)

[11] Australian Standard AS 2187.2-2006 Explosives - Storage and Use - Use of Explosives

[12] British Standard BS 7385 Part2-1993, Evaluation and measurements for vibration in buildings Part 2

[13] German Standard DIN 4150-3: 2016-12, Structural vibration - Effects of vibration on structures, December 2016

[14] ASHRAE Applications Handbook (SI) 2003, Chapter 47 Sound and Vibration Control, pp47.39-47.40

[15] Australian Standard 2834-1995 Computer Accommodation, Chapter 2.9 Vibration, p16

[16] Australian Standard AS/NZS 2107:2000 *Acoustics - Recommended design sound levels and reverberation times for building interiors*

APPENDIX A Glossary of terminology

The following is a brief description of the technical terms used to describe noise to assist in understanding the technical issues presented.

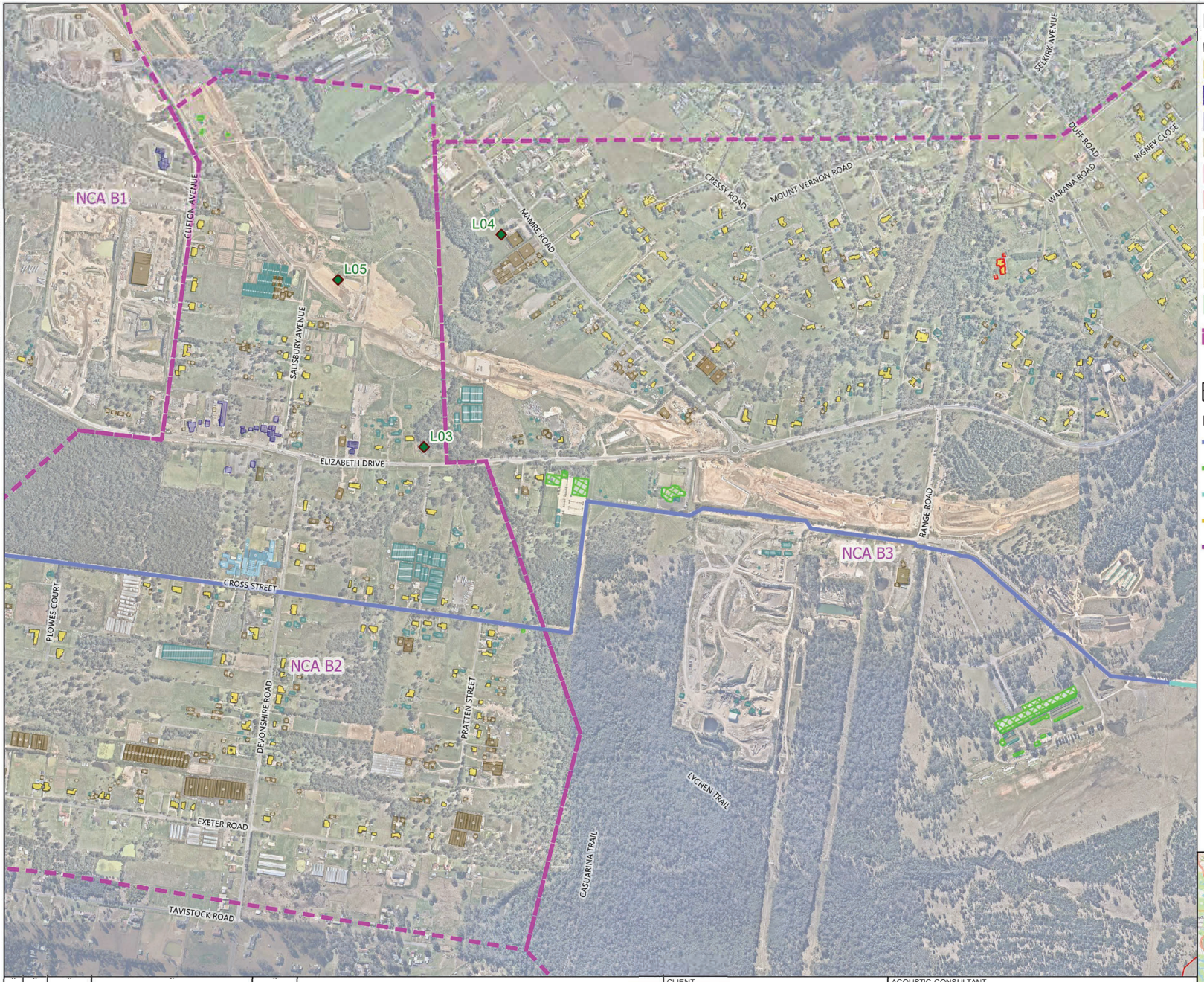
ABN	Airborne Noise
Adverse weather	Weather effects that enhance noise (that is, wind and temperature inversions) that occur at a site for a significant period of time (that is, wind occurring more than 30% of the time in any assessment period in any season and/or temperature inversions occurring more than 30% of the nights in winter).
Ambient noise	The all-encompassing noise associated within a given environment at a given time, usually composed of sound from all sources near and far.
Assessment period	The period in a day over which assessments are made.
Assessment point	A point at which noise measurements are taken or estimated. A point at which noise measurements are taken or estimated.
Attenuation	The reduction in the level of sound or vibration.
AVTG	Assessing Vibration – a technical guideline (DEC 2006)
Background noise	Background noise is the term used to describe the underlying level of noise present in the ambient noise, measured in the absence of the noise under investigation, when extraneous noise is removed. It is described as the average of the minimum noise levels measured on a sound level meter and is measured statistically as the A-weighted noise level exceeded for ninety percent of a sample period. This is represented as the L90 noise level (see below).
CEMP	Construction Environmental Management Plan
CNVIS	Construction Noise and Vibration Impact Statement
CNVS	Construction Noise and Vibration Standard (Transport for NSW 2018)
CoA	Condition of Approval (SSI 8609189)
Condition	Condition of Approval (SSI 8609189)
Decibel [dB]	The units that sound is measured in. 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 CBD mall 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 A- weighting noise filter simulates the response of the human ear at relatively low levels, where the ear is not as effective in hearing low frequency sounds as it is in 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.
dB(C)	C-weighted decibels. The C-weighting noise filter simulates the response of the human ear at relatively high levels, where the human ear is nearly equally effective at hearing from mid-low frequency (63Hz) to mid-high frequency (4kHz), but is less effective outside these frequencies.

DEC	Department of Environment and Conservation (now EPA)
DECC	Department of Environment and Climate Change (now EPA)
DECCW	Department of Environment, Climate Change and Water (now EPA)
DP&E	NSW Department of Planning and Environment
ECRTN	Environmental Criteria for Road Traffic Noise (EPA 1999)
EIS	Environmental Impacts Statement
EPA	NSW Environment Protection Authority
Feasible and reasonable	Consideration of best practice taking into account the benefit of proposed measures and their technological and associated operational application in the NSW and Australian context. Feasible relates to engineering considerations and what is practical to build. Reasonable relates to the application of judgement in arriving at a decision, taking into account mitigation benefits and cost of mitigation versus benefits provided, community views and nature and extent of potential improvements.
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.
GBN	Ground-borne noise
GIS	Geographic Information System
ICNG	Interim Construction Noise Guideline (DECC, 2009)
INP	NSW Industrial Noise Policy (EPA, 2000)
L_{Max}	The maximum sound pressure level measured over a given period.
L_{Min}	The minimum sound pressure level measured over a given period.
L_1	The sound pressure level that is exceeded for 1% of the time for which the given sound is measured.
L_{10}	The sound pressure level that is exceeded for 10% of the time for which the given sound is measured.
L_{90}	The level of noise exceeded for 90% of the time. The bottom 10% of the sample is the L90 noise level expressed in units of dB(A).
L_{eq}	The "equivalent noise level" is the summation of noise events and integrated over a selected period of time.
MWD	Minimum Working Distance
NCA	Noise Catchment Area
NML	Noise management level
NPfI	Noise Policy for Industry
NSR	Noise Sensitive Receiver
OEH	Office of Environment and Heritage
OOHW	Out-of-Hours Works – work completed outside of standard construction hours
OSR	Other Sensitive Receiver
PPV	Peak Particle Velocity
RBL	The Rating Background Level for each period is the medium value of the ABL values for the period over all of the days measured. There is therefore an RBL value for each period (day, evening and night)
Reflection	Sound wave changed in direction of propagation due to a solid object obscuring its path.
EMM	Environmental Mitigation Measure
RNP	NSW Road Noise Policy (DECCW 2011)

ROL	Road Occupancy Licence
SEL	Sound Exposure Level (SEL) is the constant sound level which, if maintained for a period of 1 second would have the same acoustic energy as the measured noise event. SEL noise measurements are useful as they can be converted to obtain Leq sound levels over any period of time and can be used for predicting noise at various locations.
Sound	A fluctuation of air pressure which is propagated as a wave through air.
Sound absorption	The ability of a material to absorb sound energy through its conversion into thermal energy.
Sound level meter	An instrument consisting of a microphone, amplifier and indicating device, having a declared performance and designed to measure sound pressure levels.
Sound pressure level (SPL)	The level of noise, usually expressed in decibels, as measured by a standard sound level meter with a microphone.
Sound power level (SWL)	Ten times the logarithm to the base 10 of the ratio of the sound power of the source to the reference sound power.
SSI	State Significant Infrastructure
Standard construction hours	Hours during which construction work is permitted by the conditions of approval and the EPL.

APPENDIX B Sensitive receivers and noise management levels

B.1 NCAs and sensitive receiver identification



LEGEND

Noise Sensitive Receivers

- Residential
- Mixed use
- Commercial
- Industrial
- Hotel/Motel/Hostel
- Medical facility
- Place of Worship
- Community centre
- Recording studio
- Library/Museum
- Educational
- Theatre/Auditorium
- Cinema
- Laboratory
- Flight simulator
- Animal Enclosure
- Recreational - Passive
- Recreational - Active
- Other
- Heritage

- Project NCAs
- Monitoring Locations
- USC AWRC Compounds

Pipeline Alignment

- Brine Pipeline
- Brine Pipeline - Underbore
- Brine Pipeline - Microtunnel
- Treated Water Pipeline
- Treated Water Pipeline - Underbore

NCA	NML DS	NML DO	NML E	NML N
NCA B1	49	44	47	40
NCA B2	49	44	47	40
NCA B3	64	59	53	42

NCA: Noise Catchment Area
NML: Noise Management Level
D(S): standard construction hours from 7 am to 6 pm Monday to Friday and from 8 am to 6 pm Saturday
D(O): out-of-hours day period from 8 am to 6 pm Sunday and Public holidays - OOHW P1
E: evening period from 6 pm to 10 pm Monday to Sunday - OOHW P1
N: night-time period from 10 pm to 7 am Monday to Friday, from 10 pm am to 8 am Saturday, Sunday and Public holidays - OOHW P2

0 250 500 750 m

0 200 400 600 800 m

1:12,000 At A3

N

REV	BY	DATE	DESCRIPTION	APPROVED
r5	SS	11/08/23	Landuse colours	AMo
r4	SS	23/06/23	Add NCAs	AMo
r3	DA	14/06/23	Add UCS	AMo
r2	DA	13/06/23	CNVIS Figures	AMo
r1	SS	17/11/22	Modify Worksites, Pipeline	MT
r0	SS	13/11/22	Prepare figures	MT

A3 Original | Co-ordinate System: MGA Zone 56 | FULL SIZE A3, REDUCED TO A4 | NOTE: Do not scale from this drawing.

CLIENT: JOHN HOLLAND

ACOUSTIC CONSULTANT: RENZO TONIN & ASSOCIATES
inspired to achieve
Ph (02) 8218 0500 Fax (02) 8218 0501

UPPER SOUTH CREEK ADVANCED WATER RECYCLING CENTER

Landuse, NCAs, and Worksites

Sheet 6 of 10

B.2 NCAs and noise management levels

Table B1: Noise Sensitive Receivers and Construction Noise Management Levels (airborne noise) **AWRC**

NCA	Receiver Type	Reference RBL	Existing Noise Levels, dB(A)						Airborne NMLs based on ICNG (external)				Sleep Dist. L_{Amax}		Comments
NCA T1	Predominantly Residential	L06	35	35	31	-	-	-	45	40	40	36	40	55	
NCA T2	Predominantly Residential	L12	40	37	30	-	-	-	50	45	42	35	40	55	
NCA T3	Predominantly Residential	L14	42	39	33	-	-	-	52	47	44	38	40	55	
NCA B1	Predominantly Residential	L05	48	46	37	-	-	-	58	53	51	42	42	55	
NCA B2	Predominantly Residential	L05	48	46	37	-	-	-	58	53	51	42	42	55	
NCA B3	Predominantly Residential	L03	54	48	37	-	-	-	64	59	53	42	42	55	
Other sensitive receivers															
Studio building (music recording studio)									45	45	45	45	-	-	Source: CNVS Section 2.2.1 & AS2107 'maximum', assuming 20 dB(A) facade loss
Studio building (film or television studio)									50	50	50	50	-	-	Source: AS2107 'maximum', assuming 20 dB(A) facade loss
Theatre/ Auditorium (Drama Theatre)									50	50	50	50	-	-	Source: CNVS Section 2.2.1 & AS2107 'maximum', assuming 20 dB(A) facade loss
Cinema space, theatre, auditorium									55	55	55	55	-	-	Source: AS2107 'maximum', assuming a conservative façade loss of 20 dB(A)
Classrooms at schools and other educational institutions									55	55	55	55	-	-	Source: ICNG, assuming a conservative façade loss of 10 dB(A)
Childcare centre (indoor sleeping areas)									55	55	55	55	-	-	Source: CNVS Section 2.2.1, assuming a conservative façade loss of 10 dB(A)
Childcare centre (play areas)									65	65	65	65	-	-	Source: CNVS Section 2.2.1
Hospital wards and operating theatres									65	65	65	65	-	-	Source: ICNG, assuming a conservative façade loss of 20 dB(A)
Places of worship									55	55	55	55	-	-	Source: ICNG, assuming a conservative façade loss of 10 dB(A)
Library (reading areas)									65	65	65	65	-	-	Source: CNVS Section 2.2.1 & AS2107 'maximum', assuming 20 dB(A) facade loss
Hotel (Sleeping areas: Hotels near major roads)									60	60	60	60	-	-	Source: CNVS Section 2.2.1 & AS2107 'maximum', assuming 20 dB(A) facade loss
Hotel (bars and lounges)									70	70	70	70	-	-	Source: CNVS Section 2.2.1 & AS2107 'maximum', assuming 20 dB(A) facade loss
Community centres – Municipal Buildings									60	60	60	60	-	-	Source: AS2107 'maximum', assuming a conservative façade loss of 10 dB(A)
Bar/ Restaurant (Bars and lounges/ Restaurant)									60	60	60	60	-	-	Source: CNVS Section 2.2.1 & AS2107 'maximum', assuming 10 dB(A) facade loss
Café/ Coffee bar									60	60	60	60	-	-	Source: CNVS Section 2.2.1 & AS2107 'maximum', assuming 10 dB(A) facade loss
Railway platform and concourse areas									75	75	75	75	-	-	Source: AS2107 'maximum', assuming a conservative façade loss of 20 dB(A)
Passive recreation areas (e.g. area used for reading, meditation)									60	60	60	60	-	-	Source: ICNG
Active recreation areas (e.g. sports fields)									65	65	65	65	-	-	Source: ICNG
Commercial premises (including offices and retail outlets)									70	70	70	70	-	-	Source: ICNG
Industrial premises									75	75	75	75	-	-	Source: ICNG

Notes: D(S): standard construction hours from 7 am to 6 pm Monday to Friday and from 8 am to 6 pm Saturday

D(O): out-of-hours day period from 8 am to 6 pm Sunday and Public holidays - OOHW P1

E: evening period from 6 pm to 10 pm Monday to Sunday - OOHW P1

N: night-time period from 10 pm to 7 am Monday to Friday, from 10 pm am to 8 am Saturday, Sunday and Public holidays - OOHW P2

APPENDIX C Construction timetable/ activities/ management

C.1 Construction timetable/activities/equipment

Table C1: Construction timetable/ activities/ equipment **AWRC**

Activity/ Work Area	Aspect	Plant/ Equipment	Plant/ Equipment (as provided by client)	Day	Evening	Night	Timing of Activity			Sound Power Level (Lw re: 1pW) in Noise Model, dB(A)			High noise plant	Vibration intensive plant	Notes
				7am - 6pm	6pm - 10pm	10pm - 7am	Start Date	End Date	Duration (Weeks)	L_{Aeq}	Penalty	L_{Amax}			
SITE COMPOUND	Car Parking	Compressor	Compressor	30					3	102	-	103	-	-	
		Road truck (deliveries to site)	Delivery trucks	55					4	106	-	111	-	-	
		Light vehicles / traffic control utes	Light vehicle	4					2	89	-	100	-	-	
		Mobile crane (20t-250t)	Crawler crane 100T	1						104	-	108	-	-	
		Telehander / Franna crane (20t)	Franna crane 20T	2						98	-	102	-	-	
		Water cart/ Street Sweeper	Water cart/ Street Sweeper	4	4	4			1	107	-	111	-	-	
AWRC SITE (Duration 12 months)	Site Establishment and Mobilisation	Mobile crane (20t-250t)	Mobile crane (20t-250t)	1			15/07/2023	9/09/2023	8	104	-	108	-	-	Some Mobile Cranes are OSOM, and are subject to Curfews
		Water cart/ Street Sweeper	Water cart/ Street Sweeper	1			15/07/2023	9/09/2023	8	107	-	111	-	-	
		Generator	Generator	1			15/07/2023	26/08/2023	6	94	-	95	-	-	
		Roller smooth/padfoot (12t)	Vibratory Roller	2			15/07/2023	29/07/2023	2	109	5	113	HN	X	
		Telehander / Franna crane (20t)	Telehandler	2			15/07/2023	26/08/2023	6	98	-	102	-	-	
		Handtool - power	Power hand tools	6			15/07/2023	26/08/2023	6	108	-	118	-	-	
		Concrete Agitator	Concrete Agitator				30/07/2023	10/09/2023	6	108	-	111	-	-	
		Compactor / Wacker packer	Plate Compactor				30/07/2023	10/09/2023	6	108	-	110	-	X	
		Road truck (deliveries to site)	Delivery trucks	6			15/07/2023	26/08/2023	6	106	-	111	-	-	The Site Sheds may be OSOM, and are subject to delivery curfews
	Site Earthworks	Excavator w bucket (25t)	Excavator 35T w bucket	2			15/07/2023	4/11/2023	16	103	-	108	-	-	Some Large Excavators are OSOM, and are subject to Curfews
		Roller smooth/padfoot (12t)	Vibratory Roller	2			15/07/2023	4/11/2023	16	109	5	113	HN	X	
		Road truck (deliveries to site)	Road truck (deliveries to site)	30			15/07/2023	4/11/2023	16	106	-	111	-	-	
		Water cart/ Street Sweeper	Water cart/ Street Sweeper	1			15/07/2023	29/06/2024	50	107	-	111	-	-	
		Light vehicles / traffic control utes	Light vehicle	6			15/07/2023	4/11/2023	16	89	-	100	-	-	
		Bulldozer (D11)	Bulldozer D10	1			15/07/2023	4/11/2023	16	117	-	123	-	-	
		Grader (16G)	Grader	1			15/07/2023	4/11/2023	16	113	-	121	-	-	
	Civil Works (inc. buildings, roadworks, u	Concrete Agitator	Concrete Agi	11	4		1/10/2023	13/04/2025	80	108	-	111	-	-	
		Mobile crane (20t-250t)	Crawler crane 100T	1	1		1/10/2023	24/11/2024	60	104	-	108	-	-	These cranes are OSOM, and are subject to Curfews
		Excavator w bucket (25t)	Excavator 25T w bucket	2	2		1/10/2023	13/04/2025	80	103	-	108	-	-	Some Large Excavators are OSOM, and are subject to Curfews
		Compactor / Wacker packer	Plate Compactor	2	2		1/10/2023	13/04/2025	80	108	-	110	-	X	
		Roller smooth/padfoot (12t)	Vibratory Roller	2	2		1/10/2023	13/04/2025	80	109	5	113	HN	X	
		Road truck (deliveries to site)	Road truck (deliveries to site)	15	15		1/10/2023	13/04/2025	80	106	-	111	-	-	
		Grader (16G)	Grader	1	1		1/10/2023	13/04/2025	80	113	-	121	-	-	
		Handtool - rattle gun	Rattle gun	2	2		1/10/2023	13/04/2025	80	107	-	118	-	-	Rattle Gun for Structural Steel
		EWP	EWP	5	5		1/10/2023	13/04/2025	80	95	-	98	-	-	
	AWRC Structure Construction	Concrete Agitator	Concrete Agi	50			1/09/2023	7/06/2024	40	108	-	111	-	-	
		Mobile crane (20t-250t)	Crawler Crane 280t	2			1/08/2023	7/05/2024	40	104	-	108	-	-	These cranes are OSOM, and are subject to Curfews
		Piling Rig - vibratory	Piling Rig	1			1/09/2023	29/09/2023	4	116	5	119	HN	X	Pile Rigs are OSOM, and are subject to Curfews
		Concrete pump	Concrete Pump	2			1/09/2023	7/06/2024	40	103	-	107	-	-	
		Concrete vibrator	Concrete Vibrator	4			1/09/2023	7/06/2024	40	97	-	100	-	-	
		Light vehicles / traffic control utes	Light vehicle	6			1/09/2023	7/06/2024	40	89	-	100	-	-	
		Road truck (deliveries to site)	Road truck (deliveries to site)	8			1/09/2023	7/06/2024	40	106	-	111	-	-	
		Mobile crane (20t-250t)	Crawler crane 100t	2			1/09/2023	16/08/2024	50	104	-	108	-	-	These cranes are OSOM, and are subject to Curfews
		EWP	EWP	4			1/09/2023	16/08/2024	50	95	-	98	-	-	
		Telehander / Franna crane (20t)	Telehandler 12T	2			1/09/2023	7/06/2024	40	98	-	102	-	-	
		Generator	Generator	2			1/09/2023	7/06/2024	40	94	-	95	-	-	
		Handtool - power	Power hand tools	8			1/09/2023	7/06/2024	40	108	-	118	-	-	
		Water Pump (Diesel)	Water Pump (Diesel)	2	2	2	1/09/2023	7/06/2024	40	106	-	109	-	-	
		Water Pump (Diesel)	Water Pump (Diesel)	1	1	1	1/02/2024	3/10/2024	35	106	-	109	-	-	
		Compressor	Compressor	2			1/08/2024	1/05/2025	39	102	-	103	-	-	
	Mechanical and Electrical Installation	Mobile crane (20t-250t)	Mobile crane (20t-250t)	1			1/03/2024	1/07/2025	70	104	-	108	-	-	Some Mobile Cranes are OSOM, and are subject to Curfews
		Telehander / Franna crane (20t)	Telehander / Franna crane (20t)	1			1/03/2024	1/07/2025	70	98	-	102	-	-	
		Road truck (deliveries to site)	Delivery trucks	10		1	1/03/2024	1/07/2025	70	106	-	111	-	-	
		Light vehicles / traffic control utes	Light vehicle	20			1/03/2024	1/07/2025	70	89	-	100	-	-	
		Generator	Generator	15			1/03/2024	1/07/2025	70	94	-	95	-	-	
		EWP	EWP	16			1/03/2024	1/07/2025	70	95	-	98	-	-	
		EWP	Scissor lift	10			1/03/2024	1/07/2025	70	95	-	98	-	-	
		Handtool - power	Power hand tools	30			1/03/2024	1/07/2025	70	108	-	118	-	-	
		Handtool - non-powered	Hand tools (non-powered)	60			1/03/2024	1/07/2025	70	105	-	118	-	-	
		Telehander / Franna crane (20t)	Telehandler	8			1/03/2024	1/07/2025	70	98	-	102	-	-	
	Landscaping and Rehabilitation	Excavator w bucket (25t)	Excavator 20T w bucket	2			1/04/2024	23/06/2025	64	103	-	108	-	-	Some Large Excavators are OSOM, and are subject to Curfews
		Road truck (deliveries to site)	Delivery trucks	5			1/04/2024	23/06/2025	64	106	-	111	-	-	
		Compactor / Wacker packer	Plate Compactor	2			1/04/2024	23/06/2025	64	108	-	110	-	X	
		Water cart/ Street Sweeper	Water cart/ Street Sweeper	1			1/04/2024	23/06/2025	64	107	-	111	-	-	
		Concrete Agitator	Concrete Agitator	2			1/04/2024	23/06/2025	64	108	-	111	-	-	
		Handtool - power	Power hand tools	4			1/04/2024	23/06/2025	64	108	-	118	-	-	

Table C1: Construction timetable/ activities/ equipment **AWRC**

Activity/ Work Area	Aspect	Plant/ Equipment	Plant/ Equipment (as provided by client)	Day	Evening	Night	Timing of Activity			Sound Power Level (Lw re: 1pW) in Noise Model, dB(A)			High noise plant	Vibration intensive plant	Notes
				7am - 6pm	6pm - 10pm	10pm - 7am	Start Date	End Date	Duration (Weeks)	L_{Aeq}	Penalty	L_{Amax}			
	Concrete pour (OOH)	Concrete pump	Concrete pump		2		1/10/2023	13/04/2025	80	103	-	107	-	-	
		Concrete vibrator	Concrete vibrator		4		1/10/2023	13/04/2025	80	97	-	100	-	-	
		Concrete Agitator	Concrete truck		4		1/10/2023	13/04/2025	80	108	-	111	-	-	
		Lighting tower	Lighting tower		2		1/10/2023	13/04/2025	80	99	-	102	-	-	
		Handtool - non-powered	Hand tools (non-powered)		1		1/10/2023	23/06/2025	80	105	-	118	-	-	
	OSOM deliveries	Delivery truck	Low loader		1	1	15/07/2023	13/04/2025	80	106	-	111	-	-	
		Light vehicles / traffic control utes	Light vehicle		4	4	1/10/2023	13/04/2025	80	89	-	100	-	-	
		Handtool - non-powered	Hand tools (non-powered)		2	2	1/10/2023	13/04/2025	80	105	-	118	-	-	
		Mobile crane (20t-250t)	Mobile crane		1	1	1/10/2023	13/04/2025	80	104	-	108	-	-	

APPENDIX D Construction airborne noise impacts

D.1 Predicted noise levels

Table D.1: Predicted construction noise levels

Receiver		Predicted noise levels, dB(A)																																																					
		Day (Standard)									Day (OOHW)									Evening (OOHW)									Night (OOHW)									Sleep screening									Sleep Limit								
NCA	Address	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM
NCA B1	100 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	35	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	1541A ELIZABETH DRIVE, KEMPS CREEK, NSW	49	38	41	38	45	-	-	-	-	47	-	-	37	-	-	-	-	-	47	-	-	37	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	135 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	34	-	37	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	65 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	36	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	60 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	36	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	121A OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	9 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	37	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	121 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	90 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	37	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	124-128 OVERETT AVENUE, KEMPS CREEK, NS	49	-	-	-	36	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	121 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	36	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	100 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	35	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	45 WESTERN ROAD, KEMPS CREEK, NSW	49	-	-	-	35	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	16B TURNBULL AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	105 WESTERN ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	100 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	35	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	145 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	34	-	37	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	21 SUMBRAY AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	120 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	113 WESTERN ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	105 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	36	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	150 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	35	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	120 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	37	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	23 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	35	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	80 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	35	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	4 TURNBULL AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	90 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	1521-1539 ELIZABETH DRIVE, KEMPS CREEK,	49	-	34	-	36	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	75 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	37	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	70 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	35	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	120 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	50 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	135 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	34	-	37	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	5 TURNBULL AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	135 WESTERN ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	2 TURNBULL AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	120 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	1770 ELIZABETH DRIVE, KEMPS CREEK, NSW	49	-	34	-	38	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	90 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	37	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	100 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	37	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	3 SUMBRAY AVENUE, KEMPS CREEK, NSW	49	-	-	-	34	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	11 SUMBRAY AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	35 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	37	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	155 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	36	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	140 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	37	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	35 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	36	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	17 SUMBRAY AVENUE, KEMPS CREEK, NSW	49	-	-	-	34	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	120 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	95 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	37	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	95 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	36	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	121A OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	85 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	36	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	80 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	37	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	140 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	37	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	9 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	37	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	90 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	10 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	36	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	150 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	36	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	13 SUMBRAY AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	15 SUMBRAY AVENUE, KEMPS CREEK, NSW	49	-	-	-	35	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	75 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	36	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	110 OVERETT AVENUE, KEMPS CREEK, NSW	49	-	-	-	37	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	135 WESTERN ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	16 SUMBRAY AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	23 SUMBRAY AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	19 SUMBRAY AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	1782 ELIZABETH DRIVE, KEMPS CREEK, NSW	49	-	-	-	37	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	6A TURNBULL AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	10 TURNBULL AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	95 WESTERN ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	95 WESTERN ROAD, KEMPS CREEK, NSW	49	-	-	-	34	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	6A TURNBULL AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-

Table D.1: Predicted construction noise levels

Receiver		Predicted noise levels, dB(A)																																																					
		Day (Standard)									Day (OOHW)									Evening (OOHW)									Night (OOHW)									Sleep screening									Sleep Limit								
NCA	Address	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM
NCA B1	10 SUMBRAY AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	7 TURNBULL AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	75 WESTERN ROAD, KEMPS CREEK, NSW	49	-	-	-	35	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	9 TURNBULL AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	9 SUMBRAY AVENUE, KEMPS CREEK, NSW	49	-	-	-	35	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	1780 ELIZABETH DRIVE, KEMPS CREEK, NSW	49	-	-	-	37	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	8 SUMBRAY AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	1782 ELIZABETH DRIVE, KEMPS CREEK, NSW	49	-	-	-	37	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	7 SUMBRAY AVENUE, KEMPS CREEK, NSW	49	-	-	-	35	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	12 TURNBULL AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	2 TURNBULL AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	125 WESTERN ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	11 TURNBULL AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	14 SUMBRAY AVENUE, KEMPS CREEK, NSW	49	-	-	-	34	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	13 SUMBRAY AVENUE, KEMPS CREEK, NSW	49	-	-	-	35	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B1	155 WESTERN ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	605, DEVONSHIRE ROAD, KEMPS CREEK NSW 2	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	75 PRATTEN STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	54 EXETER ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	44-46 PRATTEN STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	40 EXETER ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	152 WESTERN ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	1630, ELIZABETH DRIVE, KEMPS CREEK NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	422-433 CLIFTON AVENUE, KEMPS CREEK, NS	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	110 EXETER ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	616 DEVONSHIRE ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	410 CLIFTON AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	155 CROSS STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	525 DEVONSHIRE ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	610 DEVONSHIRE ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	150 EXETER ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	175 CROSS STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	551 DEVONSHIRE ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	150 WESTERN ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	185 CROSS STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	551 DEVONSHIRE ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	640 DEVONSHIRE ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	170 CROSS STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	100 WESTERN ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	44 EXETER ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	41-49 SALISBURY AVENUE, KEMPS CREEK, NS	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	152 WESTERN ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	39 PRATTEN STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	442-449 CLIFTON AVENUE, KEMPS CREEK, NS	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	585 DEVONSHIRE ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	165 CROSS STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	35 PRATTEN STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	592 DEVONSHIRE ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	60 PRATTEN STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	190 CROSS STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	75 CROSS STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	150 CROSS STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	10 PRATTEN STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	1610 ELIZABETH DRIVE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	24 PRATTEN STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	410 CLIFTON AVENUE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	541 DEVONSHIRE ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	26-32 SALISBURY AVENUE, KEMPS CREEK, NS	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	1600 ELIZABETH DRIVE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	140 WESTERN ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	10 PRATTEN STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	155 CROSS STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	33-39 SALISBURY AVENUE, KEMPS CREEK, NS	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	535 DEVONSHIRE ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	660 DEVONSHIRE ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	40 PRATTEN STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	175 CROSS STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	150, CROSS STREET, KEMPS CREEK NSW 2178	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	44-56 SALISBURY AVENUE, KEMPS CREEK, NS	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	18 PLOWES COURT, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	90 EXETER ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	70 EXETER ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-

Table D.1: Predicted construction noise levels

Receiver		Predicted noise levels, dB(A)																																																					
		Day (Standard)									Day (OOHW)									Evening (OOHW)									Night (OOHW)									Sleep screening									Sleep Limit								
NCA	Address	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM
NCA B2	160 CROSS STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	565 DEVONSHIRE ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	185 CROSS STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	70 PRATTEN STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	617, DEVONSHIRE ROAD, KEMPS CREEK NSW 2	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	1590 ELIZABETH DRIVE, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	434-441 CLIFTON AVENUE, KEMPS CREEK, NS	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	130 WESTERN ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	395-409 CLIFTON AVENUE, KEMPS CREEK, NS	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	395-409 CLIFTON AVENUE, KEMPS CREEK, NS	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	442-449 CLIFTON AVENUE, KEMPS CREEK, NS	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	34-42 SALISBURY AVENUE, KEMPS CREEK, NS	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	41-49 SALISBURY AVENUE, KEMPS CREEK, NS	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	434-441 CLIFTON AVENUE, KEMPS CREEK, NS	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	85 CROSS STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	95 CROSS STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	80 EXETER ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	130 EXETER ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	40 PRATTEN STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	515 DEVONSHIRE ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	18 PLOWES COURT, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	15 CROSS STREET, KEMPS CREEK, NSW	49	-	-	-	34	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	1383-1411 ELIZABETH DRIVE, KEMPS CREEK,	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	565 DEVONSHIRE ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	44-46 PRATTEN STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	140 EXETER ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	54 EXETER ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	44 EXETER ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	90 EXETER ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	150 CROSS STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	44-56 SALISBURY AVENUE, KEMPS CREEK, NS	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	100 WESTERN ROAD, KEMPS CREEK, NSW	49	-	-	-	34	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	20 PRATTEN STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	160 EXETER ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	180 CROSS STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	140 EXETER ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	24 EXETER ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	55 PRATTEN STREET, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	595 DEVONSHIRE ROAD, KEMPS CREEK, NSW	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B2	1383-1411 ELIZABETH DRIVE, KEMPS CREEK,	49	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	334-338 MOUNT VERNON ROAD, MOUNT VERNON	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	326-332 MOUNT VERNON ROAD, MOUNT VERNON	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	309-319 MOUNT VERNON ROAD, MOUNT VERNON	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1260-1264 MAMRE ROAD, MOUNT VERNON, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1236-1240 MAMRE ROAD, MOUNT VERNON, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1242 MAMRE ROAD, MOUNT VERNON, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1234 MAMRE ROAD, MOUNT VERNON, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1560 ELIZABETH DRIVE, CECIL PARK, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	291-297 MOUNT VERNON ROAD, MOUNT VERNON	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	322-324 MOUNT VERNON ROAD, MOUNT VERNON	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1269-1275 MAMRE ROAD, KEMPS CREEK, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1239-1245 MAMRE ROAD, KEMPS CREEK, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	346-356 MOUNT VERNON ROAD, MOUNT VERNON	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1242 MAMRE ROAD, MOUNT VERNON, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	286-310 MOUNT VERNON ROAD, MOUNT VERNON	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1266-1272 MAMRE ROAD, MOUNT VERNON, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1277-1283 MAMRE ROAD, KEMPS CREEK, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1293-1297 MAMRE ROAD, KEMPS CREEK, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1255-1259 MAMRE ROAD, KEMPS CREEK, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1258 MAMRE ROAD, MOUNT VERNON, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1279 ELIZABETH DRIVE, MOUNT VERNON, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1341 ELIZABETH DRIVE, KEMPS CREEK, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	286-310 MOUNT VERNON ROAD, MOUNT VERNON	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	321 MOUNT VERNON ROAD, MOUNT VERNON, NS	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1255-1259 MAMRE ROAD, KEMPS CREEK, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1226-1232 MAMRE ROAD, MOUNT VERNON, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	16 CRESSY ROAD, MOUNT VERNON, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1-7 CRESSY ROAD, MOUNT VERNON, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	299-307 MOUNT VERNON ROAD, MOUNT VERNON	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1236-1240 MAMRE ROAD, MOUNT VERNON, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1562 ELIZABETH DRIVE, CECIL PARK, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1285-1291 MAMRE ROAD, KEMPS CREEK, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-

Table D.1: Predicted construction noise levels

Receiver		Predicted noise levels, dB(A)																																																			
		Day (Standard)									Day (OOHW)									Evening (OOHW)									Night (OOHW)									Sleep screening									Sleep Limit								
NCA	Address	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM
NCA B3	286-310 MOUNT VERNON ROAD, MOUNT VERNON	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	335 MOUNT VERNON ROAD, MOUNT VERNON, NS	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	8-15 CRESSY ROAD, MOUNT VERNON, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	316-318 MOUNT VERNON ROAD, MOUNT VERNON	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	343-349 MOUNT VERNON ROAD, MOUNT VERNON	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1266-1272 MAMRE ROAD, MOUNT VERNON, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	1306-1318 MAMRE ROAD, MOUNT VERNON, NSW	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	340-344 MOUNT VERNON ROAD, MOUNT VERNON	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA B3	322-324 MOUNT VERNON ROAD, MOUNT VERNON	64	-	-	-	-	-	-	-	-	59	-	-	-	-	-	-	-	-	53	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	2 COMARGO LANE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	9 WOODHALL PLACE, LUDDENHAM, NSW	45	-	-	-	37	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	43 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	37	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	1 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	24 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	4 COMARGO LANE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	235-245 CLIFTON AVENUE, KEMPS CREEK, NS	45	46	49	41	48	35	41	-	-	40	-	-	40	-	-	-	35	-	40	-	-	40	-	-	-	35	38	36	-	-	-	-	-	-	-	38	55	-	-	-	-	-	-	-	42	65	-	-	-	-	-	-	-	42
NCA T1	657-703 MAMRE ROAD, KEMPS CREEK, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	983 MAMRE ROAD, KEMPS CREEK, NSW	45	43	46	36	43	-	38	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	35	36	-	-	-	-	-	-	-	35	55	-	-	-	-	-	-	-	39	65	-	-	-	-	-	-	-	39
NCA T1	885-899 MAMRE ROAD, KEMPS CREEK, NSW	45	41	44	39	46	-	38	-	-	40	-	-	38	-	-	-	-	-	40	-	-	38	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	14 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	1 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	2 CRYSTAL DOWNS CLOSE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	12 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	425A LUDDENHAM ROAD, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	16 FARMINGDALE COURT, LUDDENHAM, NSW	45	-	35	-	39	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	14 FARMINGDALE COURT, LUDDENHAM, NSW	45	-	35	-	39	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	869, MAMRE ROAD, KEMPS CREEK NSW 2178	45	38	41	38	45	-	37	-	-	40	-	-	37	-	-	-	-	-	40	-	-	37	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	11 FARMINGDALE COURT, LUDDENHAM, NSW	45	35	38	36	43	-	35	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	18, GANTON WAY, LUDDENHAM NSW 2745	45	38	41	38	45	-	36	-	-	40	-	-	37	-	-	-	-	-	40	-	-	37	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	6 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	37	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	2 PINE VALLEY CRESCENT, LUDDENHAM, NSW	45	-	34	-	38	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	66 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	146B CLIFTON AVENUE, KEMPS CREEK, NSW	45	48	51	47	54	41	42	-	-	40	-	-	46	39	-	-	41	-	40	-	-	46	39	-	-	41	40	36	-	-	-	36	36	-	-	40	55	-	-	-	40	40	-	-	44	65	-	-	-	40	40	-	-	44
NCA T1	9 PENNARD CRESCENT, LUDDENHAM, NSW	45	-	35	-	39	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	230-234 CLIFTON AVENUE, KEMPS CREEK, NS	45	48	51	41	48	35	40	-	-	40	-	-	40	-	-	-	35	-	40	-	-	40	-	-	-	35	40	36	-	-	-	-	-	-	-	40	55	-	-	-	-	-	-	-	44	65	-	-	-	-	-	-	-	44
NCA T1	3 CRYSTAL DOWNS CLOSE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	7 WOODHALL PLACE, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	949-965 MAMRE ROAD, KEMPS CREEK, NSW	45	43	46	37	44	-	38	-	-	40	-	-	36	-	-	-	-	-	40	-	-	36	-	-	-	-	35	36	-	-	-	-	-	-	-	35	55	-	-	-	-	-	-	-	39	65	-	-	-	-	-	-	-	39
NCA T1	58 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	27 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	35	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	23 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	9 PINE VALLEY CRESCENT, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	19 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	-	36	-	40	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	9 WOODHALL PLACE, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	48 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	39 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	38	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	29 MEDINAH AVENUE, LUDDENHAM, NSW	45	34	37	34	41	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	7 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	10 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	44 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	2 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	19 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	35	-	39	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	26 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	36	-	40	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	4 COMARGO LANE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	5 VENTANA COURT, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	17 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	35	-	39	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	38 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	37 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	3 HUMEWOOD PLACE, LUDDENHAM, NSW	45	36	39	36	43	-	-	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	44 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	14 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	34	37	34	41	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	425A LUDDENHAM ROAD, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	11 PINE VALLEY CRESCENT, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	15 WOODHALL PLACE, LUDDENHAM, NSW	45	-	34	-	38	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	26 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	4 PENNARD CRESCENT, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	26 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	35	38	35	42	-	-	-	-	40	-	-	34	-	-	-	-	-	40	-	-	34	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	7 DORAL GROVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	54 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	30 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	2 FARMINGDALE COURT, LUDDENHAM, NSW	45	35	38	36	43	-	-	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	58 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	34	37	34	41	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-

Table D.1: Predicted construction noise levels

Receiver		Predicted noise levels, dB(A)																																																					
		Day (Standard)									Day (OOHW)									Evening (OOHW)									Night (OOHW)									Sleep screening									Sleep Limit								
NCA	Address	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM
NCA T1	5 CRYSTAL DOWNS CLOSE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	6 DORAL GROVE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	11 DORAL GROVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	6 HUMEWOOD PLACE, LUDDENHAM, NSW	45	34	37	34	41	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	16 GANTON WAY, LUDDENHAM, NSW	45	38	41	38	45	-	36	-	-	40	-	-	37	-	-	-	-	-	40	-	-	37	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	23 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	36	-	40	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	52 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	12 HUMEWOOD PLACE, LUDDENHAM, NSW	45	35	38	35	42	-	-	-	-	40	-	-	34	-	-	-	-	-	40	-	-	34	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	34 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	1669A ELIZABETH DRIVE, BADGERYS CREEK,	45	44	**47**	43	**50**	37	39	-	-	40	-	-	**42**	35	-	-	37	-	40	-	-	**42**	35	-	-	37	36	36	-	-	-	35	35	-	-	36	55	-	-	-	39	39	-	-	40	65	-	-	-	39	39	-	-	40
NCA T1	9 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	9 HUMEWOOD PLACE, LUDDENHAM, NSW	45	36	39	36	43	-	-	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	3 PENNARD CRESCENT, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	4 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	21 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	36	-	40	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	21 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	29 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	1 HUMEWOOD PLACE, LUDDENHAM, NSW	45	36	39	36	43	-	-	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	38 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	4 GANTON WAY, LUDDENHAM, NSW	45	38	41	38	45	-	36	-	-	40	-	-	37	-	-	-	-	-	40	-	-	37	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	15 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	36 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	28 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	17 PINE VALLEY CRESCENT, LUDDENHAM, NSW	45	-	35	-	39	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	10 DORAL GROVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	51 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	36	39	36	43	-	-	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	48 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	19 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	1 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	6 GANTON WAY, LUDDENHAM, NSW	45	37	40	37	44	-	-	-	-	40	-	-	36	-	-	-	-	-	40	-	-	36	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	12 PINE VALLEY CRESCENT, LUDDENHAM, NSW	45	-	35	-	38	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	3 WOODHALL PLACE, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	1 VENTANA COURT, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	16 PENNARD CRESCENT, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	31 MEDINAH AVENUE, LUDDENHAM, NSW	45	34	37	34	41	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	60 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	21 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	30 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	48 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	17 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	64 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	11 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	6 PINE VALLEY CRESCENT, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	8 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	34	37	-	40	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	8 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	14 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	5 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	14 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	12 FARMINGDALE COURT, LUDDENHAM, NSW	45	-	35	-	39	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	36 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	10 PINE VALLEY CRESCENT, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	4 BRIDPORT PLACE, LUDDENHAM, NSW	45	34	37	34	41	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	13 WOODHALL PLACE, LUDDENHAM, NSW	45	-	-	-	37	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	443-457 LUDDENHAM ROAD, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	25 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	36	-	40	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	18 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	24 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	35	38	35	42	-	-	-	-	40	-	-	34	-	-	-	-	-	40	-	-	34	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	11 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	-	-	-	38	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	2 COMARGO LANE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	11 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	17 WOODHALL PLACE, LUDDENHAM, NSW	45	-	34	-	38	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	6 CRYSTAL DOWNS CLOSE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	40 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	62 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	8 CRYSTAL DOWNS CLOSE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	22 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	22 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	-	34	-	38	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	4 HUMEWOOD PLACE, LUDDENHAM, NSW	45	34	37	34	41	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	15 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	4 VENTANA COURT, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	949-965 MAMRE ROAD, KEMPS CREEK, NSW	45	45	**48**	38	45	-	39	-	-	40	-	-	37	-	-	-	-	-	40	-	-	37	-	-	-	-	37	36	-	-	-	-	-	-	-	**37**	55	-	-	-	-	-	-	-	41	65	-	-	-	-	-	-	-	41
NCA T1	5 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-

Table D.1: Predicted construction noise levels

Receiver		Predicted noise levels, dB(A)																																																					
		Day (Standard)									Day (OOHW)									Evening (OOHW)									Night (OOHW)									Sleep screening									Sleep Limit								
NCA	Address	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM
NCA T1	17 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	13 PINE VALLEY CRESCENT, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	7 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	33 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	46 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	43 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	38	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	15 PINE VALLEY CRESCENT, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	16 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	9 DORAL GROVE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	6 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	64 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	35	38	35	42	-	-	-	-	40	-	-	34	-	-	-	-	-	40	-	-	34	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	44 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	11 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	1 WOODHALL PLACE, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	11 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	50 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	16 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	8 DORAL GROVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	7 VENTANA COURT, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	42 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	11 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	11 WOODHALL PLACE, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	52 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	919-929 MAMRE ROAD, KEMPS CREEK, NSW	45	45	**48**	45	**52**	39	43	-	-	40	-	-	**44**	37	-	-	39	-	40	-	-	**44**	37	-	-	39	37	36	-	-	-	36	36	-	-	**37**	55	-	-	-	40	40	-	-	41	65	-	-	-	40	40	-	-	41
NCA T1	12 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	11 PENNARD CRESCENT, LUDDENHAM, NSW	45	-	35	-	39	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	41 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	37	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	48 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	3 VENTANA COURT, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	2 GANTON WAY, LUDDENHAM, NSW	45	37	40	37	44	-	36	-	-	40	-	-	36	-	-	-	-	-	40	-	-	36	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	4 PINE VALLEY CRESCENT, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	7 PENNARD CRESCENT, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	52 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	4 CRYSTAL DOWNS CLOSE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	4 PENNARD CRESCENT, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	24 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	6 PENNARD CRESCENT, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	17 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	2 HUMEWOOD PLACE, LUDDENHAM, NSW	45	-	34	-	38	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	53 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	36	39	36	43	-	-	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	55 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	37	40	37	44	-	-	-	-	40	-	-	36	-	-	-	-	-	40	-	-	36	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	19 WOODHALL PLACE, LUDDENHAM, NSW	45	36	39	36	43	-	-	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	20 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	9 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	24 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	36	-	40	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	9 WOODHALL PLACE, LUDDENHAM, NSW	45	-	-	-	37	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	31 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	27 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	3 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	27 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	-	35	-	39	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	20 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	-	36	-	40	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	8 PINE VALLEY CRESCENT, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	6 WOODHALL PLACE, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	2 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	36 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	14 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	36 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	10 GANTON WAY, LUDDENHAM, NSW	45	37	40	37	44	-	-	-	-	40	-	-	36	-	-	-	-	-	40	-	-	36	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	13 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	5 DORAL GROVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	2 VENTANA COURT, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	17 PINE VALLEY CRESCENT, LUDDENHAM, NSW	45	-	34	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	49 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	34	37	34	41	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	17 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	-	36	-	40	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	24 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	14 HUMEWOOD PLACE, LUDDENHAM, NSW	45	35	38	35	42	-	-	-	-	40	-	-	34	-	-	-	-	-	40	-	-	34	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	833A MAMRE ROAD, KEMPS CREEK, NSW	45	36	39	36	43	-	-	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	13 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	1669A ELIZABETH DRIVE, BADGERYS CREEK,	45	42	45	42	**49**	36	37	-	-	40	-	-	**41**	34	-	-	36	-	40	-	-	**41**	34	-	-	36	34	36	-	-	-	34	34	-	-	34	55	-	-	-	38	38	-	-	38	65	-	-	-	38	38	-	-	38
NCA T1	7 CRYSTAL DOWNS CLOSE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	13 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	7 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-

Table D.1: **Predicted construction noise levels**

Receiver		Predicted noise levels, dB(A)																																																					
		Day (Standard)									Day (OOHW)									Evening (OOHW)									Night (OOHW)									Sleep screening									Sleep Limit								
NCA	Address	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM
NCA T1	4 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	1 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	8 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	18 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	8 PENNARD CRESCENT, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	12 PENNARD CRESCENT, LUDDENHAM, NSW	45	-	34	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	6 VENTANA COURT, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	845-857 MAMRE ROAD, KEMPS CREEK, NSW	45	37	40	37	44	-	36	-	-	40	-	-	36	-	-	-	-	-	40	-	-	36	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	7 PINE VALLEY CRESCENT, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	35 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	983 MAMRE ROAD, KEMPS CREEK, NSW	45	44	47	37	44	-	39	-	-	40	-	-	36	-	-	-	-	-	40	-	-	36	-	-	-	-	36	36	-	-	-	-	-	-	-	36	55	-	-	-	-	-	-	-	40	65	-	-	-	-	-	-	-	40
NCA T1	15 HUMEWOOD PLACE, LUDDENHAM, NSW	45	36	39	36	43	-	-	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	1 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	21 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	203-229 CLIFTON AVENUE, KEMPS CREEK, NS	45	51	54	45	52	39	46	-	-	40	-	-	44	37	-	-	39	-	40	-	-	44	37	-	-	39	43	36	-	-	-	36	36	-	-	43	55	-	-	-	40	40	-	-	47	65	-	-	-	40	40	-	-	47
NCA T1	32 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	54 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	4 DORAL GROVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	12 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	34	37	34	41	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	5 PENNARD CRESCENT, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	2 PENNARD CRESCENT, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	45 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	37	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	10 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	-	-	-	37	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	8 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	10 HUMEWOOD PLACE, LUDDENHAM, NSW	45	35	38	35	42	-	-	-	-	40	-	-	34	-	-	-	-	-	40	-	-	34	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	62 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	34	37	34	41	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	8 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	3 PINE VALLEY CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	47 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	35	38	35	42	-	-	-	-	40	-	-	34	-	-	-	-	-	40	-	-	34	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	3 BRIDPORT PLACE, LUDDENHAM, NSW	45	35	38	35	42	-	-	-	-	40	-	-	34	-	-	-	-	-	40	-	-	34	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	8 COMARGO LANE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	14 PENNARD CRESCENT, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	13 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	10 PENNARD CRESCENT, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	5 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	15 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	35	-	39	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	2 PENNARD CRESCENT, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	15 PENNARD CRESCENT, LUDDENHAM, NSW	45	-	35	-	39	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	8 GANTON WAY, LUDDENHAM, NSW	45	37	40	37	44	-	-	-	-	40	-	-	36	-	-	-	-	-	40	-	-	36	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	5 PINE VALLEY CRESCENT, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	15 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	28 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	36	39	36	43	-	-	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	62 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	40 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	26 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	3 DORAL GROVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	23 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	34	37	34	41	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	22 HUMEWOOD PLACE, LUDDENHAM, NSW	45	36	39	36	43	-	-	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	5 WOODHALL PLACE, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	2 WOODHALL PLACE, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	68 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	258 CLIFTON AVENUE, KEMPS CREEK, NSW	45	47	50	39	46	-	41	-	-	40	-	-	38	-	-	-	-	-	40	-	-	38	-	-	-	-	39	36	-	-	-	-	-	-	-	39	55	-	-	-	-	-	-	-	43	65	-	-	-	-	-	-	-	43
NCA T1	845A MAMRE ROAD, KEMPS CREEK, NSW	45	37	40	37	44	-	36	-	-	40	-	-	36	-	-	-	-	-	40	-	-	36	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	1005-1023 MAMRE ROAD, KEMPS CREEK, NSW	45	43	46	36	43	-	37	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	35	36	-	-	-	-	-	-	-	35	55	-	-	-	-	-	-	-	39	65	-	-	-	-	-	-	-	39
NCA T1	657-703 MAMRE ROAD, KEMPS CREEK, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	1669A ELIZABETH DRIVE, BADGERYS CREEK,	45	38	41	37	44	-	-	-	-	40	-	-	36	-	-	-	-	-	40	-	-	36	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	983 MAMRE ROAD, KEMPS CREEK, NSW	45	43	46	36	43	-	38	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	35	36	-	-	-	-	-	-	-	35	55	-	-	-	-	-	-	-	39	65	-	-	-	-	-	-	-	39
NCA T1	34 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	35	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	28 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	4 WOODHALL PLACE, LUDDENHAM, NSW	45	-	-	-	36	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	39 HALMSTAD BOULEVARD, LUDDENHAM NSW 27	45	37	40	37	44	-	34	-	-	40	-	-	36	-	-	-	-	-	40	-	-	36	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	24, HUMEWOOD PLACE, LUDDENHAM NSW 2745	45	35	38	35	42	-	-	-	-	40	-	-	34	-	-	-	-	-	40	-	-	34	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	12 GANTON WAY LUDDENHAM NSW	45	37	40	37	44	-	-	-	-	40	-	-	36	-	-	-	-	-	40	-	-	36	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	20 HUMEWOOD PLACE, LUDDENHAM	45	35	38	35	42	-	-	-	-	40	-	-	34	-	-	-	-	-	40	-	-	34	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	17, FARMINGDALE COURT, LUDDENHAM NSW 27	45	36	39	36	43	-	-	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	6 FARMINGDALE COURT, LUDDENHAM NSW 2745	45	36	39	36	43	-	-	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	18 FARMINGDALE COURT, LUDDENHAM NSW 274	45	35	38	35	42	-	-	-	-	40	-	-	34	-	-	-	-	-	40	-	-	34	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	4, FARMINGDALE COURT, LUDDENHAM NSW 274	45	35	38	35	42	-	-	-	-	40	-	-	34	-	-	-	-	-	40	-	-	34	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	25, HALMSTAD BOULEVARD, LUDDENHAM NSW 2	45	34	37	34	41	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	6 MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	36 PORTRUSH CRESCENT, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	7 HUMEWOOD PLACE, LUDDENHAM, NSW	45	36	39	36	43	-	-	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-

Table D.1: Predicted construction noise levels

Receiver		Predicted noise levels, dB(A)																																																					
		Day (Standard)									Day (OOHW)									Evening (OOHW)									Night (OOHW)									Sleep screening									Sleep Limit								
NCA	Address	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM
NCA T1	6 COMARGO LANE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	203-229 CLIFTON AVENUE, KEMPS CREEK, NS	45	46	49	42	49	36	41	-	-	40	-	-	41	34	-	-	36	-	40	-	-	41	34	-	-	36	38	36	-	-	-	34	34	-	-	38	55	-	-	-	38	38	-	-	42	65	-	-	-	38	38	-	-	42
NCA T1	967-981 MAMRE ROAD, KEMPS CREEK, NSW	45	41	44	37	44	-	37	-	-	40	-	-	36	-	-	-	-	-	40	-	-	36	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	5 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	72, TWIN CREEKS DRIVE, LUDDENHAM NSW 27	45	37	40	37	44	-	-	-	-	40	-	-	36	-	-	-	-	-	40	-	-	36	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	22 TWIN CREEKS DRIVE, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	1A MEDINAH AVENUE, LUDDENHAM, NSW	45	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	11 WOODHALL PLACE, LUDDENHAM, NSW	45	-	-	-	37	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	5 HUMEWOOD PLACE, LUDDENHAM, NSW	45	36	39	36	43	-	-	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	11 HUMEWOOD PLACE, LUDDENHAM, NSW	45	36	39	36	43	-	-	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	4 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	34	37	34	41	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	833-843 MAMRE ROAD, KEMPS CREEK, NSW	45	36	39	36	43	-	-	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	10 FARMINGDALE COURT, LUDDENHAM, NSW	45	-	35	-	39	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	8 FARMINGDALE COURT, LUDDENHAM, NSW	45	-	36	-	40	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	5 FARMINGDALE COURT, LUDDENHAM, NSW	45	34	37	34	41	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	7 FARMINGDALE COURT, LUDDENHAM, NSW	45	35	38	35	42	-	34	-	-	40	-	-	34	-	-	-	-	-	40	-	-	34	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	9 FARMINGDALE COURT, LUDDENHAM, NSW	45	36	39	36	43	-	35	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	22 FARMINGDALE COURT, LUDDENHAM, NSW	45	-	35	-	39	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	146B CLIFTON AVENUE, KEMPS CREEK, NSW	45	39	42	39	46	-	-	-	-	40	-	-	38	-	-	-	-	-	40	-	-	38	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	3 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	20 GANTON WAY, LUDDENHAM NSW 2745	45	36	39	36	43	-	35	-	-	40	-	-	35	-	-	-	-	-	40	-	-	35	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	17 HUMEWOOD PLACE, LUDDENHAM NSW 2745	45	37	40	37	44	-	-	-	-	40	-	-	36	-	-	-	-	-	40	-	-	36	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	237-247 CLIFTON AVENUE, KEMPS CREEK, NS	45	48	51	43	50	37	42	-	-	40	-	-	42	35	-	-	37	-	40	-	-	42	35	-	-	37	40	36	-	-	-	35	35	-	-	40	55	-	-	-	39	39	-	-	44	65	-	-	-	39	39	-	-	44
NCA T1	1 BRIDPORT PLACE, LUDDENHAM, NSW	45	-	35	-	39	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	21 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	-	36	-	40	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	3 HALMSTAD BOULEVARD, LUDDENHAM, NSW	45	-	-	-	34	-	-	-	-	40	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T1	230-234 CLIFTON AVENUE, KEMPS CREEK, NS	45	52	55	44	51	38	46	-	-	40	-	-	43	36	-	-	38	-	40	-	-	43	36	-	-	38	44	36	-	-	-	36	36	-	-	44	55	-	-	-	40	40	-	-	48	65	-	-	-	40	40	-	-	48
NCA T2	90 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	65 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	225 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	195 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	1990 ELIZABETH DRIVE, BADGERYS CREEK, N	50	-	34	-	38	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	255 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	75 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	83-87 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	70 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	36	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	65 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	1970 ELIZABETH DRIVE, BADGERYS CREEK, N	50	-	35	-	39	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	83-87 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	210 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	110 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	35	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	150 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	60 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	36	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	25 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	145 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	85 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	170 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	205 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	160 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	211 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	150 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	5 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	34	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	80 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	36	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	40 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	55 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	180 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	50 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	37	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	195 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	235 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	245 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	165 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	30 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	37	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	180 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	10 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	35	-	38	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	200 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	65 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	35	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	245 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	85 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	35 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	45 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	55 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	165 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-

Table D.1: Predicted construction noise levels

Receiver		Predicted noise levels, dB(A)																																																					
		Day (Standard)									Day (OOHW)									Evening (OOHW)									Night (OOHW)									Sleep screening									Sleep Limit								
NCA	Address	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM
NCA T2	185 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	155 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	205 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	115 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	165 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	1930 ELIZABETH DRIVE, BADGERYS CREEK, N	50	-	35	-	39	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	1745 ELIZABETH DRIVE, BADGERYS CREEK, N	50	-	-	-	35	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	1783-1789 ELIZABETH DRIVE, BADGERYS CRE	50	-	-	-	34	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	150 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	120 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	34	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	135 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	15 LAWSON ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	160 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T2	100 MARTIN ROAD, BADGERYS CREEK, NSW	50	-	-	-	35	-	-	-	-	45	-	-	-	-	-	-	-	-	42	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T3	1793-1951 ELIZABETH DRIVE, BADGERYS CRE	52	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T3	1953-2109 ELIZABETH DRIVE, BADGERYS CRE	52	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T3	1793-1951 ELIZABETH DRIVE, BADGERYS CRE	52	-	-	-	34	-	-	-	-	47	-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T3	672-686 LUDDENHAM ROAD, LUDDENHAM, NSW	52	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T3	611A LUDDENHAM ROAD, LUDDENHAM, NSW	52	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T3	611-639 LUDDENHAM ROAD, LUDDENHAM, NSW	52	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
NCA T3	644-652 LUDDENHAM ROAD, LUDDENHAM, NSW	52	-	-	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-	44	-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
OSR_COM	1605-1667 ELIZABETH DRIVE, KEMPS CREEK,	70	34	37	-	40	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1605-1667 ELIZABETH DRIVE, KEMPS CREEK,	70	-	35	-	38	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1605-1667 ELIZABETH DRIVE, KEMPS CREEK,	70	-	36	-	40	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1605-1667 ELIZABETH DRIVE, KEMPS CREEK,	70	-	36	-	40	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1605-1667 ELIZABETH DRIVE, KEMPS CREEK,	70	-	35	-	39	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1605-1667 ELIZABETH DRIVE, KEMPS CREEK,	70	-	36	-	40	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	81 CLIFTON AVENUE, KEMPS CREEK, NSW	70	-	36	-	39	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	81 CLIFTON AVENUE, KEMPS CREEK, NSW	70	-	36	-	40	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1605-1667 ELIZABETH DRIVE, KEMPS CREEK,	70	34	37	-	40	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	51 SALISBURY AVENUE, KEMPS CREEK, NSW	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1465-1467 ELIZABETH DRIVE, KEMPS CREEK,	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1413-1415 ELIZABETH DRIVE, KEMPS CREEK,	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1650 ELIZABETH DRIVE, KEMPS CREEK, NSW	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1437-1441 ELIZABETH DRIVE, KEMPS CREEK,	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	51 SALISBURY AVENUE, KEMPS CREEK, NSW	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	51 SALISBURY AVENUE, KEMPS CREEK, NSW	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1650 ELIZABETH DRIVE, KEMPS CREEK, NSW	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1455-1463 ELIZABETH DRIVE, KEMPS CREEK,	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1455-1463 ELIZABETH DRIVE, KEMPS CREEK,	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1437-1441 ELIZABETH DRIVE, KEMPS CREEK,	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1465-1467 ELIZABETH DRIVE, KEMPS CREEK,	70	-	-	-	34	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1455-1463 ELIZABETH DRIVE, KEMPS CREEK,	70	-	-	-	34	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	51 SALISBURY AVENUE, KEMPS CREEK, NSW	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1437-1441 ELIZABETH DRIVE, KEMPS CREEK,	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1455-1463 ELIZABETH DRIVE, KEMPS CREEK,	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1437-1441 ELIZABETH DRIVE, KEMPS CREEK,	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1455-1463 ELIZABETH DRIVE, KEMPS CREEK,	70	-	-	-	34	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	51 SALISBURY AVENUE, KEMPS CREEK, NSW	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	1437-1441 ELIZABETH DRIVE, KEMPS CREEK,	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	642 LUDDENHAM ROAD, LUDDENHAM, NSW	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_COM	2-8 TWIN CREEKS DRIVE, LUDDENHAM, NSW	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-																		
OSR_EDU	110 CROSS STREET, KEMPS CREEK, NSW	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-																		
OSR_EDU	110 CROSS STREET, KEMPS CREEK, NSW	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-																		
OSR_EDU	100 CROSS STREET, KEMPS CREEK, NSW	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-																		
OSR_EDU	110 CROSS STREET, KEMPS CREEK, NSW	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-																		
OSR_EDU	100 CROSS STREET, KEMPS CREEK, NSW	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-																		
OSR_EDU	110 CROSS STREET, KEMPS CREEK, NSW	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-																		
OSR_EDU	110 CROSS STREET, KEMPS CREEK, NSW	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-	55	-	-	-	-	-	-	-	-																		
OSR_IND	8 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	4 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	4 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	5 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	8 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	8 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	105 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	6A TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	13 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	5 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	125 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	8 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1491 ELIZABETH DRIVE, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		

Table D.1: Predicted construction noise levels **AWRC**

Receiver		Predicted noise levels, dB(A)																																											
		Day (Standard)									Day (OOHW)									Evening (OOHW)									Night (OOHW)									Sleep screening									Sleep Limit								
NCA	Address	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM
OSR_IND	11 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	4 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	113 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	13 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	8 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	115 OVERETT AVENUE, KEMPS CREEK, NSW	75	-	-	-	36	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	125 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1543-1567 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	36	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1541A ELIZABETH DRIVE, KEMPS CREEK, NSW	75	38	41	38	45	-	-	-	-	75	-	-	37	-	-	-	-	-	75	-	-	37	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1589 ELIZABETH DRIVE, KEMPS CREEK, NSW	75	-	36	-	40	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1541 ELIZABETH DRIVE, KEMPS CREEK, NSW	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1543-1567 ELIZABETH DRIVE, KEMPS CREEK,	75	34	37	-	40	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1541A ELIZABETH DRIVE, KEMPS CREEK, NSW	75	38	41	37	44	-	-	-	-	75	-	-	36	-	-	-	-	-	75	-	-	36	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1543-1567 ELIZABETH DRIVE, KEMPS CREEK,	75	-	36	-	39	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1541A ELIZABETH DRIVE, KEMPS CREEK, NSW	75	39	42	38	45	-	36	-	-	75	-	-	37	-	-	-	-	-	75	-	-	37	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1541A ELIZABETH DRIVE, KEMPS CREEK, NSW	75	38	41	38	45	-	-	-	-	75	-	-	37	-	-	-	-	-	75	-	-	37	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1541A ELIZABETH DRIVE, KEMPS CREEK, NSW	75	38	41	37	44	-	-	-	-	75	-	-	36	-	-	-	-	-	75	-	-	36	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1589 ELIZABETH DRIVE, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1541A ELIZABETH DRIVE, KEMPS CREEK, NSW	75	38	41	38	45	-	-	-	-	75	-	-	37	-	-	-	-	-	75	-	-	37	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1541 ELIZABETH DRIVE, KEMPS CREEK, NSW	75	34	37	-	40	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	12 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	14 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	4 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	13 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	5 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	8 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	3 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1820 ELIZABETH DRIVE, KEMPS CREEK, NSW	75	-	34	-	38	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1487-1489 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	12 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1802 ELIZABETH DRIVE, KEMPS CREEK, NSW	75	-	35	-	38	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	4 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1820 ELIZABETH DRIVE, KEMPS CREEK, NSW	75	-	35	-	39	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	6 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1521-1539 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	5 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	13 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	4 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	11 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	125 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	125 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	13 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	8 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	12 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	135 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	105 OVERETT AVENUE, KEMPS CREEK, NSW	75	-	-	-	36	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	14 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	13 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1820 ELIZABETH DRIVE, KEMPS CREEK, NSW	75	-	35	-	39	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1477-1479 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	5 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	35 OVERETT AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	13 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	12 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	95 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	50 OVERETT AVENUE, KEMPS CREEK, NSW	75	-	-	-	36	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	12 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	125 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	125 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	4 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	1491 ELIZABETH DRIVE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	105 OVERETT AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	12 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	125 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	8 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	14 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	8 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	12 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	9 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	12 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	13 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				
OSR_IND	15 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																				

Table D.1: Predicted construction noise levels **AWRC**

Receiver		Predicted noise levels, dB(A)																																											
		Day (Standard)									Day (OOHW)									Evening (OOHW)									Night (OOHW)									Sleep screening								
NCA	Address	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM
OSR_IND	11 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	7 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	8 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	4 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	5 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	14 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	13 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	12 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	35 OVERETT AVENUE, KEMPS CREEK, NSW	75	-	-	-	36	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	8 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	12 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	12 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	7 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	10 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	12 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	15 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	13 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	16-23 CLIFTON AVENUE, KEMPS CREEK, NSW	75	-	35	-	39	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	90 CLIFTON AVENUE, KEMPS CREEK, NSW	75	37	40	37	44	-	-	-	-	75	-	-	36	-	-	-	-	-	75	-	-	36	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	4 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	125 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	5 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	115 OVERETT AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	65 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	60 OVERETT AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	5 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	12 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	13 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	135 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	155 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	125 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	5 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	90 CLIFTON AVENUE, KEMPS CREEK, NSW	75	36	39	36	43	-	-	-	-	75	-	-	35	-	-	-	-	-	75	-	-	35	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	1820 ELIZABETH DRIVE, KEMPS CREEK, NSW	75	-	35	-	38	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	70 OVERETT AVENUE, KEMPS CREEK, NSW	75	-	-	-	36	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	4 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	8 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	7 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	20 OVERETT AVENUE, KEMPS CREEK, NSW	75	-	-	-	36	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	125 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	6 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	125 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	6 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	12 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	5 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	95 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	1820 ELIZABETH DRIVE, KEMPS CREEK, NSW	75	-	34	-	38	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	8 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	11 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	125 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	4 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	12 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	1820 ELIZABETH DRIVE, KEMPS CREEK, NSW	75	-	34	-	38	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	35A OVERETT AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	13 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	8 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	15 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	13 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	4 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	113 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	9 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	14 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	12 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	13 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	23 OVERETT AVENUE, KEMPS CREEK, NSW	75	-	-	-	37	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	35 OVERETT AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	13 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	125 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	13 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	14 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	9 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									
OSR_IND	23 OVERETT AVENUE, KEMPS CREEK, NSW	75	-	-	-	37	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-									

Table D.1: Predicted construction noise levels

Receiver		Predicted noise levels, dB(A)																																																			
		Day (Standard)									Day (OOHW)									Evening (OOHW)									Night (OOHW)									Sleep screening									Sleep Limit								
NCA	Address	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM
OSR_IND	113 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	8 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	12 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	13 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	12 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	105 OVERETT AVENUE, KEMPS CREEK, NSW	75	-	34	-	38	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	35A OVERETT AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	5 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	4 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	8 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	12 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	15 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	12 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	60 OVERETT AVENUE, KEMPS CREEK, NSW	75	-	-	-	36	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1521-1539 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	14 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	11 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	125 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	12 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	5 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	12 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	8 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1487-1489 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	11 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	12 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1491 ELIZABETH DRIVE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	6 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	65 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1487-1489 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	36	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	4 SUMBRAY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	8 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	8 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	8 TURNBULL AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	110 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	13-23 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	65 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	54 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	140 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	80 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	130 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	54 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	535 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	160 CROSS STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	90 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	515 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	24 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	13-23 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1431-1433 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	70 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	165 CROSS STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	150 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	395-409 CLIFTON AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	130 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	150 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	75 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	160 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	16 PLOWES COURT, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	70 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	395-409 CLIFTON AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	150 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	70 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	65 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	60 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	41-49 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	165 CROSS STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	60 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	70 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	565 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	617 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	70 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	422-433 CLIFTON AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		

Table D.1: Predicted construction noise levels

Receiver		Predicted noise levels, dB(A)																																																					
		Day (Standard)									Day (OOHW)									Evening (OOHW)									Night (OOHW)									Sleep screening									Sleep Limit								
NCA	Address	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM
OSR_IND	382-393 CLIFTON AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	610 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	630 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	140 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	26-32 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	152 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	60 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	24 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	24 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	130 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	617 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	130 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	422-433 CLIFTON AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	505 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1640 ELIZABETH DRIVE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	41-49 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1630 ELIZABETH DRIVE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	90 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	395-409 CLIFTON AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	33-39 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	434-441 CLIFTON AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	54 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	13-23 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	70 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	660 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	40 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	40 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	13-23 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	565 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	40 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	13-23 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	44-46 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	80 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1465-1467 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	40 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	65 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	515 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	152 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	54 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	75 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	140 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	41-49 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	150 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	105 CROSS STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	617 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1455-1463 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	495 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1469-1473 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	551 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	33-39 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1431-1433 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	26-32 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	54 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1600 ELIZABETH DRIVE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1431-1433 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	60 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	55 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	33-39 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	382-393 CLIFTON AVENUE, KEMPS CREEK, NS	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	140 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	65 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	150 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	140 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	44-56 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	105 CROSS STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		

Table D.1: Predicted construction noise levels

Receiver		Predicted noise levels, dB(A)																																																					
		Day (Standard)									Day (OOHW)									Evening (OOHW)									Night (OOHW)									Sleep screening									Sleep Limit								
NCA	Address	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM
OSR_IND	1455-1463 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	595 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	434-441 CLIFTON AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	535 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	592 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	44-46 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1417-1419 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	75 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	160 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	140 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	24 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	505 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	75 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	24 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	80 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	616 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	44 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	13-23 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1431-1433 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	65 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	610 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	150 CROSS STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	120 CROSS STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	44-56 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	15 CROSS STREET, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	24 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	70 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	382A CLIFTON AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	152 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	592 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	54 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	90 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	55 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	13-23 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	33-39 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	160 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	24 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	55 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	13-23 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	90 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	3 SALISBURY AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	41-49 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	600 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	515 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	40 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	410 CLIFTON AVENUE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	395-409 CLIFTON AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	592 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	60 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	434-441 CLIFTON AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	75 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	610 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1417-1419 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	70 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	422-433 CLIFTON AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	41-49 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	13-23 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		

Table D.1: Predicted construction noise levels

Receiver		Predicted noise levels, dB(A)																																																					
		Day (Standard)									Day (OOHW)									Evening (OOHW)									Night (OOHW)									Sleep screening									Sleep Limit								
NCA	Address	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM
OSR_IND	60 PRATTEN STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	34-42 SALISBURY AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	130 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	422-433 CLIFTON AVENUE, KEMPS CREEK, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	44 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1431-1433 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	90 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	630 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	616 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	130 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	140 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	75 CROSS STREET, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	110 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	610 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1431-1433 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	505 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	551 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	160 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	150 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	152 WESTERN ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	590 DEVONSHIRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	160 EXETER ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	707A MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	917 MAMRE ROAD, KEMPS CREEK, NSW	75	48	51	45	52	39	44	-	-	75	-	-	44	37	-	-	39	-	75	-	-	44	37	-	-	39	40	75	-	-	-	37	37	-	-	40																		
OSR_IND	354-478 LUDDENHAM ROAD, LUDDENHAM, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	917 MAMRE ROAD, KEMPS CREEK, NSW	75	45	48	41	48	35	41	-	-	75	-	-	40	-	-	-	35	-	75	-	-	40	-	-	-	35	37	75	-	-	-	-	-	-	-	37																		
OSR_IND	707A MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1005-1023 MAMRE ROAD, KEMPS CREEK, NSW	75	41	44	36	43	-	35	-	-	75	-	-	35	-	-	-	-	-	75	-	-	35	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	819-831 MAMRE ROAD, KEMPS CREEK, NSW	75	35	38	35	42	-	-	-	-	75	-	-	34	-	-	-	-	-	75	-	-	34	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	757-769 MAMRE ROAD, KEMPS CREEK, NSW	75	-	34	-	38	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	917 MAMRE ROAD, KEMPS CREEK, NSW	75	51	54	46	53	40	48	-	-	75	-	-	45	38	-	-	40	-	75	-	-	45	38	-	-	40	43	75	-	-	-	38	38	-	-	43																		
OSR_IND	146B CLIFTON AVENUE, KEMPS CREEK, NSW	75	47	50	46	53	40	41	-	-	75	-	-	45	38	-	-	40	-	75	-	-	45	38	-	-	40	39	75	-	-	-	38	38	-	-	39																		
OSR_IND	901 MAMRE ROAD, KEMPS CREEK, NSW	75	47	50	45	52	39	44	-	-	75	-	-	44	37	-	-	39	-	75	-	-	44	37	-	-	39	39	75	-	-	-	37	37	-	-	39																		
OSR_IND	203-229 CLIFTON AVENUE, KEMPS CREEK, NS	75	43	46	42	49	36	38	-	-	75	-	-	41	34	-	-	36	-	75	-	-	41	34	-	-	36	35	75	-	-	-	34	34	-	-	35																		
OSR_IND	967-981 MAMRE ROAD, KEMPS CREEK, NSW	75	42	45	37	44	-	38	-	-	75	-	-	36	-	-	-	-	-	75	-	-	36	-	-	-	-	34	75	-	-	-	-	-	-	-	34																		
OSR_IND	146B CLIFTON AVENUE, KEMPS CREEK, NSW	75	50	53	49	56	43	44	-	-	75	-	-	48	41	-	-	43	-	75	-	-	48	41	-	-	43	42	75	-	-	-	41	41	-	-	42																		
OSR_IND	707-711 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	757-769 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	36	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	707-711 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	707A MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	350-352 LUDDENHAM ROAD, LUDDENHAM, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	203-229 CLIFTON AVENUE, KEMPS CREEK, NS	75	43	46	42	49	36	37	-	-	75	-	-	41	34	-	-	36	-	75	-	-	41	34	-	-	36	35	75	-	-	-	34	34	-	-	35																		
OSR_IND	350 LUDDENHAM ROAD, LUDDENHAM, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	799-803 MAMRE ROAD, KEMPS CREEK, NSW	75	34	37	34	41	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	757-769 MAMRE ROAD, KEMPS CREEK, NSW	75	-	34	-	38	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	707A MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	146B CLIFTON AVENUE, KEMPS CREEK, NSW	75	45	48	45	52	39	40	-	-	75	-	-	44	37	-	-	39	-	75	-	-	44	37	-	-	39	37	75	-	-	-	37	37	-	-	37																		
OSR_IND	203-229 CLIFTON AVENUE, KEMPS CREEK, NS	75	49	52	48	55	42	44	-	-	75	-	-	47	40	-	-	42	-	75	-	-	47	40	-	-	42	41	75	-	-	-	40	40	-	-	41																		
OSR_IND	1669A ELIZABETH DRIVE, BADGERYS CREEK,	75	38	41	38	45	-	36	-	-	75	-	-	37	-	-	-	-	-	75	-	-	37	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	917 MAMRE ROAD, KEMPS CREEK, NSW	75	55	58	46	53	40	51	-	-	75	-	-	45	38	-	-	40	-	75	-	-	45	38	-	-	40	47	75	-	-	-	38	38	-	-	47																		
OSR_IND	771-781 MAMRE ROAD, KEMPS CREEK, NSW	75	-	34	-	38	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	931A MAMRE ROAD, KEMPS CREEK, NSW	75	45	48	38	45	-	39	-	-	75	-	-	37	-	-	-	-	-	75	-	-	37	-	-	-	-	37	75	-	-	-	-	-	-	-	37																		
OSR_IND	1725A ELIZABETH DRIVE, BADGERYS CREEK,	75	36	39	36	43	-	-	-	-	75	-	-	35	-	-	-	-	-	75	-	-	35	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1725A ELIZABETH DRIVE, BADGERYS CREEK,	75	37	40	37	44	-	-	-	-	75	-	-	36	-	-	-	-	-	75	-	-	36	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1725A ELIZABETH DRIVE, BADGERYS CREEK,	75	-	35	-	39	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	917 MAMRE ROAD, KEMPS CREEK, NSW	75	45	48	44	51	38	44	-	-	75	-	-	43	36	-	-	38	-	75	-	-	43	36	-	-	38	37	75	-	-	-	36	36	-	-	37																		
OSR_IND	203-229 CLIFTON AVENUE, KEMPS CREEK, NS	75	49	52	45	52	39	43	-	-	75	-	-	44	37	-	-	39	-	75	-	-	44	37	-	-	39	41	75	-	-	-	37	37	-	-	41																		
OSR_IND	707A MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	146B CLIFTON AVENUE, KEMPS CREEK, NSW	75	45	48	44	51	38	39	-	-	75	-	-	43	36	-	-	38	-	75	-	-	43	36	-	-	38	37	75	-	-	-	36	36	-	-	37																		
OSR_IND	845-857 MAMRE ROAD, KEMPS CREEK, NSW	75	35	38	34	41	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1725A ELIZABETH DRIVE, BADGERYS CREEK,	75	-	35	-	38	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	235-245 CLIFTON AVENUE, KEMPS CREEK, NS	75	47	50	42	49	36	42	-	-	75	-	-	41	34	-	-	36	-	75	-	-	41	34	-	-	36	39	75	-	-	-	34	34	-	-	39																		
OSR_IND	901 MAMRE ROAD, KEMPS CREEK, NSW	75	46	49	45	52	39	43	-	-	75	-	-	44	37	-	-	39	-	75	-	-	44	37	-	-	39	38	75	-	-	-	37	37	-	-	38																		
OSR_IND	783A MAMRE ROAD, KEMPS CREEK, NSW	75	-	35	-	39	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	805-817 MAMRE ROAD, KEMPS CREEK, NSW	75	34	37	34	41	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	917 MAMRE ROAD, KEMPS CREEK, NSW	75	51	54	47	54	41	47	-	-	75	-	-	46	39	-	-	41	-	75	-	-	46	39	-	-	41	43	75	-	-	-	39	39	-	-	43																		
OSR_IND	901 MAMRE ROAD, KEMPS CREEK, NSW	75	47	50	47	54	41	45	-	-	75	-	-	46	39	-	-	41	-	75	-	-	46	39	-	-	41	39	75	-	-	-	39	39	-	-	39																		
OSR_IND	1725A ELIZABETH DRIVE, BADGERYS CREEK,	75	-	34	-	37	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1725A ELIZABETH DRIVE, BADGERYS CREEK,	75	-	-	-	36	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	707A MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		

Table D.1: Predicted construction noise levels

Receiver		Predicted noise levels, dB(A)																																																					
		Day (Standard)									Day (OOHW)									Evening (OOHW)									Night (OOHW)									Sleep screening									Sleep Limit								
NCA	Address	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM
OSR_IND	917 MAMRE ROAD, KEMPS CREEK, NSW	75	50	53	46	53	40	46	-	-	75	-	-	45	38	-	-	40	-	75	-	-	45	38	-	-	40	42	75	-	-	-	38	38	-	-	42																		
OSR_IND	783-797 MAMRE ROAD, KEMPS CREEK, NSW	75	-	35	-	39	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	917 MAMRE ROAD, KEMPS CREEK, NSW	75	45	48	41	48	35	40	-	-	75	-	-	40	-	-	-	35	-	75	-	-	40	-	-	-	35	37	75	-	-	-	-	-	-	-	37																		
OSR_IND	757-769 MAMRE ROAD, KEMPS CREEK, NSW	75	-	34	-	38	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	949A MAMRE ROAD, KEMPS CREEK, NSW	75	52	55	51	58	45	47	-	-	75	-	-	50	43	-	-	45	-	75	-	-	50	43	-	-	45	44	75	-	-	-	43	43	-	-	44																		
OSR_IND	901 MAMRE ROAD, KEMPS CREEK, NSW	75	42	45	40	47	34	39	-	-	75	-	-	39	-	-	-	34	-	75	-	-	39	-	-	-	34	34	75	-	-	-	-	-	-	-	34																		
OSR_IND	707-711 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	799-803 MAMRE ROAD, KEMPS CREEK, NSW	75	34	37	34	41	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	203-229 CLIFTON AVENUE, KEMPS CREEK, NS	75	53	56	49	56	43	47	-	-	75	-	-	48	41	-	-	43	-	75	-	-	48	41	-	-	43	45	75	-	-	-	41	41	-	-	45																		
OSR_IND	757-769 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	36	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	949-965 MAMRE ROAD, KEMPS CREEK, NSW	75	45	48	37	44	-	39	-	-	75	-	-	36	-	-	-	-	-	75	-	-	36	-	-	-	-	37	75	-	-	-	-	-	-	-	37																		
OSR_IND	931 MAMRE ROAD, KEMPS CREEK, NSW	75	39	42	-	40	-	34	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	901 MAMRE ROAD, KEMPS CREEK, NSW	75	44	47	39	46	-	39	-	-	75	-	-	38	-	-	-	-	-	75	-	-	38	-	-	-	-	36	75	-	-	-	-	-	-	-	36																		
OSR_IND	901 MAMRE ROAD, KEMPS CREEK, NSW	75	46	49	45	52	39	44	-	-	75	-	-	44	37	-	-	39	-	75	-	-	44	37	-	-	39	38	75	-	-	-	37	37	-	-	38																		
OSR_IND	783-797 MAMRE ROAD, KEMPS CREEK, NSW	75	-	36	-	40	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	931 MAMRE ROAD, KEMPS CREEK, NSW	75	41	44	37	44	-	36	-	-	75	-	-	36	-	-	-	-	-	75	-	-	36	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	901 MAMRE ROAD, KEMPS CREEK, NSW	75	43	46	43	50	37	38	-	-	75	-	-	42	35	-	-	37	-	75	-	-	42	35	-	-	37	35	75	-	-	-	35	35	-	-	35																		
OSR_IND	146B CLIFTON AVENUE, KEMPS CREEK, NSW	75	50	53	50	57	44	45	-	-	75	-	-	49	42	-	-	44	-	75	-	-	49	42	-	-	44	42	75	-	-	-	42	42	-	-	42																		
OSR_IND	967-981 MAMRE ROAD, KEMPS CREEK, NSW	75	41	44	36	43	-	35	-	-	75	-	-	35	-	-	-	-	-	75	-	-	35	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	707A MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	350-352 LUDDENHAM ROAD, LUDDENHAM, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	931A MAMRE ROAD, KEMPS CREEK, NSW	75	44	47	37	44	-	38	-	-	75	-	-	36	-	-	-	-	-	75	-	-	36	-	-	-	-	36	75	-	-	-	-	-	-	-	36																		
OSR_IND	146B CLIFTON AVENUE, KEMPS CREEK, NSW	75	48	51	47	54	41	42	-	-	75	-	-	46	39	-	-	41	-	75	-	-	46	39	-	-	41	40	75	-	-	-	39	39	-	-	40																		
OSR_IND	901 MAMRE ROAD, KEMPS CREEK, NSW	75	43	46	40	47	34	39	-	-	75	-	-	39	-	-	-	34	-	75	-	-	39	-	-	-	34	35	75	-	-	-	-	-	-	-	35																		
OSR_IND	901 MAMRE ROAD, KEMPS CREEK, NSW	75	42	45	42	49	36	39	-	-	75	-	-	41	34	-	-	36	-	75	-	-	41	34	-	-	36	34	75	-	-	-	34	34	-	-	34																		
OSR_IND	146B CLIFTON AVENUE, KEMPS CREEK, NSW	75	46	49	45	52	39	40	-	-	75	-	-	44	37	-	-	39	-	75	-	-	44	37	-	-	39	38	75	-	-	-	37	37	-	-	38																		
OSR_IND	235-245 CLIFTON AVENUE, KEMPS CREEK, NS	75	49	52	40	47	34	43	-	-	75	-	-	39	-	-	-	34	-	75	-	-	39	-	-	-	34	41	75	-	-	-	-	-	-	-	41																		
OSR_IND	949-965 MAMRE ROAD, KEMPS CREEK, NSW	75	43	46	36	43	-	37	-	-	75	-	-	35	-	-	-	-	-	75	-	-	35	-	-	-	-	35	75	-	-	-	-	-	-	-	35																		
OSR_IND	967-981 MAMRE ROAD, KEMPS CREEK, NSW	75	43	46	35	42	-	37	-	-	75	-	-	34	-	-	-	-	-	75	-	-	34	-	-	-	-	35	75	-	-	-	-	-	-	-	35																		
OSR_IND	919-929 MAMRE ROAD, KEMPS CREEK, NSW	75	42	45	37	44	-	37	-	-	75	-	-	36	-	-	-	-	-	75	-	-	36	-	-	-	-	34	75	-	-	-	-	-	-	-	34																		
OSR_IND	931A MAMRE ROAD, KEMPS CREEK, NSW	75	45	48	38	45	-	39	-	-	75	-	-	37	-	-	-	-	-	75	-	-	37	-	-	-	-	37	75	-	-	-	-	-	-	-	37																		
OSR_IND	919-929 MAMRE ROAD, KEMPS CREEK, NSW	75	47	50	46	53	40	45	-	-	75	-	-	45	38	-	-	40	-	75	-	-	45	38	-	-	40	39	75	-	-	-	38	38	-	-	39																		
OSR_IND	919-929 MAMRE ROAD, KEMPS CREEK, NSW	75	40	43	37	44	-	36	-	-	75	-	-	36	-	-	-	-	-	75	-	-	36	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	931 MAMRE ROAD, KEMPS CREEK, NSW	75	44	47	37	44	-	38	-	-	75	-	-	36	-	-	-	-	-	75	-	-	36	-	-	-	-	36	75	-	-	-	-	-	-	-	36																		
OSR_IND	901 MAMRE ROAD, KEMPS CREEK, NSW	75	42	45	38	45	-	37	-	-	75	-	-	37	-	-	-	-	-	75	-	-	37	-	-	-	-	34	75	-	-	-	-	-	-	-	34																		
OSR_IND	771-781 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	845A MAMRE ROAD, KEMPS CREEK, NSW	75	41	44	41	48	35	38	-	-	75	-	-	40	-	-	-	35	-	75	-	-	40	-	-	-	35	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	146B CLIFTON AVENUE, KEMPS CREEK, NSW	75	47	50	46	53	40	41	-	-	75	-	-	45	38	-	-	40	-	75	-	-	45	38	-	-	40	39	75	-	-	-	38	38	-	-	39																		
OSR_IND	210 MARTIN ROAD, BADGERYS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	210 MARTIN ROAD, BADGERYS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	210 MARTIN ROAD, BADGERYS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	210 MARTIN ROAD, BADGERYS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	210 MARTIN ROAD, BADGERYS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	210 MARTIN ROAD, BADGERYS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	210 MARTIN ROAD, BADGERYS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	210 MARTIN ROAD, BADGERYS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	210 MARTIN ROAD, BADGERYS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	210 MARTIN ROAD, BADGERYS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	210 MARTIN ROAD, BADGERYS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1953-2109 ELIZABETH DRIVE, BADGERYS CRE	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1953-2109 ELIZABETH DRIVE, BADGERYS CRE	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1953-2109 ELIZABETH DRIVE, BADGERYS CRE	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1953-2109 ELIZABETH DRIVE, BADGERYS CRE	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1953-2109 ELIZABETH DRIVE, BADGERYS CRE	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1953-2109 ELIZABETH DRIVE, BADGERYS CRE	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1953-2109 ELIZABETH DRIVE, BADGERYS CRE	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1953-2109 ELIZABETH DRIVE, BADGERYS CRE	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1953-2109 ELIZABETH DRIVE, BADGERYS CRE	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1953-2109 ELIZABETH DRIVE, BADGERYS CRE	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1953-2109 ELIZABETH DRIVE, BADGERYS CRE	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1953-2109 ELIZABETH DRIVE, BADGERYS CRE	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1953-2109 ELIZABETH DRIVE, BADGERYS CRE	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1953-2109 ELIZABETH DRIVE, BADGERYS CRE	75	-	-	-	34	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1953-2109 ELIZABETH DRIVE, BADGERYS CRE	75	-	-	-	36	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1953-2109 ELIZABETH DRIVE, BADGERYS CRE	75	-	-	-	35	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1247 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	8-15 CRESSY ROAD, MOUNT VERNON, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	299-307 MOUNT VERNON ROAD, MOUNT VERNON	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1266-1272 MAMRE ROAD, MOUNT VERNON, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1261-1267 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	346-356 MOUNT VERNON ROAD, MOUNT VERNON	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		

Table D.1: Predicted construction noise levels

Receiver		Predicted noise levels, dB(A)																																																					
		Day (Standard)									Day (OOHW)									Evening (OOHW)									Night (OOHW)									Sleep screening									Sleep Limit								
NCA	Address	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM
OSR_IND	334-338 MOUNT VERNON ROAD, MOUNT VERNON	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1255-1259 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	8-15 CRESSY ROAD, MOUNT VERNON, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1261-1267 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1277-1283 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	326-332 MOUNT VERNON ROAD, MOUNT VERNON	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	8-15 CRESSY ROAD, MOUNT VERNON, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	346-356 MOUNT VERNON ROAD, MOUNT VERNON	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1233-1237 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1297-1305 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1266-1272 MAMRE ROAD, MOUNT VERNON, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1255-1259 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1349 ELIZABETH DRIVE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	335 MOUNT VERNON ROAD, MOUNT VERNON, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1285-1291 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1297-1305 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	346-356 MOUNT VERNON ROAD, MOUNT VERNON	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1261-1267 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1261-1267 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1269-1275 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1234 MAMRE ROAD, MOUNT VERNON, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1233-1237 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	326-332 MOUNT VERNON ROAD, MOUNT VERNON	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1247 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	334-338 MOUNT VERNON ROAD, MOUNT VERNON	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1234 MAMRE ROAD, MOUNT VERNON, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1233-1237 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1-7 CRESSY ROAD, MOUNT VERNON, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	334-338 MOUNT VERNON ROAD, MOUNT VERNON	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1297-1305 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	335 MOUNT VERNON ROAD, MOUNT VERNON, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1261-1267 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1349 ELIZABETH DRIVE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1233-1237 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1261-1267 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1357-1371 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	346-356 MOUNT VERNON ROAD, MOUNT VERNON	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1233-1237 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1260-1264 MAMRE ROAD, MOUNT VERNON, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1247 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1258 MAMRE ROAD, MOUNT VERNON, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1261-1267 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	335 MOUNT VERNON ROAD, MOUNT VERNON, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1233-1237 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1261-1267 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1226-1232 MAMRE ROAD, MOUNT VERNON, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	335 MOUNT VERNON ROAD, MOUNT VERNON, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1277-1283 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1349 ELIZABETH DRIVE, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1269-1275 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1242 MAMRE ROAD, MOUNT VERNON, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	322-324 MOUNT VERNON ROAD, MOUNT VERNON	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1247 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1233-1237 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	329 MOUNT VERNON ROAD, MOUNT VERNON, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1233-1237 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1266-1272 MAMRE ROAD, MOUNT VERNON, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1285-1291 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	321 MOUNT VERNON ROAD, MOUNT VERNON, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1297-1305 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	335 MOUNT VERNON ROAD, MOUNT VERNON, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1269-1275 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	321 MOUNT VERNON ROAD, MOUNT VERNON, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1219-1231 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1255-1259 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1357-1371 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	329 MOUNT VERNON ROAD, MOUNT VERNON, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	321 MOUNT VERNON ROAD, MOUNT VERNON, NS	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1234 MAMRE ROAD, MOUNT VERNON, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	340-344 MOUNT VERNON ROAD, MOUNT VERNON	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1277-1283 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	316-318 MOUNT VERNON ROAD, MOUNT VERNON	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		

Table D.1: Predicted construction noise levels

Receiver		Predicted noise levels, dB(A)																																																					
		Day (Standard)									Day (OOHW)									Evening (OOHW)									Night (OOHW)									Sleep screening									Sleep Limit								
NCA	Address	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM	NML	SE	EW	CW	SC	MI	LR	CP	OSOM
OSR_IND	312-314 MOUNT VERNON ROAD, MOUNT VERNON	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	343-349 MOUNT VERNON ROAD, MOUNT VERNON	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	309-319 MOUNT VERNON ROAD, MOUNT VERNON	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1255-1259 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1258 MAMRE ROAD, MOUNT VERNON, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1297-1305 ELIZABETH DRIVE, KEMPS CREEK,	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1233-1237 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1560 ELIZABETH DRIVE, CECIL PARK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1242 MAMRE ROAD, MOUNT VERNON, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	312-314 MOUNT VERNON ROAD, MOUNT VERNON	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1255-1259 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1277-1283 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1236-1240 MAMRE ROAD, MOUNT VERNON, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1233-1237 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_IND	1233-1237 MAMRE ROAD, KEMPS CREEK, NSW	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-																		
OSR_REA	16B TURNBULL AVENUE, KEMPS CREEK, NSW	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-																		
OSR_REA	17 SUMBRAY AVENUE, KEMPS CREEK, NSW	65	-	-	-	34	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-																		
OSR_REA	364-372 CLIFTON AVENUE, KEMPS CREEK, NS	65	-	-	-	34	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-																		
OSR_REA	10 PRATTEN STREET, KEMPS CREEK, NSW	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-																		
OSR_REA	364-372 CLIFTON AVENUE, KEMPS CREEK, NS	65	-	-	-	34	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-																		
OSR_REA	364-372 CLIFTON AVENUE, KEMPS CREEK, NS	65	-	-	-	34	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-																		
OSR_REA	364-372 CLIFTON AVENUE, KEMPS CREEK, NS	65	-	-	-	36	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-																		
OSR_REA	1490 ELIZABETH DRIVE, CECIL PARK, NSW	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-																		
OSR_REA	1530-1540 ELIZABETH DRIVE, CECIL PARK,	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-																		
OSR_REA	1530-1540 ELIZABETH DRIVE, CECIL PARK,	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-																		
OSR_REA	1530-1540 ELIZABETH DRIVE, CECIL PARK,	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-																		

D.2 Number of receivers above NMLs

Table D.2: Number of exceedances per NCA **AWRC**

NCA	Day (Standard)									Day (OOHW)									Evening (OOHW)									Night (OOHW)									Sleep screening									Sleep Limit								
	dB(A) above NML	Number of exceedances								dB(A) above NML	Number of exceedances								dB(A) above NML	Number of exceedances								dB(A) above NML	Number of exceedances								dB(A) above NML	Number of exceedances								dB(A) above NML	Number of exceedances							
		SE	EW	CW	SC	MI	LR	CP	OSOM		SE	EW	CW	SC	MI	LR	CP	OSOM		SE	EW	CW	SC	MI	LR	CP	OSOM		SE	EW	CW	SC	MI	LR	CP	OSOM		SE	EW	CW	SC	MI	LR	CP	OSOM		SE	EW	CW	SC	MI	LR	CP	OSOM
NCA B1	0 to 10									0 to 5									0 to 5									0 to 5									0 to 5									0 to 5								
	10 to 20									5 to 15									5 to 15									5 to 15									5 to 15									5 to 15								
	>20									15 to 25									15 to 25									15 to 25									15 to 25									15 to 25								
	75dBA or greater									>25									>25									>25									>25									>25								
NCA B2	0 to 10									0 to 5									0 to 5									0 to 5									0 to 5									0 to 5								
	10 to 20									5 to 15									5 to 15									5 to 15									5 to 15									5 to 15								
	>20									15 to 25									15 to 25									15 to 25									15 to 25									15 to 25								
	75dBA or greater									>25									>25									>25									>25									>25								
NCA B3	0 to 10									0 to 5									0 to 5									0 to 5									0 to 5									0 to 5								
	10 to 20									5 to 15									5 to 15									5 to 15									5 to 15									5 to 15								
	>20									15 to 25									15 to 25									15 to 25									15 to 25									15 to 25								
	75dBA or greater									>25									>25									>25									>25									>25								
NCA T1	0 to 10	8	16	1	13		2			0 to 5			7			1			0 to 5		7				1	2		0 to 5							8		0 to 5									0 to 5								
	10 to 20									5 to 15			1						5 to 15		1							5 to 15							2		5 to 15									5 to 15								
	>20									15 to 25									15 to 25									15 to 25									15 to 25									15 to 25								
	75dBA or greater									>25									>25									>25									>25									>25								
NCA T2	0 to 10									0 to 5									0 to 5									0 to 5									0 to 5									0 to 5								
	10 to 20									5 to 15									5 to 15									5 to 15									5 to 15									5 to 15								
	>20									15 to 25									15 to 25									15 to 25									15 to 25									15 to 25								
	75dBA or greater									>25									>25									>25									>25									>25								
NCA T3	0 to 10									0 to 5									0 to 5									0 to 5									0 to 5									0 to 5								
	10 to 20									5 to 15									5 to 15									5 to 15									5 to 15									5 to 15								
	>20									15 to 25									15 to 25									15 to 25									15 to 25									15 to 25								
	75dBA or greater									>25									>25									>25									>25									>25								
OSR_COM	0 to 10									0 to 5									0 to 5									0 to 5									0 to 5									0 to 5								
	10 to 20									5 to 15									5 to 15									5 to 15									5 to 15									5 to 15								
	>20									15 to 25									15 to 25									15 to 25									15 to 25									15 to 25								
	75dBA or greater									>25									>25									>25									>25									>25								
OSR_EDU	0 to 10									0 to 5									0 to 5									0 to 5									0 to 5									0 to 5								
	10 to 20									5 to 15									5 to 15									5 to 15									5 to 15									5 to 15								
	>20									15 to 25									15 to 25									15 to 25									15 to 25									15 to 25								
	75dBA or greater									>25									>25									>25									>25									>25								
OSR_IND	0 to 10									0 to 5									0 to 5									0 to 5									0 to 5									0 to 5								
	10 to 20									5 to 15									5 to 15									5 to 15									5 to 15									5 to 15								
	>20									15 to 25									15 to 25									15 to 25									15 to 25									15 to 25								
	75dBA or greater									>25									>25									>25									>25									>25								
OSR_REA	0 to 10									0 to 5									0 to 5									0 to 5									0 to 5									0 to 5								
	10 to 20									5 to 15									5 to 15									5 to 15									5 to 15									5 to 15								
	>20									15 to 25									15 to 25									15 to 25									15 to 25									15 to 25								
	75dBA or greater									>25									>25									>25									>25									>25								

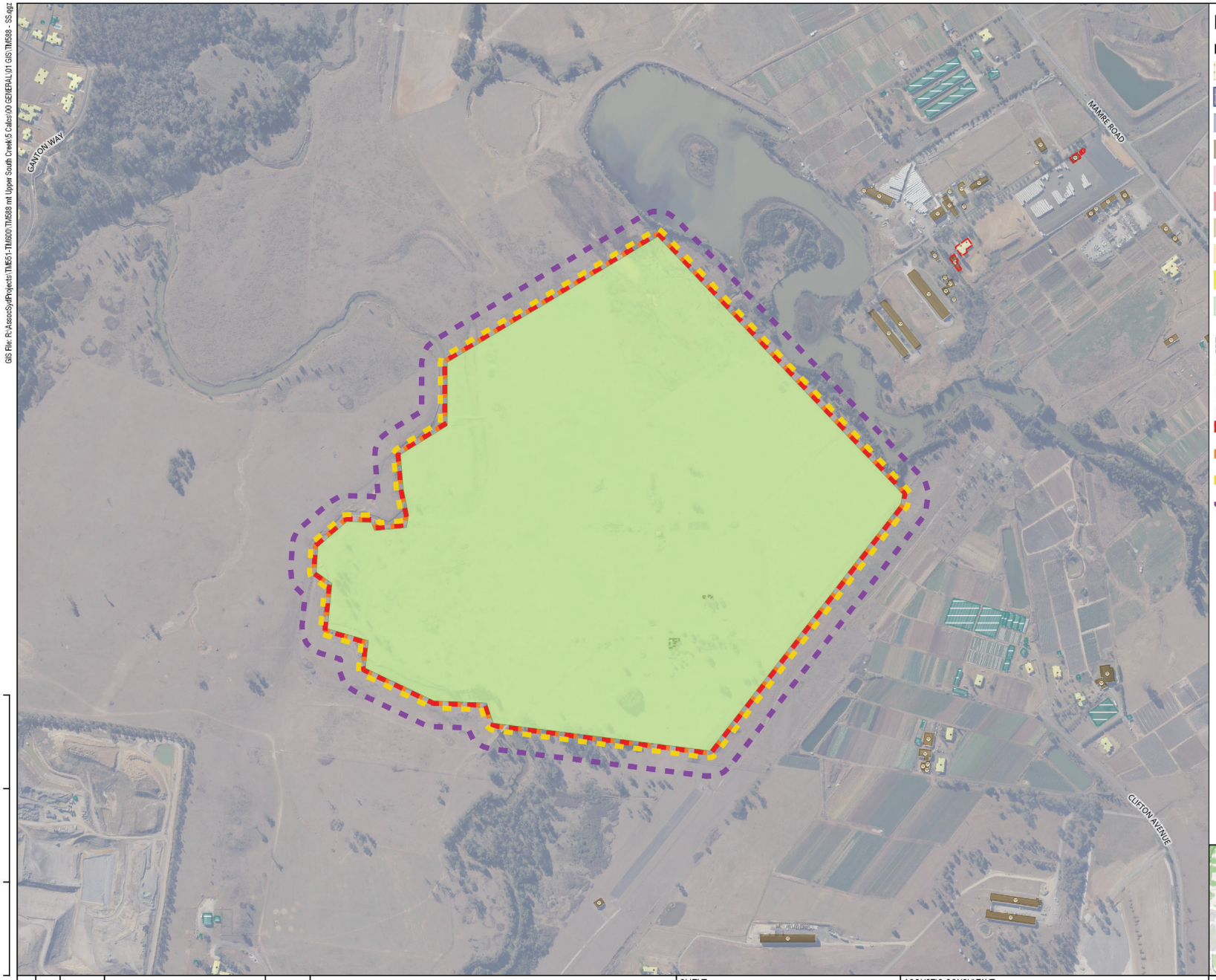
D.3 Additional management measures

Table D.3: Additional noise mitigation and receiver notifications

Receiver		Additional noise mitigation and receiver notifications																																													
		Day (Standard)								Day (OOHW)								Evening (OOHW)								Night (OOHW)								Sleep screening								Sleep Limit							
NCA	Address	SE	EW	CW	SC	MI	LR	CP	OSOM	SE	EW	CW	SC	MI	LR	CP	OSOM	SE	EW	CW	SC	MI	LR	CP	OSOM	SE	EW	CW	SC	MI	LR	CP	OSOM	SE	EW	CW	SC	MI	LR	CP	OSOM	SE	EW	CW	SC	MI	LR	CP	OSOM
NCA T1	235-245 CLIFTON AVENUE, KEMPS CREEK, NS																																PN																
NCA T1	983 MAMRE ROAD, KEMPS CREEK, NSW																																																
NCA T1	885-899 MAMRE ROAD, KEMPS CREEK, NSW																																																
NCA T1	146B CLIFTON AVENUE, KEMPS CREEK, NSW											PN								PN													PN																
NCA T1	230-234 CLIFTON AVENUE, KEMPS CREEK, NS																																PN																
NCA T1	949-965 MAMRE ROAD, KEMPS CREEK, NSW																																																
NCA T1	1669A ELIZABETH DRIVE, BADGERYS CREEK,																																																
NCA T1	949-965 MAMRE ROAD, KEMPS CREEK, NSW																																PN																
NCA T1	919-929 MAMRE ROAD, KEMPS CREEK, NSW																																PN																
NCA T1	1669A ELIZABETH DRIVE, BADGERYS CREEK,																																																
NCA T1	983 MAMRE ROAD, KEMPS CREEK, NSW																																																
NCA T1	203-229 CLIFTON AVENUE, KEMPS CREEK, NS																																PN, V																
NCA T1	258 CLIFTON AVENUE, KEMPS CREEK, NSW																																PN																
NCA T1	1005-1023 MAMRE ROAD, KEMPS CREEK, NSW																																																
NCA T1	983 MAMRE ROAD, KEMPS CREEK, NSW																																																
NCA T1	203-229 CLIFTON AVENUE, KEMPS CREEK, NS																																PN																
NCA T1	146B CLIFTON AVENUE, KEMPS CREEK, NSW																																																
NCA T1	237-247 CLIFTON AVENUE, KEMPS CREEK, NS																																PN																
NCA T1	230-234 CLIFTON AVENUE, KEMPS CREEK, NS																																PN, V																

APPENDIX E Construction vibration impacts

E.1 AWRC worksite - minimum working distance for vibration impact



LEGEND

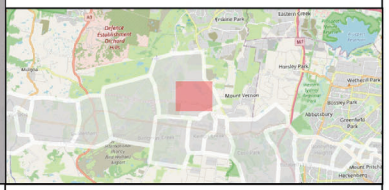
Noise Sensitive Receivers

- Residential
- Mixed use
- Commercial
- Industrial
- Hotel/Motel/Hostel
- Medical facility
- Place of Worship
- Community centre
- Recording studio
- Library/Museum
- Childcare
- Educational
- Theatre/Auditorium
- Cinema
- Laboratory
- Flight simulator
- Animal Enclosure
- Recreational - Passive
- Recreational - Active
- Other
- Heritage

- Receivers within MWD for cosmetic damage
- USC AWRC

MWD for cosmetic damage and human annoyance for Vibratory Roller

- Reinforced structures (25.0mm/s ppv)
- Unreinforced structures (7.5mm/s ppv)
- Heritage structures (2.5mm/s ppv)
- Human annoyance - Residential (day)



0 600 m
200
400

Plot Date: 30/05/23 - 12:28 Layout: TM588 MWD
GIS File: R:\AssocSyd\Projects\TM551-TM600\TM588 mt Upper South Creek\5 Calcs\00 GENERAL\01 GIS\TM588 - SS.qgz

REV	BY	DATE	DESCRIPTION	APPROVED
r0	SS	30/05/23	Prepare figures	DA

A3 Original | Co-ordinate System: MGA Zone 56

0 100 200 300 400 m
1:8,000 At size A3
FULL SIZE A3, REDUCED TO A4
NOTE: Do not scale from this drawing.

N

CLIENT
JOHN HOLLAND

ACOUSTIC CONSULTANT
RENZO TONIN & ASSOCIATES
inspired to achieve
Ph (02) 8218 0500 Fax (02) 8218 0501

UPPER SOUTH CREEK ADVANCED WATER RECYCLING CENTER

MWD for cosmetic damage and human annoyance

Sheet 1 of 1

APPENDIX F Community Consultation for Additional Mitigation Measures

31 July 2023

Dear Resident

Re: Start of Major Work at the Upper South Creek Advanced Water Recycling Centre

Sydney Water is building the Upper South Creek Advanced Water Recycling Centre (AWRC) in Kemps Creek and associated pipelines to support population and economic growth in Western Sydney.

Our delivery partner, John Holland, will start major work at the AWRC from around **Monday 7 August 2023**. Refer to the map overleaf for the location of our work.

Work over the next three months will include:

- establishing site fences and erosion and sediment controls, including basins
- clearing vegetation within the future operational space and temporary construction compound
- removing old disused buildings
- earthworks to make the area a suitable height for construction
- building a temporary worker car park and internal access tracks
- installing worker sheds and amenities
- installing temporary power from a nearby substation to the site
- concreting work for new water tanks
- delivering plant, materials and equipment.

Access route

Heavy and light vehicles will access the site from Clifton Avenue off Elizabeth Drive in Kemps Creek. Heavy vehicles will include oversized vehicles transporting earthmoving equipment, truck and trailers, concrete trucks, dump trucks and cranes. We will manage construction vehicle movements by scheduling operational deliveries and other vehicle movements outside of peak traffic times, where possible.

Expected average vehicle movements at the AWRC site during the morning and evening peak are shown in the table below.

AM Peak (7-10 am)				**PM Peak (3-7 pm)**			
Light vehicles		**Heavy vehicles**		**Light vehicles**		**Heavy vehicles**	
In	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
113	22	8	8	1	85	6	6

Between the AM and PM peak (10 am - 4 pm), we expect an average of 44 heavy vehicle movements each day.

At various times during construction of the AWRC, daily vehicle movements will peak above the averages shown in the table. Updates will be distributed to local residents and businesses if these peaks may impact usual local access arrangements.

Our working hours

Our working hours will be **7 am to 6 pm Monday to Friday** and **8 am to 1 pm Saturday.** From time to time, we may work extended hours and we will notify you before this occurs.

Our work impacts
We will minimise impacts as much as possible through active monitoring of noise, dust and vibration, our selection of machinery, considering the hours we conduct our high impact activities and training and supervision of our workforce.

Whilst we will have a number of measures in place to manage noise, dust and vibration, we are always open to feedback about how we can further reduce the impact on you. We would also like to know if there are activities that happen at your address that may be significantly disrupted by our work. To view a full list of our planned measures and provide your thoughts about our approach, please complete a feedback form by scanning the below QR code on your phone.

SCAN ME

Regular updates will be distributed as the work progresses, with properties that may be highly impacted by noise or vibration or planned night works to receive specific notifications about these activities.

For further information please contact John Holland's Community Team on 1800 064 127 or uppersouthcreek@sydneywater.com.au. For more information about the Upper South Creek Advanced Water Recycling Centre project, visit sydneywatertalk.com.au/uppersouthcreek.

Thanks for your understanding during this essential work.

Yours sincerely

Darren Wharton

Darren Wharton
Delivery Manager - Upper South Creek AWRC and Pipelines

Work area