

Out of Hours Permit

Belmont Desalination Plant



General Details			
Contract:	Belmont Desalination Plant Project		
Contractor:	John Holland Pty. Ltd.		
Application Title:	Automatic Dosing Unit OOH		
Application Number:	006		
Application Date:	03/07/2025		
Relevant Planning Approval:	SSI 8896		
OOHW Protocol:	Belmont Desalination Plant Out-of-Hours-Work Protocol - CS1135-WT-BEL-EN-PLN-0004		
Contact Details			
Position	Name	Contact Number	Email
Project Engineer	Shaun Vincent	0400 651 316	Shaun.Vincent@jhg.com.au
Construction Manager	Jason Nisbet	0418 693 964	Jason.Nisbet@jhg.com.au
Communications Representative	Monique Brown	0449 133 941	Monique.brown@jhg.com.au
Environmental Manager / Representative	Wadeea Chaudhary	0429 020 437	Wchaudhary@jhg.com.au

Part A: Proposal			
Project name:	Belmont Desalination Plant		
Summary of Out of Hours Works:	Out of Hours Operation of Automatic Dosing Unit and dewatering activity		
Duration:	3 Months	Duration and proposed hours of work (timing of works):	Expected to operate 24 hours a day, 7 days a week for a duration of 3 months
Specific Details:	18 July 2025 to 18 October 2025		
Location of Works: Refer to Appendix 1	Belmont Desalination Plant – Main Site, 12A Ocean Park Rd		
Scope of works, outside of approved working hours:	The project will be undergoing excavation works for installation and construction of in-ground services and structures. Due to site conditions, the project is expected to experience groundwater ingress for majority of the excavation works. To safely complete these works, continuous discharge across the site will be required to slow the ingress of water. Dewatering detailed in this permit will be carried out via well-points (spears) into a temporary treatment system where the water will be moved through various settlement and balance tanks as well as a dosing shed to be treated, before being discharged to the adjacent Wastewater Treatment Works (licensed discharge point 18), in accordance with EPL 1771. If the dewatering discharge system was to cease operations, there is a risk of excavated areas overfilling with groundwater. Once installed and operating the dosing unit will need to continuously operate to keep groundwater at the required levels. The automatic treatment system is run with the use of four 66kV generators that are contained on a pad on the eastern side of the site. The system has been set up so that if a failure occurs, an alert is sent out to technicians and relevant personnels which then triggers a response. This response can include a technician arriving to site out of hours, with one light vehicle and hand tools. The project expects the automatic dosing unit system to be in constant 24-hour operation from 18 July 2025 and to continue for approximately 3 months while excavation works are completed. The operation of this system has been modelled to have no impact on any receivers. Traffic movement outside of standard construction hours is not expected, however one light vehicle may move within site as necessary to undertake repairs and maintenance as required.		
Justification	<u>Justification</u> These works will be undertaken outside standard construction hours in accordance with condition D4(b) of the Conditions of Approval SS1 8896, which states:		

	<u>“Construction Hours</u> <i>Notwithstanding Conditions D3 and D7 construction may be undertaken outside the hours specified in the following circumstances (a, b, c or d below):</i> <i>(b) Construction that meets the following criteria, including:</i> <i>i. Construction that causes LAeq(15 minute) noise levels:</i> <i>no more than 5 dB(A) above the rating background level at any residence in accordance with the Interim Construction Noise Guideline (DECC, 2009), and</i> <i>no more than the ‘Noise affected’ NMLs specified in Table 3 of the Interim Construction Noise Guideline (DECC, 2009) at other sensitive receivers; and</i> <i>ii. Construction that causes LAFmax noise levels no greater than 15 dB(A) above the night period rating background level at any residence during the night period as defined in the Interim Construction Noise Guideline (DECC, 2009); and</i> <i>iii. Construction that causes:</i> <i>continuous or impulsive vibration values, measured at the most affected residence are no more than the preferred values for human exposure to vibration, specified in Table 2.2 of Assessing Vibration: a technical guideline (DEC, 2006), and</i> <i>intermittent vibration values measured at the most affected residence are no more than the preferred values for human exposure to vibration, specified in Table 2.4 of Assessing Vibration: a technical guideline (DEC, 2006)”</i> <u>Extended Hours Proposed</u> Works outside standard construction hours will be undertaken during the following Out of Hours (OOH) periods: - OOH Period 1 (6PM-10PM) - OOH Period 2 (10PM-7AM) - Day OOH (SAT 1PM-5PM) No residential receivers are expected to be affected by noise generated from these works.
Equipment	<u>Equipment List:</u> 4x Generators (66kV) 4x Pumps 1x Light Vehicle - Hand-held tools (as required)

Part C: Impacts, Mitigation and Communication Proposed

Noise Impacts

View attachment of Noise Assessment in Appendix 1 for further detail.

Site Location Maps - Refer to Appendix 1 – Figure 1.

Closest residential and non-residential receivers – refer to Appendix 1 – Table 4

- No receivers are affected by these works**

Other Impacts

Additional impacts to those already assessed as part of Environmental Approval:

Mitigation Measures

Noise / Vibration Mitigation Measure	Reasonable / Feasible (Y/N/NA)	Comments
Have you considered programming of noisy activities to reduce community impacts?	Yes	No receivers are expected to be affected by noise generated from the proposed OOH work.
Are there alternative plant or methods that can be used to reduce noise? E.g. using smaller equipment to do the job, or using a different (quieter) method to do the job	N/A	No receivers are expected to be affected by noise generated from the proposed equipment used for these OOH work.
Noise barriers/mats to assist noise management for all noisy works where practical	N/A	These works have been assessed to be inaudible at the nearest sensitive receiver and so noise barriers are not deemed to be appropriate for this scope of work.
Where possible, trucks and vehicles to be parked up between noisy works when operating near sensitive receivers.	N/A	No receivers are expected to be affected by noise generated from the proposed OOH work.

Where possible, noisiest activities will commence closest to sensitive receivers and move away from them as work progresses.	N/A	No receivers are expected to be affected by noise generated from the proposed OOH work.
All plant and equipment to minimise reversing where possible and must include the use of non-tonal reversing beepers (or an equivalent mechanism, e.g. 'quackers')	Yes	All mobile plant and equipment on site will have non-tonal reversing alarms equipped.
Staff to be briefed before works - no loud talking, excessive use of radios, music, swearing, be mindful of the community. Turn off equipment when not in use. Do not drop tools, equipment, and materials	Yes	Included in inductions.
Supervisors will make note of, and have removed off site and replaced any equipment item observed to have defective noise controls e.g. defective muffler, loose or missing cowling or engine compartment panels etc	Yes	Defective plant and equipment will be identified during plant inductions and during site inspections. Any defective plant/equipment will be removed and/or replaced.
During high noise impact works 3 hours on 1 hour off must be enforced unless the high noise activity is to be completed before midnight.	N/A	High noise impact works are not proposed to be undertaken as part of this activity.
Can temporary relocation (eg. accommodation) be offered to the adjacent sensitive receivers?	N/A	No receivers are expected to be affected by noise generated from the proposed OOH work.
Is minimum distance for cosmetic damage or human comfort triggered	N/A	No vibratory works will be carried out as part of this activity.
Are there any additional measures that could be incorporated to further mitigate any noise impacts?	Y	- All workers are to have completed the project induction and attended the pre-start toolbox. - Pre-start toolbox is to include the requirement for workers to leave the site in a quiet and considerate manner after the completion of works, being mindful of the site's neighbours. - Workers to communicate through walkie talkies when communicating over large distances (no shouting). - Flood lights will be directed down to prevent light spill. - Reversing alarms to be non-tonal only. - Plant not in use to be switched off. - Residential grade mufflers will be fitted. - Air brake silencers will be installed and operational. - No signalling by horns. - No whistles to be used. - No shouting. - No radios. - No dropping of materials from height, throwing of metal items and slamming of doors. - No excessive revving of plant and vehicle engines.
Additional Mitigation Measures	Reasonable/Feasible (Y/N/NA)	Comments
Notification (N)	N/A	This activity will not be audible at the nearest sensitive receiver in accordance with the noise assessment include as Appendix 1
Specific Notification (SN)	N/A	This activity will not be audible at the nearest sensitive receiver in accordance with the noise assessment include as Appendix 1
Individual Briefing (IB)	N/A	This activity will not be audible at the nearest sensitive receiver in accordance with the noise assessment include as Appendix 1
Alternative Accommodation (AA)	N/A	This activity will not be audible at the nearest sensitive receiver in accordance with the noise assessment include as Appendix 1
Verification of predicted noise (V)	N/A	This activity will not be audible at the nearest sensitive receiver in accordance with the noise assessment include as Appendix 1
Phone Call (PC)	N/A	This activity will not be audible at the nearest sensitive receiver in accordance with the noise assessment include as Appendix 1
Project Specific Respite Offer (RO)	N/A	This activity will not be audible at the nearest sensitive receiver in accordance with the noise assessment include as Appendix 1
Duration Respite (DR)	N/A	This activity will not be audible at the nearest sensitive receiver in accordance with the noise assessment include as Appendix 3

Community Notification

Community notifications will be undertaken as per the Out of Hours Protocol, including;

1. Where predicted noise levels are above the relevant noise guideline levels the contractor must letterbox drop the impacted residents a minimum of 5 days prior to the works commencing and no more than 14 days prior to the works commencing. The contractor must consult with Hunter Water's Community Liaison Representative for messaging, at a minimum the notification must include:
 - a. Clearly outline the reason that the work is required to be undertaken outside standard construction hours specified.
 - b. Include a diagram that clearly identifies the location of the proposed works in relation to nearby cross streets and local landmarks.
 - c. Include details of relevant time restrictions that apply to the proposed works.
 - d. Clearly outline in plain English, the location, nature, type of work, scope and days and dates and hours of the proposed works.
 - e. Detail the expected noise impact of the works on directly affected residents and sensitive land use(s)
 - f. Detail mitigation and management measures and proposed respite periods.
 - g. Clearly state how complaints may be made and additional information obtained.
 - h. Include the number of the 24-hour telephone complaints line, site contact (where available) and the Project website address
 - i. The contractor must door knock all sensitive receivers immediately adjacent to the works (i.e. adjoining boundaries,) to clearly explain the duration of the works, noise levels, and inform of any respite periods at least 7 days prior to works commencing.

All community complaints will be fully investigated, and any additional identified reasonable and feasible mitigation measures will be implemented, (including investigation of the feasibility of respite periods/alternative methodologies such as rescheduling of noisiest, adaptation of mitigation measures etc.)

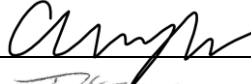
Part D: Submission, Review and Approval

- ☐ OOHW Approved / Endorsed
☐ OOHW Approved with conditions (see below)
☐ OOHW Rejected

Conditions for Approval:

	Type	Low Risk Factors	High Risk Factors	Assessed Risk Level (Low/High)
Risk Level <i>(yellow highlight indicates applicable condition to this permit)</i>	Air-borne Noise (LAeq 15min)	Noise levels are predicted to be up to 5dBA above the NML, or Noise levels are predicted to be more than 5dBA above the NML for a maximum of: • 2 consecutive evenings and/or nights per week; and • 3 non-consecutive evenings and/or nights per week; and • 10 evenings and/or nights per month	Noise levels are predicted to be more than 5dBA above the NML for more than: • 2 consecutive evenings and/or nights per week; and • 3 non-consecutive evenings and/or nights per week; and • 10 evenings and/or nights per month	Low
	Sleep Disturbance (LAmax)	Predicted maximum noise levels are below awakening levels of 55dB LAmax internal	Predicted maximum noise levels are above awakening levels of 55dB LAmax internal	Low

ER Assessment of Risk Factors: ☒ Low ☐ Medium ☐ High

Position	Name	Signature	Date
JHG Environmental Manager or Delegate	Wadeea Chaudhary		16.07.25
Environmental Representative (EMM)	Daniel Keegan (Alt ER)		17/07/2025
HWC Environmental Lead	Stuart Longman		17/07/2025

Internal Document Sign-off

	Name:	Signature:	Date:
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Document Author:	Wadeea Chaudhary		
JHG Community Manager or Delegate:	Monique Browne		
JHG Construction Manager:	Jason Nisbet		
JHG Project Environmental Rep:	Wadeea Chaudhary		

Appendices / Attachments: *(Attach supporting documentation / noise assessment / community agreement etc)*

Appendix 1: Noise Assessment – maps included (Gatewave)

17 July 2025

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John Holland Pty Ltd
Wadeea Chaudhary
wadeea.chaudhary@jhgc.com.au

From: Renzo Tonin and Associates via Gatewave

Calculation scenario: **006 - Dewatering Discharge System Operation** (Gatewave ID TN416_011)

Belmont Desalination Plant – Noise and Vibration Assessment Report

1 Introduction

The Renzo Tonin and Associates web-based construction assessment tool (Gatewave) has been used to prepare this noise and vibration assessment report for the Belmont Desalination Plant project (the Project).

The overall noise and vibration impacts from the Project works and associated mitigation measures have already been addressed in the Belmont Drought Response Desalination Plant Environmental Impact Statement (EIS, November 2019), Belmont Drought Response Desalination Plant Noise and Vibration Amendment Report (Amendment report, June 2020), Environmental Impact Statement – Modification 1: Belmont Permanent Desalination Plant (MOD, January 2024) and in the Project's Construction Noise and Vibration Management Plan (CNVMP).

This tool allows specific work areas and activities to be assessed as construction works progress. It also allows cumulative noise impact from other aspects of the Project to be assessed and managed in accordance with the Project's CNVMP.

2 Assessment methodology

2.1 Construction noise

Results for the assessment of airborne noise were determined using a CadnaA computer noise model developed for the Project. The CadnaA noise model 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: 2024.

Results from the CadnaA noise model are exported and stored into the Gatewave database which allows for the prediction of the total cumulative noise from all construction activities.

A summary of the noise calculation parameters is detailed in Table 1.

Table 1: Summary of noise modelling parameters

Parameters	Inputs
Calculation method	ISO 9613-2:2024
Location of noise sources above the local ground	1.5m
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.)
Sound Power Levels (L_w) of plant and equipment	All L_w data obtained from Renzo Tonin & Associates database Detailed in Section 3
Construction activities	Detailed in Section 3
Ground absorption	Varying from 1 for absorptive surfaces (e.g. park land), 0.5 (e.g. residential areas) to 0 for reflective surfaces (e.g. water, concrete, paving);
Noise barriers and screening	As detailed in Project's EIS, amendment report and MOD

2.2 Construction vibration

The plant and equipment considered in this scenario are not considered vibration intensive. As a result, minimum working distances (MWDs) for cosmetic damage or human annoyance have not been nominated.

3 Construction activities, work areas and NCAs

3.1 Justification to complete the works OOH

These works will be undertaken outside standard construction hours in accordance with condition D4(b) of the Conditions of Approval SS1 8896, which states:

"Construction Hours

Notwithstanding Conditions D3 and D7 construction may be undertaken outside the hours specified in the following circumstances (a, b, c or d below):

(b) Construction that meets the following criteria, including:

i. Construction that causes LAeq(15 minute) noise levels:

- no more than 5 dB(A) above the rating background level at any residence in accordance with the Interim Construction Noise Guideline (DECC, 2009), and*
- no more than the 'Noise affected' NMLs specified in Table 3 of the Interim Construction Noise Guideline (DECC, 2009) at other sensitive receivers; and*

ii. Construction that causes LAFmax noise levels no greater than 15 dB(A) above the night period rating background level at any residence during the night period as defined in the Interim Construction Noise Guideline (DECC, 2009); and

iii. Construction that causes:

- continuous or impulsive vibration values, measured at the most affected residence are no more than the preferred values for human exposure to vibration, specified in Table 2.2 of Assessing Vibration: a technical guideline (DEC, 2006), and*

intermittent vibration values measured at the most affected residence are no more than the preferred values for human exposure to vibration, specified in Table 2.4 of Assessing Vibration: a technical guideline (DEC, 2006)"

3.2 Construction activities

3.2.1 Plant and equipment use

A summary of the plant and equipment operating during each assessment time period is presented in Table 2. Note that Table 2 identifies if a plant/equipment item is used for part or all of the assessment period on a given day, and does not necessarily denote if the plant/equipment are operating concurrently (refer APPENDIX A for details on which plant/equipment are operating together).

Table 2: Proposed construction activities and associated sound power levels

Activity/plant/equipment	Number in use				Sound power level, dB(A)		High impact item	Noise reduction from mitigation measures, dB(A)
	Day	Day (OOH)	Evening	Night	Leq	Lmax		
New work area								
JACOBS_Pump Sump	1	1	1	1	97	101	-	-
Main Site								
Light vehicles	1	1	1	1	79	100	-	-
Pump	4	4	4	4	45	42	-	65

Activity/plant/equipment	Number in use				Sound power level, dB(A)		High impact item	Noise reduction from mitigation measures, dB(A)
	Day	Day (OOH)	Evening	Night	Leq	Lmax		
Generator (20kVa)	4	4	4	4	67	62	-	33
Hand tools	1	1	1	1	94	111	-	-
Spear pump								
JACOBS_Pump	1	1	1	1	97	101	-	-

Notes:

- 1) Refer APPENDIX A for plant/equipment timings and to identify which items operate concurrently.
- 2) Equipment marked in **orange** are not verified by Renzo Tonin and Associates

The locations of the construction activities are presented in Figure 1.

Figure 1: Construction work areas



4 Construction noise and vibration impacts

4.1 Predicted noise levels

4.1.1 Construction $L_{Aeq,15min}$ assessment

Noise levels were determined by modelling the noise sources, receiver locations, and operating activities, based on the information presented in Table 2.

The noise predictions presented in this report represent a realistic worst-case scenario when construction occurs at the closest location within a specific work area. At each receiver, noise levels will vary during the construction period based on the position of equipment within the work area, the distance to the receiver, the construction activities being undertaken and the noise levels of particular plant items and equipment. Actual noise levels will often be less than the predicted levels presented.

A summary of the results is presented in Table 3. NMLs and predictions for the three worst-affected receivers for each works area are provided in Table 4. Detailed noise results including additional mitigation measures are provided in APPENDIX B and presented visually in noise maps in APPENDIX C.

Table 3: Summary of receivers above relevant NMLs

NCA	Day		Day (OOH)		Evening		Night	
	dB(A) above NML	No. of properties	dB(A) above NML	No. of properties	dB(A) above NML	No. of properties	dB(A) above NML	No. of properties
NCA_01	0 to 10	0	0 to 5	0	0 to 5	0	0 to 5	0
	> 10	0	5 to 15	0	5 to 15	0	5 to 15	0
	Over 75 dB(A)	0	15 to 25	0	15 to 25	0	15 to 25	0
			> 25	0	> 25	0	> 25	0
Industrial	0 to 10	0	0 to 5	0	0 to 5	0	0 to 5	0
	> 10	0	5 to 15	0	5 to 15	0	5 to 15	0
	Over 75 dB(A)	0	15 to 25	0	15 to 25	0	15 to 25	0
			> 25	0	> 25	0	> 25	0

4.2 Predicted vibration levels

The plant and equipment described in Table 2 are not considered vibration intensive and, as a result, do not have MWDs for cosmetic damage or human annoyance.

4.3 Mitigation measures

4.3.1 Specific reasonable and feasible mitigation measures

TO BE COMPLETED BY CLIENT (e.g. temporary noise barriers, attenuators, less noisy plant, etc)

4.3.2 Additional noise mitigation measures

In accordance with the CNVG, where, after application of all reasonable and feasible mitigation measures, the $L_{Aeq(15\text{minute})}$ airborne construction noise levels are still predicted to exceed the NMLs, additional airborne noise mitigation measures can be applied to further limit the risk of annoyance from construction noise.

Figure 2 presents a summary of the additional noise mitigation measures applicable for construction activities where, after application of all reasonable and feasible mitigation options, construction noise levels still exceed the NMLs.

Figure 2: Additional airborne noise mitigation measures

When is the work being undertaken?	How much does the predicted noise level exceed the ANML by?	Identify additional management measures to be implemented	Additional mitigation measure code
All Hours	75 dB(A) or greater	V, N, PC, RO	AM2
Standard Hours M-F 7am to 6pm Sat 8am to 6pm	0 dB(A)	-	-
	≤ 10 dB(A)	-	-
	10 to 20 dB(A)	V, N	AM1
	> 20 dB(A)	V, N	AM1
OOHW Period 1 M-F 6pm to 10pm Sat 6pm to 10pm Sun/ PH 8am to 10pm	< 5 dB(A)	-	-
	5 to 15 dB(A)	N, R1, DR	AM3
	15 to 25 dB(A)	V, N, R1, DR	AM4
	> 25 dB(A)	V, N, SN, IB, PC, R1, DR	AM5
OOHW Period 2* M-F 10pm to 7am Sat 10pm to 8am Sun/ PH 6pm to 8am	< 5 dB(A)	N	AM6
	5 to 15 dB(A)	V, N, R2, DR	AM7
	15 to 25 dB(A)	V, N, SN, IB, PC, R2, DR	AM8
	> 25 dB(A)	AA, V, N, SN, IB, PC, R2, DR	AM9

Notes: Use the abbreviation codes in the table above to confirm management measures required

* Where OCHW occur in the evening/night shoulder period (10pm to 12am) or the night/morning shoulder period (5am to 7am) apply additional airborne mitigation measures from the OCHW Period 2, excluding AA.

N = Notification (should be issued a minimum of five working days prior to the start of works)

SN = Specific notifications (issued no later than seven calendar days ahead of construction activities)

IB = Individual briefing

PC = Phone Call

AA = Alternative accommodation**

RO = Project specific respite offer

R1 = Respite period 1

R2 = Respite period 2

V = Verification of predicted noise

DR = Duration respite

** Where construction activity impacts receiver for more than two consecutive nights, AA is not applicable to shoulder periods.

4.3.3 Noise monitoring plan

Attended noise monitoring is to be undertaken to verify that noise levels resulting from works are in accordance with the levels predicted in this noise and vibration assessment report, subject to obtaining

the property owner/occupier's consent to access the property (where required). Noise monitoring should be carried out on or near the property boundary at a location representative of the worst affected location (i.e. in publicly accessible areas on or near the nominated receivers, typically at ground level).

Table 4 identifies potential monitoring locations in each NCA, which are the three worst noise-affected receivers for each NCA from the works.

Note: Gatewave tries to find the most affected receivers in each NCA (up to 3 locations) purely based on the numerical results. These locations will be reviewed for suitability based on safety, accessibility, will provide valid data, etc. If not suitable, alternative suitable locations will be selected for verification monitoring.

If monitoring levels exceed predicted levels, continual improvement and corrective action measures will be implemented, (e.g. investigate cause, review work or activity, scheduling, etc).

Table 4: Nominated verification monitoring locations

Receiver			Noise management levels (NMLs), dB(A)				Sleep disturbance goals, dB(A)		Predicted noise levels, dB(A) Leq,15min				Predicted noise levels, dB(A) Lmax
NCA	Address	Land use	NML Day	NML Day (OOH)	NML Evening	NML Night	Lmax (screening)	Lmax (limit)	Day	Day (OOH)	Evening	Night	Night
NCA_01	33 WILLIAMS ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	28	28	28	28	36
NCA_01	27 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	28	28	28	28	36
NCA_01	27 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	28	28	28	28	37

4.3.4 Vibration monitoring

As the plant and equipment in this scenario are not considered to be vibration intensive, further vibration monitoring is not required.

If attended vibration monitoring is required (for example, in response to vibration-related complaints), monitoring will be undertaken according to the process described in the CNVMP.

Vibration monitoring should follow the procedures outlined in Appendix F of the CNVG.

Important disclaimer

- * This document has been partly automatically generated by Gatewave™, software for prediction, assessment and management of noise and vibration, developed by Renzo Tonin and Associates.
- * This document is uncontrolled. Please contact Renzo Tonin and Associates if you suspect there are any errors in this report.
- * Results in this report are based on the assumptions described in Section 0 and inputs presented in Section 3. Noise and vibration monitoring data will be collected to ensure Gatewave is verified and adjusted, if required.
- * Renzo Tonin and Associates cannot be held liable for the misuse of the software Gatewave™, including any errors that may be contained within the software.

APPENDIX A Summary of works

A.1 Plant and equipment

Table 5: Plant and equipment schedule for work area: New work area

Equipment	Penalty, dB(A)	Quantity	Intensity	Reduction, dB	Sound power level, dB(A)		Start time	End time
					L _{eq,15min}	L _{max}		
New activity								
JACOBS_Pump Sump	-	1	100%	0	97	101	2025-07-18 17:00:00	2025-07-21 02:45:00

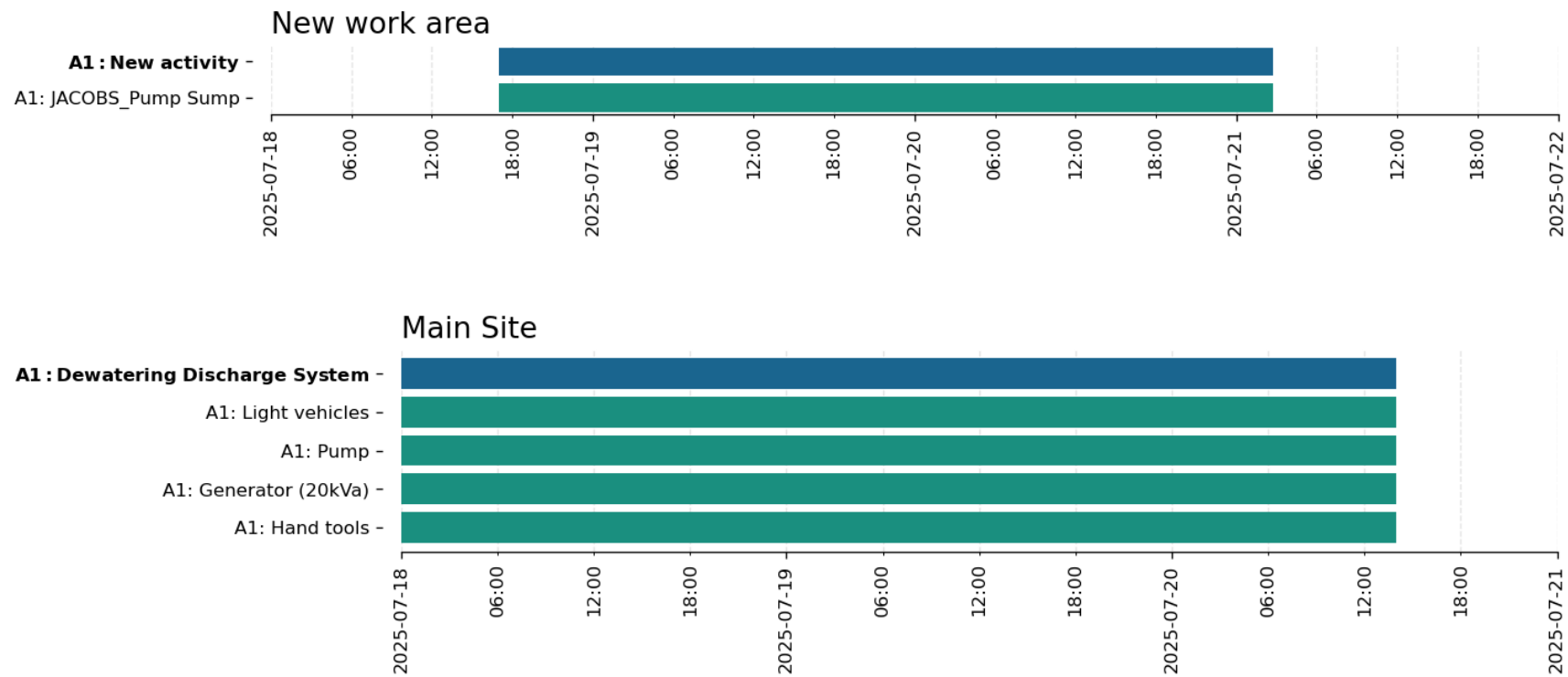
Table 6: Plant and equipment schedule for work area: Main Site

Equipment	Penalty, dB(A)	Quantity	Intensity	Reduction, dB	Sound power level, dB(A)		Start time	End time
					L _{eq,15min}	L _{max}		
Dewatering Discharge System								
Light vehicles	-	1	11%	0	79	100	2025-07-18 00:00:00	2025-07-19 14:00:00
							2025-07-19 14:00:00	2025-07-20 02:00:00
							2025-07-20 02:00:00	2025-07-20 14:00:00
Pump	-	4	100%	65	45	42	2025-07-18 00:00:00	2025-07-19 14:00:00
							2025-07-19 14:00:00	2025-07-20 02:00:00
							2025-07-20 02:00:00	2025-07-20 14:00:00
Generator (20kVa)	-	4	100%	33	67	62	2025-07-18 00:00:00	2025-07-19 14:00:00
							2025-07-19 14:00:00	2025-07-20 02:00:00
							2025-07-20 02:00:00	2025-07-20 14:00:00
Hand tools	-	1	5%	0	94	111	2025-07-18 00:00:00	2025-07-19 14:00:00

Equipment	Penalty, dB(A)	Quantity	Intensity	Reduction, dB	Sound power level, dB(A)		Start time	End time
					L _{eq,15min}	L _{max}		
							2025-07-19 14:00:00	2025-07-20 02:00:00
							2025-07-20 02:00:00	2025-07-20 14:00:00

Table 7: Plant and equipment schedule for work area: Spear pump

Equipment	Penalty, dB(A)	Quantity	Intensity	Reduction, dB	Sound power level, dB(A)		Start time	End time
					L _{eq,15min}	L _{max}		
New activity								
JACOBS_Pump	-	1	100%	0	97	101	2025-07-18 17:00:00	2025-07-21 00:00:00





APPENDIX B Detailed construction noise results

Table 8: Construction noise results

Receiver		Noise management levels (NMLs), dB(A)				Sleep disturbance goals, dB(A)		Predicted noise levels, dB(A) Leq,15min				Predicted noise levels, dB(A) Lmax		Additional mitigation			
Address	Land use	NML Day	NML Day (OOH)	NML Evening	NML Night	Lmax (screening)	Lmax (limit)	Day	Day (OOH)	Evening	Night	Night	Day	Day (OOH)	Evening	Night	
12A OCEAN PARK RD, BELMONT SOUTH NSW 2280	Industrial	75	75	75	75	None	None	42	42	42	42	53	-	-	-	-	
12A OCEAN PARK RD, BELMONT SOUTH NSW 2280	Industrial	75	75	75	75	None	None	40	40	40	40	52	-	-	-	-	
12A OCEAN PARK RD, BELMONT SOUTH NSW 2280	Industrial	75	75	75	75	None	None	37	37	37	37	46	-	-	-	-	
12A OCEAN PARK RD, BELMONT SOUTH NSW 2280	Industrial	75	75	75	75	None	None	37	37	37	37	48	-	-	-	-	
12A OCEAN PARK RD, BELMONT SOUTH NSW 2280	Industrial	75	75	75	75	None	None	36	36	36	36	48	-	-	-	-	
12A OCEAN PARK RD, BELMONT SOUTH NSW 2280	Industrial	75	75	75	75	None	None	35	35	35	35	45	-	-	-	-	
12A OCEAN PARK RD, BELMONT SOUTH NSW 2280	Industrial	75	75	75	75	None	None	34	34	34	34	46	-	-	-	-	
12A OCEAN PARK RD, BELMONT SOUTH NSW 2280	Industrial	75	75	75	75	None	None	34	34	34	34	46	-	-	-	-	
12A OCEAN PARK RD, BELMONT SOUTH NSW 2280	Industrial	75	75	75	75	None	None	31	31	31	31	38	-	-	-	-	
33 WILLIAMS ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	28	28	28	28	36	-	-	-	-	
27 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	28	28	28	28	36	-	-	-	-	
27 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	28	28	28	28	37	-	-	-	-	
28 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	28	28	28	28	36	-	-	-	-	
31 WILLIAMS ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	28	28	28	28	36	-	-	-	-	
23 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
29 WILLIAMS ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
25 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
14 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
14 MCEWAN ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	27	27	27	27	36	-	-	-	-	
16 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
27 WILLIAMS ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
21 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
10 MCEWAN ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	27	27	27	27	36	-	-	-	-	
34 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
8A MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
25 WILLIAMS ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
23 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
12 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
6 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
8A MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
4 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
6 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
4 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
21 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
23 WILLIAMS ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
19 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
2 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	36	-	-	-	-	
21 WILLIAMS ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	27	27	27	27	35	-	-	-	-	

Receiver		Noise management levels (NMLs), dB(A)				Sleep disturbance goals, dB(A)		Predicted noise levels, dB(A) Leq,15min				Predicted noise levels, dB(A) Lmax		Additional mitigation			
		Land use	NML Day	NML Day (OOH)	NML Evening	NML Night	Lmax (screening)	Lmax (limit)	Day	Day (OOH)	Evening	Night	Night	Day	Day (OOH)	Evening	Night
20 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	37	-	-	-	-	
25 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	35	-	-	-	-	
17 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	36	-	-	-	-	
30 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	37	-	-	-	-	
24 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	37	-	-	-	-	
19 WILLIAMS ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	35	-	-	-	-	
15 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	35	-	-	-	-	
26 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	37	-	-	-	-	
22 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	35	-	-	-	-	
32 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	37	-	-	-	-	
10 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	36	-	-	-	-	
28 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	37	-	-	-	-	
21 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	36	-	-	-	-	
26 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	36	-	-	-	-	
18 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	36	-	-	-	-	
30 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	35	-	-	-	-	
32 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	35	-	-	-	-	
10 ANDRA CL, BELMONT NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	36	-	-	-	-	
26 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	34	-	-	-	-	
10 ANDRA CL, BELMONT NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	36	-	-	-	-	
17 WILLIAMS ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	34	-	-	-	-	
10 BRANDT CL, BELMONT NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	36	-	-	-	-	
9 ANDRA CL, BELMONT NSW 2280	Residential	48	42	42	38	55	65	26	26	26	26	36	-	-	-	-	
11 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	33	-	-	-	-	
28 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	34	-	-	-	-	
19 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	36	-	-	-	-	
23 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	36	-	-	-	-	
7 BRANDT CL, BELMONT NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	36	-	-	-	-	
7 ANDRA CL, BELMONT NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	36	-	-	-	-	
7 BRANDT CL, BELMONT NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	36	-	-	-	-	
24 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	35	-	-	-	-	
26 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	35	-	-	-	-	
28 MCEWAN ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	25	25	25	25	35	-	-	-	-	
30 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	35	-	-	-	-	
14 LANCELOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	34	-	-	-	-	
None	Residential	48	42	42	38	55	65	25	25	25	25	34	-	-	-	-	
22 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	35	-	-	-	-	
18 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	35	-	-	-	-	
5 ANDRA CL, BELMONT NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	36	-	-	-	-	

Receiver		Noise management levels (NMLs), dB(A)				Sleep disturbance goals, dB(A)		Predicted noise levels, dB(A) Leq,15min				Predicted noise levels, dB(A) Lmax		Additional mitigation			
		Address	Land use	NML Day	NML Day (OOH)	NML Evening	NML Night	Lmax (screening)	Lmax (limit)	Day	Day (OOH)	Evening	Night	Night	Day	Day (OOH)	Evening
	19 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	33	-	-	-	-
	6 ANDRA CL, BELMONT NSW 2280	Non-receiver	999	999	999	999	None	None	25	25	25	25	36	-	-	-	-
	41 ARTHUR ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	35	-	-	-	-
	DUNE RISE 63/687 PACIFIC HWY, BELMONT NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	32	-	-	-	-
	DUNE RISE 89/687 PACIFIC HWY, BELMONT NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	32	-	-	-	-
	1/3 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	34	-	-	-	-
	2 CAPRI CL, BELMONT NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	36	-	-	-	-
	5 BRANDT CL, BELMONT NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	36	-	-	-	-
	DUNE RISE 107/687 PACIFIC HWY, BELMONT NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	32	-	-	-	-
	DUNE RISE 64/687 PACIFIC HWY, BELMONT NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	32	-	-	-	-
	DUNE RISE 75/687 PACIFIC HWY, BELMONT NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	32	-	-	-	-
	2 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	34	-	-	-	-
	DUNE RISE 112/687 PACIFIC HWY, BELMONT NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	32	-	-	-	-
	DUNE RISE 76/687 PACIFIC HWY, BELMONT NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	32	-	-	-	-
	DUNE RISE 88/687 PACIFIC HWY, BELMONT NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	32	-	-	-	-
	1/3 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	35	-	-	-	-
	None	Residential	48	42	42	38	55	65	25	25	25	25	32	-	-	-	-
	DUNE RISE 90/687 PACIFIC HWY, BELMONT NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	32	-	-	-	-
	6 BRANDT CL, BELMONT NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	35	-	-	-	-
	8A MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	34	-	-	-	-
	12 MCEWAN ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	25	25	25	25	34	-	-	-	-
	12 MCEWAN ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	25	25	25	25	34	-	-	-	-
	32 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	34	-	-	-	-
	8A MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	31	-	-	-	-
	34 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	34	-	-	-	-
	34 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	34	-	-	-	-
	8A MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	34	-	-	-	-
	17 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	31	-	-	-	-
	21 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	31	-	-	-	-
	15 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	25	25	25	25	32	-	-	-	-
	8 ROBERT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	34	-	-	-	-
	13 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	34	-	-	-	-
	13 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	31	-	-	-	-
	34 HARRY ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	35	-	-	-	-
	15 WILLIAMS ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	34	-	-	-	-
	1/3 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	32	-	-	-	-
	1/3 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	31	-	-	-	-
	18 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	31	-	-	-	-
	10 ROBERT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	31	-	-	-	-

Receiver	Noise management levels (NMLs), dB(A)								Sleep disturbance goals, dB(A)		Predicted noise levels, dB(A) Leq,15min			Predicted noise levels, dB(A) Lmax		Additional mitigation	
	Address	Land use	NML Day	NML Day (OOH)	NML Evening	NML Night	Lmax (screening)	Lmax (limit)	Day	Day (OOH)	Evening	Night	Night	Day	Day (OOH)	Evening	Night
	DUNE RISE 38/687 PACIFIC HWY, BELMONT NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	33	-	-	-	-
	6 CAPRI CL, BELMONT NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	34	-	-	-	-
	None	Residential	48	42	42	38	55	65	24	24	24	24	34	-	-	-	-
	4 CAPRI CL, BELMONT NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	34	-	-	-	-
	5 LANCELOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	32	-	-	-	-
	35 HARRY ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	34	-	-	-	-
	7 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	31	-	-	-	-
	1/8 ANDRA CL, BELMONT NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	32	-	-	-	-
	8 BRANDT CL, BELMONT NSW 2280	Non-receiver	999	999	999	999	None	None	24	24	24	24	33	-	-	-	-
	15 ROBERT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	31	-	-	-	-
	5 BRANDT CL, BELMONT NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	33	-	-	-	-
	6 BRANDT CL, BELMONT NSW 2280	Non-receiver	999	999	999	999	None	None	24	24	24	24	33	-	-	-	-
	DUNE RISE 40/687 PACIFIC HWY, BELMONT NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	32	-	-	-	-
	DUNE RISE 39/687 PACIFIC HWY, BELMONT NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	33	-	-	-	-
	None	Residential	48	42	42	38	55	65	24	24	24	24	33	-	-	-	-
	None	Residential	48	42	42	38	55	65	24	24	24	24	32	-	-	-	-
	DUNE RISE 62/687 PACIFIC HWY, BELMONT NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	32	-	-	-	-
	24 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	24	24	24	24	31	-	-	-	-
	28 BEACH ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	24	24	24	24	33	-	-	-	-
	23 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	31	-	-	-	-
	13 WILLIAMS ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	30	-	-	-	-
	24 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	33	-	-	-	-
	20 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	31	-	-	-	-
	26 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	31	-	-	-	-
	22 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	32	-	-	-	-
	39 ARTHUR ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	34	-	-	-	-
	13 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	31	-	-	-	-
	17 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	31	-	-	-	-
	13 ROBERT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	31	-	-	-	-
	36 HARRY ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	35	-	-	-	-
	9 LANCELOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	31	-	-	-	-
	33 ARTHUR ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	32	-	-	-	-
	15 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	31	-	-	-	-
	12 ELLEN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	31	-	-	-	-
	22 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	31	-	-	-	-
	25 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	32	-	-	-	-
	14 LANCELOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	30	-	-	-	-
	None	Residential	48	42	42	38	55	65	23	23	23	23	34	-	-	-	-
	18 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	31	-	-	-	-

Receiver	Noise management levels (NMLs), dB(A)				Sleep disturbance goals, dB(A)		Predicted noise levels, dB(A) Leq,15min				Predicted noise levels, dB(A) Lmax		Additional mitigation				
	Address	Land use	NML Day	NML Day (OOH)	NML Evening	NML Night	Lmax (screening)	Lmax (limit)	Day	Day (OOH)	Evening	Night	Night	Day (OOH)	Evening	Night	
	22 ELLEN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	31	-	-	-	-
	4 ANDRA CL, BELMONT NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	30	-	-	-	-
	14 LANCELOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	31	-	-	-	-
	11 ROBERT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	30	-	-	-	-
	None	Residential	48	42	42	38	55	65	23	23	23	23	34	-	-	-	-
	None	Residential	48	42	42	38	55	65	23	23	23	23	34	-	-	-	-
	9 ROBERT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	30	-	-	-	-
	16 ELLEN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	30	-	-	-	-
	22 ELLEN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	30	-	-	-	-
	9 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	31	-	-	-	-
	35 ARTHUR ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	30	-	-	-	-
	13 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	30	-	-	-	-
	10 ELLEN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	30	-	-	-	-
	4 ELLEN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	30	-	-	-	-
	3 LANCELOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	31	-	-	-	-
	6 ELLEN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	23	23	23	23	30	-	-	-	-
	14 ELLEN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	30	-	-	-	-
	2 ELLEN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	30	-	-	-	-
	7 LANCELOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	31	-	-	-	-
	8 ELLEN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	30	-	-	-	-
	24 BEACH ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	22	22	22	22	31	-	-	-	-
	2 ARNDALL PL, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	31	-	-	-	-
	17 MCEWAN ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	22	22	22	22	30	-	-	-	-
	8 BRANDT CL, BELMONT NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	30	-	-	-	-
	28 ELLEN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	30	-	-	-	-
	19 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	30	-	-	-	-
	4 ELLEN ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	22	22	22	22	30	-	-	-	-
	16 ELLEN ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	22	22	22	22	30	-	-	-	-
	11 LANCELOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	31	-	-	-	-
	17 WILLIAMS ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	30	-	-	-	-
	DUNE RISE 41/687 PACIFIC HWY, BELMONT NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	30	-	-	-	-
	6 ELLEN ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	22	22	22	22	30	-	-	-	-
	21 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	31	-	-	-	-
	7 LANCELOT ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	22	22	22	22	31	-	-	-	-
	7 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	30	-	-	-	-
	13 LANCELOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	31	-	-	-	-
	7 LANCELOT ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	22	22	22	22	31	-	-	-	-
	11 ARNDALL PL, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	31	-	-	-	-
	11 LANCELOT ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	22	22	22	22	31	-	-	-	-

Receiver	Noise management levels (NMLs), dB(A)								Sleep disturbance goals, dB(A)		Predicted noise levels, dB(A) Leq,15min			Predicted noise levels, dB(A) Lmax		Additional mitigation	
	Address	Land use	NML Day	NML Day (OOH)	NML Evening	NML Night	Lmax (screening)	Lmax (limit)	Day	Day (OOH)	Evening	Night	Night	Day	Day (OOH)	Evening	Night
	13 LANCELOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	31	-	-	-	-
	15 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	31	-	-	-	-
	15 LANCELOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	31	-	-	-	-
	30 HARRY ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	30	-	-	-	-
	8 ELLEN ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	22	22	22	22	30	-	-	-	-
	14 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	30	-	-	-	-
	6 ARNDALL PL, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	31	-	-	-	-
	2/20 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	30	-	-	-	-
	17 LANCELOT ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	22	22	22	22	31	-	-	-	-
	17 LANCELOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	31	-	-	-	-
	11 ARNDALL PL, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	31	-	-	-	-
	15 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	31	-	-	-	-
	34 ELLEN ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	22	22	22	22	30	-	-	-	-
	11 ARNDALL PL, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	30	-	-	-	-
	11 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	30	-	-	-	-
	16 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	22	22	22	22	30	-	-	-	-
	10 ARNDALL PL, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	18 ELLEN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	4 ARNDALL PL, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	16 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	14 WILLIAMS ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	17 ARNDALL PL, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	5 ANDRA CL, BELMONT NSW 2280	Non-receiver	999	999	999	999	None	None	21	21	21	21	30	-	-	-	-
	None	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	38 HARRY ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	11 ARNDALL PL, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	37 ARTHUR ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	8 ARNDALL PL, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	5 BRANDT CL, BELMONT NSW 2280	Non-receiver	999	999	999	999	None	None	21	21	21	21	30	-	-	-	-
	26 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	32	-	-	-	-
	14 LANCELOT ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	21	21	21	21	30	-	-	-	-
	14 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	8 ARNDALL PL, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	21	21	21	21	30	-	-	-	-
	9 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	31 ARTHUR ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	1 HUDSON ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	26 ELLEN ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	21	21	21	21	30	-	-	-	-
	34 HARRY ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	21	21	21	21	30	-	-	-	-
	21 MCEWAN ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	21	21	21	21	27	-	-	-	-

Receiver	Noise management levels (NMLs), dB(A)								Sleep disturbance goals, dB(A)	Predicted noise levels, dB(A) Leq,15min				Predicted noise levels, dB(A) Lmax		Additional mitigation	
	Address	Land use	NML Day	NML Day (OOH)	NML Evening	NML Night	Lmax (screening)	Lmax (limit)	Day	Day (OOH)	Evening	Night	Night	Day	Day (OOH)	Evening	Night
	14 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	20 HUDSON ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	32 HARRY ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	21	21	21	21	30	-	-	-	-
	None	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	12 HUDSON ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	21	21	21	21	30	-	-	-	-
	None	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	9 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	9 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	33 HARRY ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	32 HARRY ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	14 HUDSON ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	7 LANCELOT ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	21	21	21	21	28	-	-	-	-
	None	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	12 HUDSON ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	21	21	21	21	30	-	-	-	-
	9 ROBERT ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	21	21	21	21	30	-	-	-	-
	14 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	20	20	20	20	30	-	-	-	-
	17 ARNDALL PL, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	20	20	20	20	30	-	-	-	-
	29 ARTHUR ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	20	20	20	20	29	-	-	-	-
	DUNE RISE 37/687 PACIFIC HWY, BELMONT NSW 2280	Residential	48	42	42	38	55	65	20	20	20	20	29	-	-	-	-
	16 HUDSON ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	20	20	20	20	29	-	-	-	-
	18 ELLEN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	20	20	20	20	30	-	-	-	-
	11 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	20	20	20	20	30	-	-	-	-
	19 BEACH ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	20	20	20	20	29	-	-	-	-
	12 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	20	20	20	20	30	-	-	-	-
	17 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	20	20	20	20	29	-	-	-	-
	12 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	20	20	20	20	29	-	-	-	-
	18 HUDSON ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	20	20	20	20	29	-	-	-	-
	30 ELLEN ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	20	20	20	20	28	-	-	-	-
	12 HUDSON ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	20	20	20	20	30	-	-	-	-
	4 BRANDT CL, BELMONT NSW 2280	Non-receiver	999	999	999	999	None	None	20	20	20	20	28	-	-	-	-
	DUNE RISE 36/687 PACIFIC HWY, BELMONT NSW 2280	Residential	48	42	42	38	55	65	20	20	20	20	29	-	-	-	-
	11 ROBERT ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	20	20	20	20	28	-	-	-	-
	13 WILLIAMS ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	20	20	20	20	28	-	-	-	-
	6 ANDRA CL, BELMONT NSW 2280	Residential	48	42	42	38	55	65	20	20	20	20	28	-	-	-	-
	7 ANDRA CL, BELMONT NSW 2280	Non-receiver	999	999	999	999	None	None	19	19	19	19	27	-	-	-	-
	14 ELLEN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	19	19	19	19	26	-	-	-	-
	31 ARTHUR ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	19	19	19	19	28	-	-	-	-
	DUNE RISE 35/687 PACIFIC HWY, BELMONT NSW 2280	Residential	48	42	42	38	55	65	19	19	19	19	29	-	-	-	-
	17 BEACH ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	18	18	18	18	28	-	-	-	-

Receiver	Noise management levels (NMLs), dB(A)				Sleep disturbance goals, dB(A)		Predicted noise levels, dB(A) Leq,15min				Predicted noise levels, dB(A) Lmax		Additional mitigation				
	Address	Land use	NML Day	NML Day (OOH)	NML Evening	NML Night	Lmax (screening)	Lmax (limit)	Day	Day (OOH)	Evening	Night	Night	Day	Day (OOH)	Evening	Night
	2 ELLEN ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	18	18	18	18	26	-	-	-	-
	None	Residential	48	42	42	38	55	65	18	18	18	18	27	-	-	-	-
	32 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	18	18	18	18	26	-	-	-	-
	None	Residential	48	42	42	38	55	65	18	18	18	18	26	-	-	-	-
	9 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	18	18	18	18	27	-	-	-	-
	None	Residential	48	42	42	38	55	65	18	18	18	18	27	-	-	-	-
	10 HUDSON ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	18	18	18	18	25	-	-	-	-
	35 HARRY ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	17	17	17	17	25	-	-	-	-
	DUNE RISE 106/687 PACIFIC HWY, BELMONT NSW 2280	Residential	48	42	42	38	55	65	17	17	17	17	28	-	-	-	-
	20 ELLEN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	17	17	17	17	26	-	-	-	-
	2 ELLEN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	17	17	17	17	25	-	-	-	-
	None	Residential	48	42	42	38	55	65	16	16	16	16	26	-	-	-	-
	None	Residential	48	42	42	38	55	65	16	16	16	16	24	-	-	-	-
	None	Residential	48	42	42	38	55	65	15	15	15	15	25	-	-	-	-
	1/8 ANDRA CL, BELMONT NSW 2280	Non-receiver	999	999	999	999	None	None	15	15	15	15	25	-	-	-	-
	11 MCEWAN ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	14	14	14	14	22	-	-	-	-
	20 ELLEN ST, BELMONT SOUTH NSW 2280	Non-receiver	999	999	999	999	None	None	13	13	13	13	23	-	-	-	-
	18 BEACH ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	9	9	9	9	19	-	-	-	-
	15 MARRIOT ST, BELMONT SOUTH NSW 2280	Residential	48	42	42	38	55	65	7	7	7	7	16	-	-	-	-

APPENDIX C Noise level above nominated target

Noise level above NML Day (area 1 of 1)



Noise level above NML Day (OOH) (area 1 of 1)



Noise level above NML Evening (area 1 of 1)



Noise level above NML Night (area 1 of 1)

