MARTINUS RAIL
INLAND

JUNEE TO ILLABO – CONSTRUCTION NOISE AND VIBRATION IMPACT STATEMENT ADDENDUM 4

A2I | Albury to Illabo

CONTRACT NUMBER:0052

PROJECT DOCUMENT NUMBER:

6-0052-210-EEC-J7-AS-0002_ADD4

Document Control

DOCUMENT TITLE:	Junee to Illabo – Construction Noise and Vibration Impact Statement Addendum 4			
DOCUMENT OWNER:	Chris Standing – Environment, Approvals and Sustainability Manager			
PREPARED BY:	Steven Dando	**TITLE:**	Environmental Approvals Advisor	
SIGNATURE:	Signed by: Steven Dando 1A164E16008D443...		**DATE:**	16/03/2026
REVIEWED BY:	Simon Fisher	**TITLE:**	Environmental Lead	
SIGNATURE:	DocuSigned by: F858C386E017448...		**DATE:**	16/03/2026

Approved by

NAME	TITLE	SIGNATURE	DATE
Chris Standing	Environment, Approvals and Sustainability Manager (A2P)	DocuSigned by: 800B3022182143F...	16/03/2026

Revision History

REVISION	REVISION DATE	AMENDMENT	DATE TO CLIENT
A	02/03/2026	For review	02/03/2026
B	11/03/2026	For review	11/03/2026
0	16/03/2026	For use	16/03/2026

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

GLOSSARY

Specific terms and acronyms used throughout this plan are listed and described in Table 1 below.

TABLE 1: DEFINITIONS

TERM	DEFINITION
A2I	Albury to Illabo section of the Inland Rail project
CA	Consistency Assessment
CIZ	Construction Impact Zone
CNVIS	Construction Noise and Vibration Impact Statement
CNVIS Addendum	This document
Construction boundary	The area physically affected by work as defined in the Project Description as described in the documents listed in Condition A1 of the project Infrastructure Approval.
Junee to Illabo CNVIS	Junee to Illabo Construction Noise and Vibration Impact Statement (Doc No. 6-0052-210-EEC-J7-AS-0002)
km	Kilometres
m	Metres
NML	Noise Management Level
OOH	Out-of-hours
Project	Albury to Illabo project approved under section 5.19 of the EP&A Act on 8 October 2024, as modified on 13 August 2025
RBL	Rating Background Level
SLR Predict	A2I noise and vibration management tool
W.010A	Work Scenario 10A – CSR Activities
W.012A	Work Scenario 12A – Level Crossing Work
W.013	Work Scenario 13 – Watermain Relocation Work

1 INTRODUCTION

1.1 Inland Rail

Inland Rail is an approximate 1,600 kilometres (km) freight rail network that will connect Beveridge and Kagaru via regional Victoria, New South Wales and Queensland. The Inland Rail route would involve using approximately 1,000 km of existing track (with enhancements and upgrades where necessary) and 600 km of new track, passing through 30 local government areas. Inland Rail will accommodate double-stacked freight trains up to 1,800 metres (m) long and 6.5 m high.

The Albury to Illabo (A2I) section (the Project) forms a key component of the Inland Rail program.It is a 185 km section of existing rail corridor located in regional NSW between the towns of Albury and Illabo. Works would include track realignment, lowering and/or modification within the existing rail corridor, modification, removal or replacement of bridge structures (rail, road and/or pedestrian bridges), raising or replacing signal gantries, level-crossing modifications and other associated works.

Precinct	Enhancement sites
Albury Precinct	Murray River bridge
	Albury Station pedestrian bridge
	Albury Yard clearances
	Riverina Highway bridge
	Billy Hughes bridge
	Table Top Yard clearances
Greater Hume-Lockhart	Culcairn pedestrian bridge
	Culcairn Yard clearances
	Henty Yard clearances
	Yerong Creek Yard clearances
	The Rock Yard clearances
Wagga Wagga	Uranquinty Yard clearances
	Pearson Street bridge
	Cassidy Parade pedestrian bridge
	Edmonson Street bridge
	Wagga Wagga Station pedestrian bridge
	Wagga Wagga Yard clearances
	Bomen Yard clearances
Junee	Harefield Yard clearances
	Kemp Street bridge
	Junee Station pedestrian bridge
	Junee Yard clearances
	Olympic Highway underbridge
	Junee to Illabo clearances

FIGURE 1: PROJECT ENHANCEMENT SITES

1.2 Purpose of this Noise Assessment

This Noise Assessment has been prepared to identify and assess two new work areas / scenarios required to support and enable approved construction activities associated with the Junee to Illabo clearances for the Junee Precinct. This Construction Noise and Vibration Impact Statement Addendum (CNVIS Addendum 4) forms an addendum to the endorsed Junee to Illabo CNVIS (Doc No: 6-0052-210-EEC-J7-AS-0002).

This CNVIS Addendum should be reviewed in conjunction with the Junee to Illabo CNVIS (Doc No: 6-0052-210-EEC-J7-AS-0002) including adopted rating background levels (RBL), noise management levels (NMLs) and assessment criteria in accordance with the Infrastructure Approval (SSI-10055). For completeness, this CNVIS Addendum 4 should also be read in conjunction with the preceding CNVIS Addendums:

- Junee to Illabo Addendum 1 (Doc No: 6-0052-210-EEC-J7-AS-0002_ADD_0) required for Waterworks Road Compound Operation;
- Junee to Illabo Addendum 2 (Doc No: 6-0052-210-EEC-J7-AS-0002_ADD2_0) required for shoulder recondition works outside of major possession periods; and,
- Junee to Illabo Addendum 3 (Doc No: 6-0052-210-EEC-J7-AS-0002_ADD3_0) required for Carters and Wornes Gate Site Establishment and Operation.

The new work areas and scenarios assessed in this CNVIS Addendum 4 are as follows:

- Work area for W.010A CSR Activities (Figure 2)
- Work area for W.012A Level Crossing Work (Figure 3)
- Work area for W.013 Watermain Relocation Work (Figure 4)

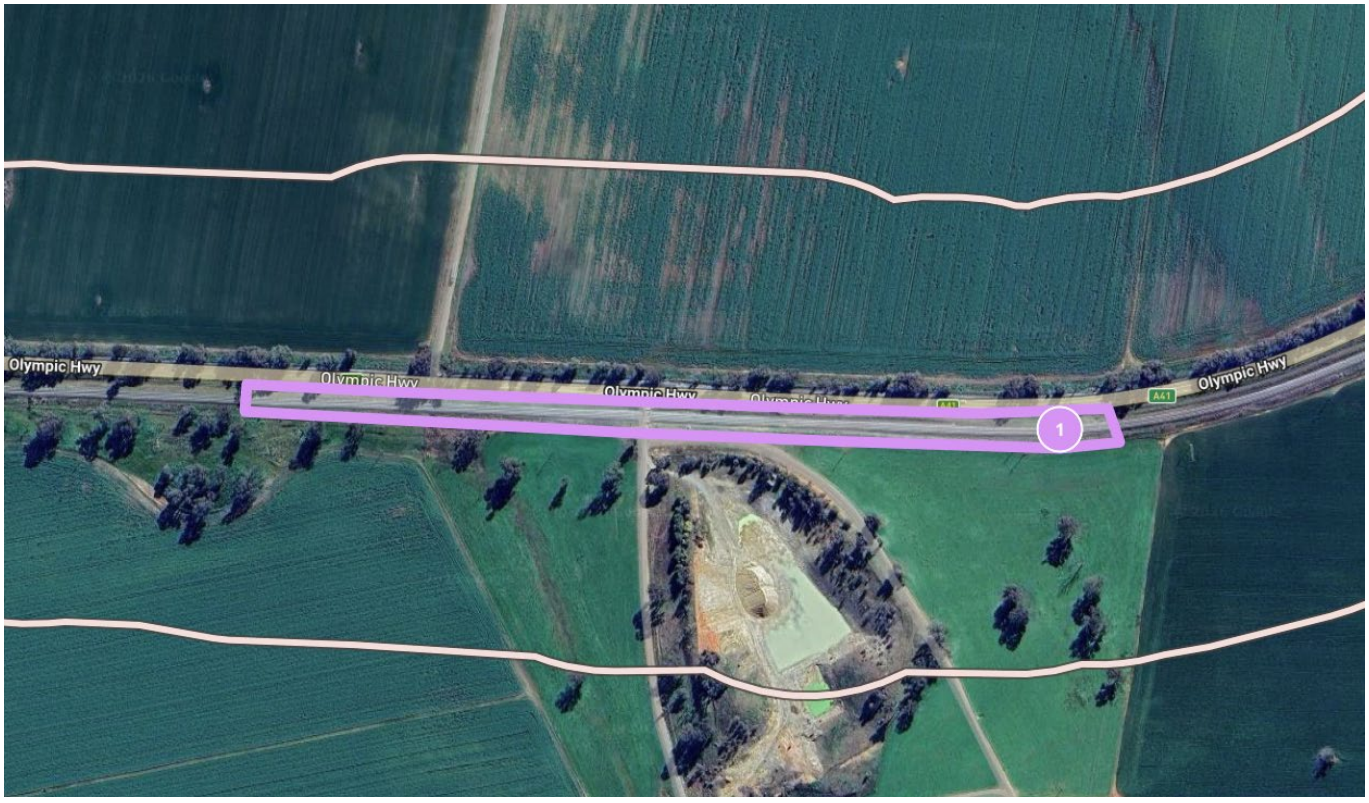

FIGURE 2: WORK AREA REQUIRED FOR CSR ACTIVITIES – W.010A

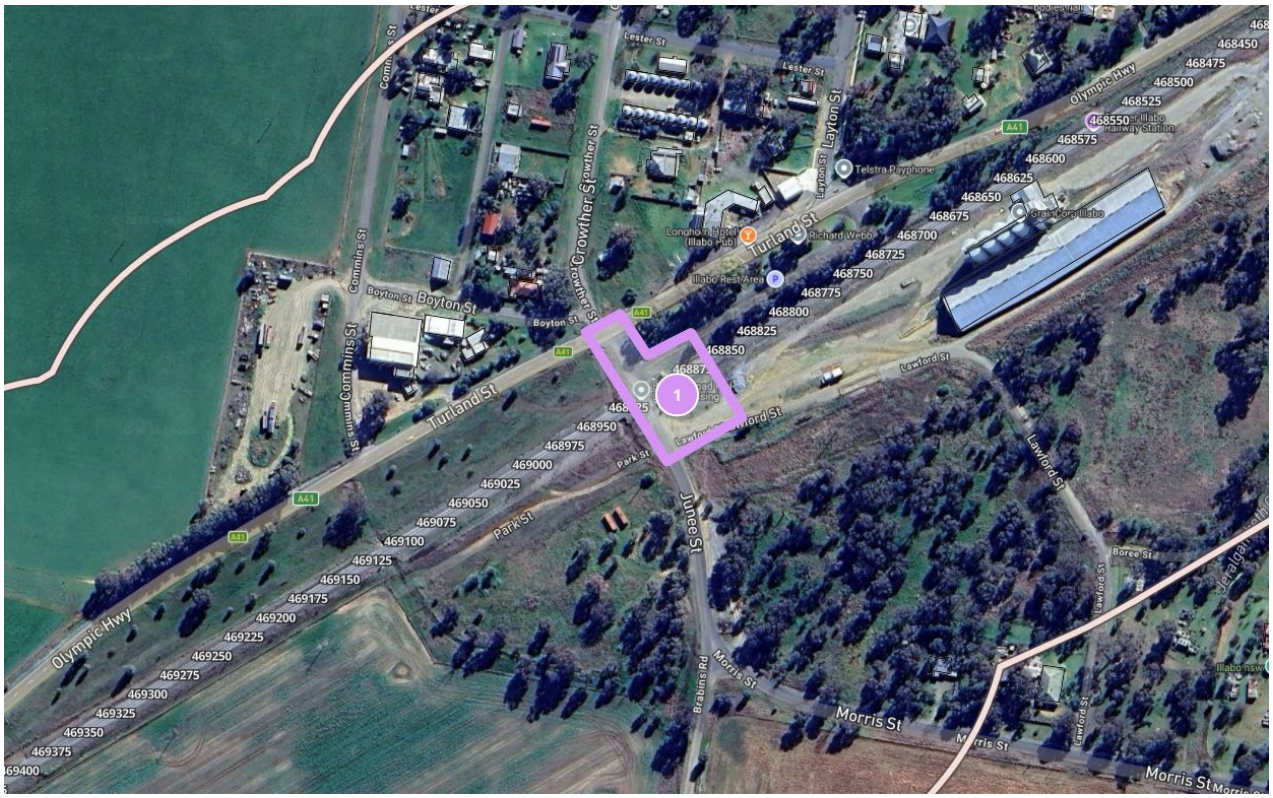

FIGURE 3: WORK AREA REQUIRED FOR LEVEL CROSSING WORK – W.012A

FIGURE 4: WORK AREA REQUIRED FOR WATERMAIN RELOCATION WORK – W.013

2 NOISE ASSESSMENT

The potential construction noise levels from the proposed works have been predicted using SLR Predict, the A2I project-specific noise and vibration tool. This CNVIS Addendum 4 assesses the work scenarios identified in Table 2.

TABLE 2: WORK SCENARIO DESCRIPTION

ID	Scenario	Description	Total Lw
W.010A	CSR Activities	CSR installation works	111
W.012A	Level Crossing Work	Temporary level crossing works Construction of temporary vehicle ramp	116
W.013	Watermain Relocation Work	Excavation for watermain works Under bore new watermain alignment	114

2.1 CSR Activities (W.010A)

2.1.1 Scope

The work area (Figure 2) falls within and adjacent to within the Construction Impact Zone (CIZ) for the approved project (referred to as the 'Construction boundary' in the Infrastructure Approval). Where the work area is outside the Construction boundary, the additional CIZ area is considered as part of various revisions of the Junee to Illabo Consistency Assessment (CA) (Doc No: 6-0052-210-EAP-J7-AS-0001).

This CNVIS Addendum 4 has assessed the work area required for W.010A, using SLR Predict, with the following noted:

Plant and equipment

- 1 x Hand tools (electric)
- 10 x Light vehicles
- 1 x Excavator (10T)
- 1 x Tipper truck (5T)
- 1 x Plate compactor
- 1 x Vacuum truck (NDD)

Construction hours

- Standard approved Hours:
  - 7am to 6pm Monday to Friday, inclusive
  - 7am to 6pm Saturday
- Day Out-of-Hours (OOH):
  - 8am to 6pm Sunday and public holidays
- Evening OOH:
  - 6pm to 10pm Monday to Sunday (including public holidays)
- Night OOH:
  - 10pm to 7am Monday to Saturday
  - 10pm to 8am Sunday (including public holidays)

2.1.2 Assessment

The new work scenario has been assessed utilising SLR Predict. The plant and equipment list (as noted above) has been considered as a worst-case scenario within a 15-minute assessment period. The operating time (utilisation %) of each plant and equipment is representative to site working conditions.

2.1.3 Results

The SLR Predict results are presented in Appendix A for the CSR Activities (W.010A) scenario. Night time out of hours is the most affected period.

Table 3 provides a summary of the exceedances identified for W.010A (night time) exceedances assessed in SLR Predict with the proposed equipment list, in the proposed work area (Figure 2).

TABLE 3: EXCEEDANCES FOR W.010A (NIGHT OOH)

ASSESSMENT RESULTS	NUMBER OF RESIDENTIAL RECEIVERS WITH NML EXCEEDANCE
	W.010A SLR Predict (Night) (new work scenario)
Total Lw (dBA)	111
Noticeable (1-5 dB)	-
Clearly Audible (6-10 dB)	-
Moderately Intrusive (11-20 dB)	-
Highly Intrusive (>20 dB)	-
Sleep Disturbance (>52 dB)	-
Sleep Awakening (>65 dB)	-

There is a limitation in allowing a comparison of the results with other work scenarios in the endorsed CNVIS due to the difference in location, plant and equipment. The new work scenario for W.010A for the work area in Figure 2 has been considered and assessed on its own. The work scenario W.010A would not impact any receivers.

The same management and mitigation measures will be implemented for all additional affected receivers, as noted in Section 8 of the endorsed CNVIS and as per Section 4 below.

2.2 Level Crossing Work (W.012A)

2.2.1 Scope

The work area (Figure 3) falls within and adjacent to within the Construction Impact Zone (CIZ) for the approved project, (referred to as the 'Construction boundary' in the Infrastructure Approval). Where the work area is outside the Construction boundary, the additional CIZ area is considered as part of the Junee to Illabo CA (Doc No: 6-0052-210-EAP-J7-AS-0001).

This CNVIS Addendum 4 has assessed the work area required for W.012A, using SLR Predict, with the following noted:

Plant and equipment

- 1 x Hi-Rail Hydrema
- 1 x Dump Truck
- 1 x Grader
- 1 x Hi- Rail Excavator
- 1 x Track Excavator
- 1 x Watercart
- 1 x Loader
- 1 x Positrack
- 1 x Roller – vibratory (2.5T)

Construction hours

- Standard approved Hours:
  - 7am to 6pm Monday to Friday, inclusive
  - 7am to 6pm Saturday
- Day Out-of-Hours (OOH):
  - 8am to 6pm Sunday and public holidays
- Evening OOH:
  - 6pm to 10pm Monday to Sunday (including public holidays)
- Night OOH:
  - 10pm to 7am Monday to Saturday
  - 10pm to 8am Sunday (including public holidays)

2.2.2 Assessment

The new work scenario has been assessed utilising SLR Predict. The plant and equipment list (as noted above) has been considered as a worst-case scenario within a 15-minute assessment period. The operating time (utilisation %) of each plant and equipment is representative to site working conditions.

2.2.3 Results

The SLR Predict results are presented in Appendix B for the Level Crossing Work (W.012A) scenario. Night time out of hours is the most affected period.

Table 4 provides a comparison of the exceedances identified in the endorsed CNVIS for W.011 Level Crossing Work-Peak work scenario with W.012A exceedances assessed in SLR Predict using the proposed equipment list, in the proposed locations (Figure 3) during the night time OOH period.

TABLE 4: EXCEEDANCES FOR W.012A (NIGHT OOH)

ASSESSMENT RESULTS	NUMBER OF RESIDENTIAL RECEIVERS WITH NML EXCEEDANCE	
	W.011 CNVIS (Night)	W.012A SLR Predict (Night) (new work scenario)
Total Lw (dBA)	119	116
Noticeable (1-5 dB)	1	11
Clearly Audible (6-10 dB)	24	17
Moderately Intrusive (11-20 dB)	7	5
Highly Intrusive (>20 dB)	3	2
Sleep Disturbance (>52 dB)	N/A*	13
Sleep Awakening (>65 dB)	N/A*	2

*Number of receivers exceeding screening level for sleep disturbance and awakening criteria includes multiple work areas in endorsed CNVIS

There is a limitation in allowing a comparison of the results with other work scenarios in the endorsed CNVIS due to the difference in location, plant and equipment. The additional work area for W.012A has been considered and assessed specifically in relation to the W.011 Level Crossing Work-Peak work scenario at LX604 (Figure 4). The work scenario W.012A would have a lesser impact compared with W.011 in the endorsed CNVIS (Appendix C-38d).

The same management and mitigation measures will be implemented for all additional affected receivers, as noted in Section 8 of the endorsed CNVIS and as per Section 4 below.

2.3 Watermain Relocation Work (W.013)

2.3.1 Scope

The work area (Figure 4) falls within and adjacent to within the Construction Impact Zone (CIZ) for the approved project, (referred to as the 'Construction boundary' in the Infrastructure Approval). Where the work area is outside the approved CSSI boundary, the additional CIZ area is considered as part of the Junee to Illabo Consistency Assessment (CA) (Doc No: 6-0052-210-EAP-J7-AS-0001).

This CNVIS Addendum 4 has assessed the work area required for W.013, using SLR Predict, with the following noted:

Plant and equipment

- 1 x Bob cat
- 1 x Concrete Agitator
- 1 x Crew Truck
- 1 x Excavator (5-8T)
- 1 x Generator
- 1 x Grouting mix machine
- 1 x Grout pump
- 1 x Hand tools
- 1 x Hydraulic power pack
- 5 x Light vehicles
- 1 x NDD Truck
- 1 x Pipe welding machine
- 1 x Under boring machine
- 1 x Water cart
- 1 x Water pump

Construction hours

- Standard approved Hours:
  - 7am to 6pm Monday to Friday, inclusive
  - 7am to 6pm Saturday

2.3.2 Assessment

The new work scenario has been assessed utilising SLR Predict. The plant and equipment list (as noted above) has been considered as a worst-case scenario within a 15-minute assessment period. The operating time (utilisation %) of each plant and equipment is representative to site working conditions.

2.3.3 Results

The SLR Predict results are presented in Appendix C for the Watermain Relocation Work (W.013) scenario. Day time is the most affected period.

Table 5 provides a summary of the exceedances identified for W.013 (day time) exceedances assessed in SLR Predict with the proposed equipment list, in the proposed locations (Figure 4).

TABLE 5: EXCEEDANCES FOR W.013 (DAY)

ASSESSMENT RESULTS	NUMBER OF RESIDENTIAL RECEIVERS WITH NML EXCEEDANCE
	W.013 SLR Predict (Day) (new work area)
Total Lw (dBA)	114
Clearly Audible (1-10 dB)	2
Moderately Intrusive (11-20 dB)	-
Highly Intrusive (>20 dB)	-

There is a limitation in allowing a comparison of the results with other work scenarios in the endorsed CNVIS due to the difference in location, plant and equipment. The additional work area for W.013 has been considered and assessed on its own.

Compared to other work scenarios in the endorsed CNVIS, the number of affected receivers is relatively low. The work scenario W.013 would have a clearly audible noise impact (1-10 dB) on two residential receivers. The same two receivers potentially impacted by the new work area (W.013), are also identified as being subject to the same level of impact (clearly audible) by the W.003 Geotechnical Investigation scenario during the day time (as per the endorsed CNVIS):

The same management and mitigation measures will be implemented for all additional affected receivers, as noted in Section 8 of the endorsed CNVIS and as per Section 4 below.

3 VIBRATION ASSESSMENT

3.1 CSR Activities (W.010A)

There are no vibration intensive plant and equipment items proposed to be utilised as part of W.010A as presented in Appendix A; therefore no vibration impacts are expected.

3.2 Level Crossing Work (W.012A)

There are no vibration intensive plant and equipment items proposed to be utilised as part of W.012A as presented in Appendix B; therefore no vibration impacts are expected.

3.3 Watermain Relocation Work (W.013)

There are no vibration intensive plant and equipment items proposed to be utilised as part of W.013 as presented in Appendix C; therefore no vibration impacts are expected.

4 CONCLUSION

4.1 Mitigation and management measures

As this Assessment is an addendum to the endorsed CNVIS for Junee to Illabo, the same mitigation and management measures apply as noted in Section 8 of the CNVIS.

4.2 Additional mitigation measures

As noted in Figure 5 below and under Appendices A, B and C, the SLR Predict noise results include a section on all applicable additional mitigation measures. These additional mitigation measures will be implemented where appropriate. No additional mitigation measures were identified for vibration.

Airborne Noise - Additional Mitigation Measures Matrix				
Time Period	Exceedance of NML	Perception	Duration	Communication Category/Management Measure
OOHW Daytime PeriodSunday 7am - 6pm(including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
	>25	Highly intrusive	Any	CO1, CO2
OOHW Evening PeriodMonday - Sunday 6pm - 10pm(including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
	>25	Highly intrusive	Any	CO1, CO2
			>2 consecutive rest periods	CO1, CO2, RO
OOHW Night PeriodMonday - Sunday 10pm - 7am(including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
			>2 consecutive sleep periods	CO1, CO2, RO, AO
	>25	Highly intrusive	Any	CO1, CO2, RO
			>2 consecutive sleep periods	CO1, CO2, RO, AO, AltA

FIGURE 5: ADDITIONAL MITIGATION MEASURES MATRIX – NOISE

Vibration - Additional Mitigation Measures Matrix			
Time Period	**Duration**	**Exceedance of 'preferred' value**	**Exceedance of 'maximum' value**
OOHW Daytime Period Sunday 8am-6pm	Any	CO1, CO2	CO1, CO2, RO
OOHW Evening Period Mon-Sun 6pm-10pm	Any	CO1, CO2	CO1, CO2, RO
OOHW Night Period Mon-Sat 10pm-7am Sun 10pm-8am	Any	CO1, CO2, RO	CO1, CO2, RO, AltA

Additional Mitigation Measures	
Measure	**Abbreviation**
Communication (Category 1)[1]	CO1
Communication (Category 2)[2]	CO2
Respite Offer[3]	RO
Alternative Accommodation	AltA
Agreement with Owners	AO

Note 1: CO1: Communication to provide information on the OOHW via methods such as letter box drop, email, newsletter, media advertisements and/ or website prior to the works commencing.

Note 2: CO2: Communication should be personalised (e.g. door knock, meeting, telephone call). Contact with these residents should commence early to enable feedback to be considered by the proposal.

Note 3: RO are not applicable to non-residential receivers. RO may comprise of pre-purchased movie tickets, dinner vouchers or similar. RO can also be provided by limiting high noise generating works and allowing at least a one-hour respite period between blocks of work. Where possible, the timing of this respite should be discussed with the impacted community.

Receiver Types			
Code	**Description**	**Code**	**Description**
RES	Residential	OED	Other Educational
COM	Commercial	OHO	Other Hotel
IND	Industrial	OLI	Other Library
OOA	Other Outdoor Active Recreation	OME	Other Medical
OOP	Other Outdoor Passive Recreation	OPW	Other Place of Worship
OCC	Other Child Care	OPB	Other Public Building

FIGURE 6: ADDITIONAL MITIGATION MEASURES MATRIX AND NOTES – NOISE AND VIBRATION

APPENDICES

APPENDIX A

SLR Predict (W.010A)

Construction Noise and Vibration Impact Statement (CNVIS)

This report presents the outcomes of detailed noise/vibration modelling relating to specific construction activities proposed on site in accordance with the methodology outlined in the *Construction Noise and Vibration Management Plan* (CNVMP) and overarching *Construction Noise and Vibration Impact Statement* (CNVIS).
Prior to detailed noise/vibration modelling being undertaken, work activities are reviewed and considered in relation to industry best practice, consistent with the requirements of the CNVMP. Consideration is first given to eliminating the noise/vibration emissions so far as reasonably practicable. Where elimination is not practicable, efforts are been made to reduce the risk as far as practical by implementing noise and vibration management measures as outlined in the overarching CNVIS and CNVMP.
Examples of these measures include selecting the quietest equipment and processes to complete the works, considering staging and periods of respite to minimise prolonged periods of noise and vibration exposure, and maximising distances between construction activities and sensitive receivers.

Consultation with Affected Receivers
In accordance with CoA E78, the CNVIS must include specific mitigation measures identified through consultation with affected sensitive land user(s) and the mitigation measures must be implemented for the duration of the Work. Details of this consultation are provided in the overarching CNVIS for each enhancement site.

Predicted Noise Levels
The assessment presents the highest predicted level at each receiver building, considering predictions at each floor and façade from all potential work areas. The assessment is generally considered conservative as the calculations assume several items of construction equipment are in use at the same time within each work area. The assessment uses 'realistic worst-case' scenarios to determine the impacts from the noisiest 15-minute period that is likely to occur for each work scenario.

Assessment Details

Author Name	
Author Email	noiseassessments@martinus.com.au
Author Organisation	Martinus Rail
Project Name	A2I - Albury to Illabo
Assessment Name	J7 LX605 CSR
Assessment Number	405
Stage	A2I Construction
Permit Number	
Start Date	
End Date	
Assessment Period	Night - out of hours

Equipment Details

Plant/Equipment	Equipment Sound Power Level (Unadjusted), dBA	Number of Units	Temporary Noise Barrier
1: CSR and signalling (Height: Ground)	Total: 111		
Light Vehicle (accelerating) 25% operation	95	10	No
Excavator - Tracked (10T) 50% operation	100	1	No
Truck - tipper small (5T) 100% operation	97	1	No
Truck - vacuum (NDD or non-destructive digger) 100% operation	109	1	No
Compactor (plate) 100% operation	104	1	No
Hand tools (electric) 75% operation	102	1	No

Note 1: Equipment classed as 'annoying' in the *Interim Construction Noise Guideline (DECC, 2009)* include a 5 dB correction.
Note 2: Equipment sound power levels consider the mitigation measures outlined in the overarching CNVIS to provide mitigated results.

Assessment Results

	Residential	Non-Residential
Highly Intrusive	0 property	0 property
Moderately Intrusive	0 property	0 property
Clearly Audible	0 property	0 property
Noticeable	0 property	0 property
Above Sleep Disturbance	0 property	0 property
Above Sleep Awake	0 property	0 property

Legend

Project Boundary	
Work Areas	
Barriers	

Results by Receiver

Address	Land Use	Noise Catchment Area	Construction Noise Management Level, dBA	Predicted Noise Level, dBA	Predicted Noise Level Above Noise Management Level, dB	Noise Category

No results

Recommended Mitigation Measures

This assessment has been conducted with regard to the relevant CNVIS and CNVMP. To manage noise and vibration impacts, project specific mitigation measures may be considered such as reviewing construction staging methodology to identify opportunities to schedule intensive works during less sensitive time periods and by providing a clear process for community engagement and complaints. Likewise, the requirements and actionable items within the overarching CNVIS and CNVMP should be considered and adopted where appropriate. Following the consideration of project specific noise mitigation measures, additional noise mitigation measures to be explored are described in the Inland Rail NSW Construction Noise and Vibration Framework (CNVF) and summarised below.

Airborne Noise - Additional Mitigation Measures Matrix				
Time Period	**Exceedance of NML**	**Perception**	**Duration**	**Communication Category/Management Measure**
OOHW Daytime Period Sunday 7am - 6pm (including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
	>25	Highly intrusive	Any	CO1, CO2
OOHW Evening Period Monday - Sunday 6pm - 10pm (including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
	>25	Highly intrusive	Any	CO1, CO2
			>2 consecutive rest periods	CO1, CO2, RO
OOHW Night Period Monday - Sunday 10pm - 7am (including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
			>2 consecutive sleep periods	CO1, CO2, RO, AO
	>25	Highly intrusive	Any	CO1, CO2, RO
			>2 consecutive sleep periods	CO1, CO2, RO, AO, AltA

Vibration - Additional Mitigation Measures Matrix			
Time Period	**Duration**	**Exceedance of 'preferred' value**	**Exceedance of 'maximum' value**
OOHW Daytime Period Sunday 8am-6pm	Any	CO1, CO2	CO1, CO2, RO
OOHW Evening Period Mon-Sun 6pm-10pm	Any	CO1, CO2	CO1, CO2, RO
OOHW Night Period Mon-Sat 10pm-7am Sun 10pm-8am	Any	CO1, CO2, RO	CO1, CO2, RO, AltA

Additional Mitigation Measures	
Measure	**Abbreviation**
Communication (Category 1)[1]	CO1
Communication (Category 2)[2]	CO2
Respite Offer[3]	RO
Alternative Accommodation	AltA
Agreement with Owners	AO

Note 1: CO1: Communication to provide information on the OOHW via methods such as letter box drop, email, newsletter, media advertisements and/ or website prior to the works commencing.

Note 2: CO2: Communication should be personalised (e.g. door knock, meeting, telephone call). Contact with these residents should commence early to enable feedback to be considered by the proposal.

Note 3: RO are not applicable to non-residential receivers. RO may comprise of pre-purchased movie tickets, dinner vouchers or similar. RO can also be provided by limiting high noise generating works and allowing at least a one-hour respite period between blocks of work. Where possible, the timing of this respite should be discussed with the impacted community.

Receiver Types			
Code	**Description**	**Code**	**Description**
RES	Residential	OED	Other Educational
COM	Commercial	OHO	Other Hotel
IND	Industrial	OLI	Other Library
OOA	Other Outdoor Active Recreation	OME	Other Medical
OOP	Other Outdoor Passive Recreation	OPW	Other Place of Worship
OCC	Other Child Care	OPB	Other Public Building

APPENDIX B

SLR Predict (W.012A)

Construction Noise and Vibration Impact Statement (CNVIS)

This report presents the outcomes of detailed noise/vibration modelling relating to specific construction activities proposed on site in accordance with the methodology outlined in the *Construction Noise and Vibration Management Plan* (CNVMP) and overarching *Construction Noise and Vibration Impact Statement* (CNVIS).
Prior to detailed noise/vibration modelling being undertaken, work activities are reviewed and considered in relation to industry best practice, consistent with the requirements of the CNVMP. Consideration is first given to eliminating the noise/vibration emissions so far as reasonably practicable. Where elimination is not practicable, efforts are been made to reduce the risk as far as practical by implementing noise and vibration management measures as outlined in the overarching CNVIS and CNVMP.
Examples of these measures include selecting the quietest equipment and processes to complete the works, considering staging and periods of respite to minimise prolonged periods of noise and vibration exposure, and maximising distances between construction activities and sensitive receivers.

Consultation with Affected Receivers
In accordance with CoA E78, the CNVIS must include specific mitigation measures identified through consultation with affected sensitive land user(s) and the mitigation measures must be implemented for the duration of the Work. Details of this consultation are provided in the overarching CNVIS for each enhancement site.

Predicted Noise Levels
The assessment presents the highest predicted level at each receiver building, considering predictions at each floor and façade from all potential work areas. The assessment is generally considered conservative as the calculations assume several items of construction equipment are in use at the same time within each work area. The assessment uses 'realistic worst-case' scenarios to determine the impacts from the noisiest 15-minute period that is likely to occur for each work scenario.

Assessment Details

Author Name	
Author Email	noiseassessments@martinus.com.au
Author Organisation	Martinus Rail
Project Name	A2I - Albury to Illabo
Assessment Name	J7 LX604 temp crossing
Assessment Number	404
Stage	A2I Construction
Permit Number	
Start Date	
End Date	
Assessment Period	Night - out of hours

Equipment Details

Plant/Equipment	Equipment Sound Power Level (Unadjusted), dBA	Number of Units	Temporary Noise Barrier
1: LX604 tempoarary crossing (Height: Ground)	Total: 116		
Hi-Rail Hydrema 25% operation	107	1	No
Truck - dump 25% operation	117	1	No
Grader (small) 50% operation	110	1	No
Water Cart 75% operation	105	1	No
Front End Loader 50% operation	113	1	No
Positrack 50% operation	104	1	No
Hi-Rail Excavator (20T) 50% operation	105	1	No
Roller - vibratory (2-4t) 100% operation	109	1	No

Note 1: Equipment classed as 'annoying' in the *Interim Construction Noise Guideline (DECC, 2009)* include a 5 dB correction.
Note 2: Equipment sound power levels consider the mitigation measures outlined in the overarching CNVIS to provide mitigated results.

Assessment Results

	Residential	Non-Residential
Highly Intrusive	2 properties	0 property
Moderately Intrusive	5 properties	1 property
Clearly Audible	17 properties	0 property
Noticeable	11 properties	0 property
Above Sleep Disturbance	11 properties	0 property
Above Sleep Awake	2 properties	0 property

Legend

Project Boundary	
Work Areas	
Barriers	

Results by Receiver

Address	Land Use	Noise Catchment Area	Construction Noise Management Level, dBA	Predicted Noise Level, dBA	Predicted Noise Level Above Noise Management Level, dB	Noise Category
2 CROWTHER ST, ILLABO NSW 2590	RES	NCA15	38	70	32	Highly Intrusive Above Sleep Dist Above Sleep Awake
2-4 TURLAND ST, ILLABO NSW 2590	RES	NCA15	38	68	30	Highly Intrusive Above Sleep Dist Above Sleep Awake
26 CROWTHER ST, ILLABO NSW 2590	RES	NCA15	38	62	24	Moderately Intrusive Above Sleep Dist
18 CROWTHER ST, ILLABO NSW 2590	RES	NCA15	38	59	21	Moderately Intrusive Above Sleep Dist
29 COMMINS ST, ILLABO NSW 2590	RES	NCA15	38	57	19	Moderately Intrusive Above Sleep Dist
14 TURLAND ST, ILLABO NSW 2590	OHO	NCA15	45	64	19	Moderately Intrusive
23 COMMINS ST, ILLABO NSW 2590	RES	NCA15	38	56	18	Moderately Intrusive Above Sleep Dist
24 MORRIS ST, ILLABO NSW 2590	RES	NCA15	38	55	17	Moderately Intrusive Above Sleep Dist
33 COMMINS ST, ILLABO NSW 2590	RES	NCA15	38	53	15	Clearly Audible Above Sleep Dist

Results by Receiver

Address	Land Use	Noise Catchment Area	Construction Noise Management Level, dBA	Predicted Noise Level, dBA	Predicted Noise Level Above Noise Management Level, dB	Noise Category
26 MORRIS ST, ILLABO NSW 2590	RES	NCA15	38	52	14	Clearly Audible Above Sleep Dist
36 TURLAND ST, ILLABO NSW 2590	RES	NCA15	38	51	13	Clearly Audible Above Sleep Dist
6-8 LAYTON ST, ILLABO NSW 2590	RES	NCA15	38	50	12	Clearly Audible Above Sleep Dist
25 LAYTON ST, ILLABO NSW 2590	RES	NCA15	38	49	11	Clearly Audible
LOT 4 (DP758533) BOREE ST, ILLABO NSW 2590	RES	NCA15	38	48	10	Clearly Audible
21 WOOD ST, ILLABO NSW 2590	RES	NCA15	38	48	10	Clearly Audible
31 CROWTHER ST, ILLABO NSW 2590	RES	NCA15	38	48	10	Clearly Audible
24-26 LAYTON ST, ILLABO NSW 2590	RES	NCA15	38	47	9	Clearly Audible
47 EURONGILLY RD, ILLABO NSW 2590	RES	NCA15	38	46	8	Clearly Audible
2 HOWELL ST, ILLABO NSW 2590	RES	NCA15	38	46	8	Clearly Audible
37 CROWTHER ST, ILLABO NSW 2590	RES	NCA15	38	46	8	Clearly Audible
47 EURONGILLY RD, ILLABO NSW 2590	RES	NCA15	38	45	7	Clearly Audible
10 HOWELL ST, ILLABO NSW 2590	RES	NCA15	38	45	7	Clearly Audible

Results by Receiver

Address	Land Use	Noise Catchment Area	Construction Noise Management Level, dBA	Predicted Noise Level, dBA	Predicted Noise Level Above Noise Management Level, dB	Noise Category
33 LAYTON ST, ILLABO NSW 2590	RES	NCA15	38	45	7	Clearly Audible
81 WOOD ST, ILLABO NSW 2590	RES	NCA15	38	44	6	Clearly Audible
10 HOWELL ST, ILLABO NSW 2590	RES	NCA15	38	44	6	Clearly Audible
11 HOWELL ST, ILLABO NSW 2590	RES	NCA15	38	43	5	Noticeable
35 LAYTON ST, ILLABO NSW 2590	RES	NCA15	38	43	5	Noticeable
6 JUBILEE ST, ILLABO NSW 2590	RES	NCA15	38	43	5	Noticeable
LOT 4 (DP758533) LAYTON ST, ILLABO NSW 2590	RES	NCA15	38	42	4	Noticeable
6 TURLAND ST, ILLABO NSW 2590	RES	NCA15	38	42	4	Noticeable
13 HOWELL ST, ILLABO NSW 2590	RES	NCA15	38	42	4	Noticeable
16 HOWELL ST, ILLABO NSW 2590	RES	NCA15	38	42	4	Noticeable
41-45 LAYTON ST, ILLABO NSW 2590	RES	NCA15	38	42	4	Noticeable
81 ILLABO SHOWGROUND RD, ILLABO NSW 2590	RES	NCA15	38	41	3	Noticeable
7 TOOHEYS LANE, ILLABO NSW 2590	RES	NCA15	38	41	3	Noticeable

Results by Receiver

Address	Land Use	Noise Catchment Area	Construction Noise Management Level, dBA	Predicted Noise Level, dBA	Predicted Noise Level Above Noise Management Level, dB	Noise Category
17 TOOHEYS LANE, ILLABO NSW 2590	RES	NCA15	38	40	2	Noticeable

Recommended Mitigation Measures

This assessment has been conducted with regard to the relevant CNVIS and CNVMP. To manage noise and vibration impacts, project specific mitigation measures may be considered such as reviewing construction staging methodology to identify opportunities to schedule intensive works during less sensitive time periods and by providing a clear process for community engagement and complaints. Likewise, the requirements and actionable items within the overarching CNVIS and CNVMP should be considered and adopted where appropriate. Following the consideration of project specific noise mitigation measures, additional noise mitigation measures to be explored are described in the Inland Rail NSW Construction Noise and Vibration Framework (CNVF) and summarised below.

Airborne Noise - Additional Mitigation Measures Matrix				
Time Period	**Exceedance of NML**	**Perception**	**Duration**	**Communication Category/Management Measure**
OOHW Daytime Period Sunday 7am - 6pm (including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
	>25	Highly intrusive	Any	CO1, CO2
OOHW Evening Period Monday - Sunday 6pm - 10pm (including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
	>25	Highly intrusive	Any	CO1, CO2
			>2 consecutive rest periods	CO1, CO2, RO
OOHW Night Period Monday - Sunday 10pm - 7am (including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
			>2 consecutive sleep periods	CO1, CO2, RO, AO
	>25	Highly intrusive	Any	CO1, CO2, RO
			>2 consecutive sleep periods	CO1, CO2, RO, AO, AltA

Vibration - Additional Mitigation Measures Matrix			
Time Period	**Duration**	**Exceedance of 'preferred' value**	**Exceedance of 'maximum' value**
OOHW Daytime Period Sunday 8am-6pm	Any	CO1, CO2	CO1, CO2, RO
OOHW Evening Period Mon-Sun 6pm-10pm	Any	CO1, CO2	CO1, CO2, RO
OOHW Night Period Mon-Sat 10pm-7am Sun 10pm-8am	Any	CO1, CO2, RO	CO1, CO2, RO, AltA

Additional Mitigation Measures	
Measure	**Abbreviation**
Communication (Category 1)[1]	CO1
Communication (Category 2)[2]	CO2
Respite Offer[3]	RO
Alternative Accommodation	AltA
Agreement with Owners	AO

Note 1: CO1: Communication to provide information on the OOHW via methods such as letter box drop, email, newsletter, media advertisements and/ or website prior to the works commencing.

Note 2: CO2: Communication should be personalised (e.g. door knock, meeting, telephone call). Contact with these residents should commence early to enable feedback to be considered by the proposal.

Note 3: RO are not applicable to non-residential receivers. RO may comprise of pre-purchased movie tickets, dinner vouchers or similar. RO can also be provided by limiting high noise generating works and allowing at least a one-hour respite period between blocks of work. Where possible, the timing of this respite should be discussed with the impacted community.

Receiver Types			
Code	**Description**	**Code**	**Description**
RES	Residential	OED	Other Educational
COM	Commercial	OHO	Other Hotel
IND	Industrial	OLI	Other Library
OOA	Other Outdoor Active Recreation	OME	Other Medical
OOP	Other Outdoor Passive Recreation	OPW	Other Place of Worship
OCC	Other Child Care	OPB	Other Public Building

APPENDIX C

SLR Predict (W.013)

Construction Noise and Vibration Impact Statement (CNVIS)

This report presents the outcomes of detailed noise/vibration modelling relating to specific construction activities proposed on site in accordance with the methodology outlined in the *Construction Noise and Vibration Management Plan* (CNVMP) and overarching *Construction Noise and Vibration Impact Statement* (CNVIS).
Prior to detailed noise/vibration modelling being undertaken, work activities are reviewed and considered in relation to industry best practice, consistent with the requirements of the CNVMP. Consideration is first given to eliminating the noise/vibration emissions so far as reasonably practicable. Where elimination is not practicable, efforts are been made to reduce the risk as far as practical by implementing noise and vibration management measures as outlined in the overarching CNVIS and CNVMP.
Examples of these measures include selecting the quietest equipment and processes to complete the works, considering staging and periods of respite to minimise prolonged periods of noise and vibration exposure, and maximising distances between construction activities and sensitive receivers.

Consultation with Affected Receivers
In accordance with CoA E78, the CNVIS must include specific mitigation measures identified through consultation with affected sensitive land user(s) and the mitigation measures must be implemented for the duration of the Work. Details of this consultation are provided in the overarching CNVIS for each enhancement site.

Predicted Noise Levels
The assessment presents the highest predicted level at each receiver building, considering predictions at each floor and façade from all potential work areas. The assessment is generally considered conservative as the calculations assume several items of construction equipment are in use at the same time within each work area. The assessment uses 'realistic worst-case' scenarios to determine the impacts from the noisiest 15-minute period that is likely to occur for each work scenario.

Assessment Details

Author Name	
Author Email	noiseassessments@martinus.com.au
Author Organisation	Martinus Rail
Project Name	A2I - Albury to Illabo
Assessment Name	J7 477 Watermain
Assessment Number	359
Stage	A2I Construction
Permit Number	
Start Date	
End Date	
Assessment Period	Day - standard

Equipment Details

Plant/Equipment	Equipment Sound Power Level (Unadjusted), dBA	Number of Units	Temporary Noise Barrier
1: Watermain relocation (Height: Ground)	Total: 114		
Directional Drill 50% operation	101	1	No
Excavator - Tracked (10T) 50% operation	100	1	No
Bobcat 50% operation	104	1	No
Truck - vacuum (NDD or non-destructive digger) 100% operation	109	1	No
Water Cart 75% operation	105	1	No
Water Pump 75% operation	93	1	No
Welding Equipment 100% operation	110	1	No

Note 1: Equipment classed as 'annoying' in the *Interim Construction Noise Guideline (DECC, 2009)* include a 5 dB correction.
Note 2: Equipment sound power levels consider the mitigation measures outlined in the overarching CNVIS to provide mitigated results.

Equipment Details

Plant/Equipment	Equipment Sound Power Level (Unadjusted), dBA	Number of Units	Temporary Noise Barrier
Generator - diesel/ petrol 100% operation	103	1	No
Hand tools (electric) 75% operation	102	1	No
Truck - light rigid 25% operation	97	1	No
Light Vehicle (accelerating) 25% operation	95	5	No
Hand tools (manual) 75% operation	102	1	No

Note 1: Equipment classed as 'annoying' in the *Interim Construction Noise Guideline (DECC, 2009)* include a 5 dB correction.
Note 2: Equipment sound power levels consider the mitigation measures outlined in the overarching CNVIS to provide mitigated results.

Assessment Results

Residential **Non-Residential**

Assessment Results

	Highly Intrusive	0 property	0 property
	Moderately Intrusive	0 property	0 property
	Clearly Audible	2 properties	0 property
	Above HNA	0 property	0 property

Legend

	Project Boundary
	Work Areas
	Barriers

Results by Receiver

Address	Land Use	Noise Catchment Area	Construction Noise Management Level, dBA	Predicted Noise Level, dBA	Predicted Noise Level Above Noise Management Level, dB	Noise Category
731 BALLENGOARRAH LANE, WANTIOOL NSW 2663	RES	NCA15	51	54	3	Clearly Audible
731 BALLENGOARRAH LANE, WANTIOOL NSW 2663	RES	NCA15	51	53	2	Clearly Audible

Recommended Mitigation Measures

This assessment has been conducted with regard to the relevant CNVIS and CNVMP. To manage noise and vibration impacts, project specific mitigation measures may be considered such as reviewing construction staging methodology to identify opportunities to schedule intensive works during less sensitive time periods and by providing a clear process for community engagement and complaints. Likewise, the requirements and actionable items within the overarching CNVIS and CNVMP should be considered and adopted where appropriate. Following the consideration of project specific noise mitigation measures, additional noise mitigation measures to be explored are described in the Inland Rail NSW Construction Noise and Vibration Framework (CNVF) and summarised below.

Airborne Noise - Additional Mitigation Measures Matrix				
Time Period	**Exceedance of NML**	**Perception**	**Duration**	**Communication Category/Management Measure**
OOHW Daytime Period Sunday 7am - 6pm (including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
	>25	Highly intrusive	Any	CO1, CO2
OOHW Evening Period Monday - Sunday 6pm - 10pm (including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
	>25	Highly intrusive	Any	CO1, CO2
			>2 consecutive rest periods	CO1, CO2, RO
OOHW Night Period Monday - Sunday 10pm - 7am (including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
			>2 consecutive sleep periods	CO1, CO2, RO, AO
	>25	Highly intrusive	Any	CO1, CO2, RO
			>2 consecutive sleep periods	CO1, CO2, RO, AO, AltA

Vibration - Additional Mitigation Measures Matrix			
Time Period	**Duration**	**Exceedance of 'preferred' value**	**Exceedance of 'maximum' value**
OOHW Daytime Period Sunday 8am-6pm	Any	CO1, CO2	CO1, CO2, RO
OOHW Evening Period Mon-Sun 6pm-10pm	Any	CO1, CO2	CO1, CO2, RO
OOHW Night Period Mon-Sat 10pm-7am Sun 10pm-8am	Any	CO1, CO2, RO	CO1, CO2, RO, AltA

Additional Mitigation Measures	
Measure	**Abbreviation**
Communication (Category 1)[1]	CO1
Communication (Category 2)[2]	CO2
Respite Offer[3]	RO
Alternative Accommodation	AltA
Agreement with Owners	AO

Note 1: CO1: Communication to provide information on the OOHW via methods such as letter box drop, email, newsletter, media advertisements and/ or website prior to the works commencing.

Note 2: CO2: Communication should be personalised (e.g. door knock, meeting, telephone call). Contact with these residents should commence early to enable feedback to be considered by the proposal.

Note 3: RO are not applicable to non-residential receivers. RO may comprise of pre-purchased movie tickets, dinner vouchers or similar. RO can also be provided by limiting high noise generating works and allowing at least a one-hour respite period between blocks of work. Where possible, the timing of this respite should be discussed with the impacted community.

Receiver Types			
Code	**Description**	**Code**	**Description**
RES	Residential	OED	Other Educational
COM	Commercial	OHO	Other Hotel
IND	Industrial	OLI	Other Library
OOA	Other Outdoor Active Recreation	OME	Other Medical
OOP	Other Outdoor Passive Recreation	OPW	Other Place of Worship
OCC	Other Child Care	OPB	Other Public Building

MARTINUS