ROAD TRAFFIC NOISE ASSESSMENT

RESIDENTIAL DEVELOPMENT

STAGES 1 TO 4

78 BEATTIE ROAD

COOMERA

Prepared for:
Citimark Properties Pty Ltd

Prepared by:
MWA Environmental

20 June 2025

Max Winders & Associates Pty Ltd tas MWA Environmental
Level 7, 241 Adelaide St, Brisbane GPO BOX 3137, Brisbane Qld 4001
P 07 3002 5500 E mail@mwaenviro.com.au
W mwaenviro.com.au
ABN 94 010 833 084

DOCUMENT CONTROL SHEET

MWA Environmental
Level 7 241 Adelaide Street
GPO Box 3137
Brisbane City QLD 4001

Telephone: 07 3002 5500

Email: mail@mwaenviro.com.au

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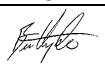
1 Report	20/06/2025	DS		BH	
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1.0 INTRODUCTION

1.1. STUDY BRIEF

MWA Environmental has been engaged to prepare a Road Traffic Noise Assessment report in support of a Reconfiguration of Lot application for Stages 1 to 4 of the 'Novella Waters' development at 78 Beattie Road, Coomera.

The assessment has addressed the potential future noise impacts from Beattie Road upon the proposed residential allotments. The assessment has been prepared in response to Item 33 of City of Gold Coast Information Request (reference COM/2024/380, dated 5 March 2025).

This assessment has been based upon noise monitoring undertaken on-site and detailed computer noise modelling of the future Beattie Road configuration and including the proposed urban design over the development site.

1.2. SITE DESCRIPTION

The site location and surrounding land uses are shown on **Figure 1**.

The real property description of the proposed residential development is part of Lot 50 on SP214550 ("**the subject site**").

The site holds a Preliminary Approval (including a variation request) varying the effect of the City Plan (version 4) in accordance with the 78 Beattie Road – Plan of development as approved by the Planning and Environment Judgement (Court Order No. 3029 of 2022).

The site is located immediately to the south of Beattie Road, between Lorenzo Drive and Gold Coast Train Line. At its closest, the site boundary is located approximately 3.5 metres from nearest running lane of the current alignment of Beattie Road.

1.3. PROPOSED DEVELOPMENT

The proposed residential development is a four (4) stage reconfiguration of lot application for Stages 1 to 4, to deliver a total of 175 residential allotments consistent with the framework set in the Preliminary Approval. The development also creates an internal road network, open space and park areas.

Access to development is via Beattie Road.

Along some parts of the northern boundary of the site, land on-site is to be resumed to accommodate future works in the Beattie Road corridor.

The proposed reconfiguration of lot plan is included at **Attachment 1**.

2.0 REGULATORY REQUIREMENTS

2.1. LOCAL GOVERNMENT REQUIREMENTS

The requirements for assessing road traffic noise intrusion for Reconfiguring a Lot applications are generally triggered under City Plan under the Regional Infrastructure Overlay Code for a material change of use, reconfiguring a lot or operational work for development subject to the Regional infrastructure overlay and the State controlled roads, rail corridor and transport noise corridors overlay. MWA Environmental notes that the proposed Stages 1 to 4 residential allotments are not affected by these overlays.

Notwithstanding, Item 33 of the Information Request references Performance Outcome PO1 of the City Plan General Development Provisions Code. The relevant part of PO1 is as follows:

> **PO1**
> Development mitigates any negative effects to amenity, health and safety from existing surrounding activities having regard to:
> (a) noise; …

No Acceptable Outcome is provided for PO1.

In the absence of specific planning scheme criteria for assessment of PO1, reference is made to the road traffic noise criteria presented at Section 8.2.14 of the City Plan Regional Infrastructure Overlay Code, Assessable Development Benchmarks are outlined in Part B for the determination of whether Beattie Road traffic noise is adequately mitigated.

The relevant noise provisions are reproduced below.

Table 8.2.14-3: Design Level – road and rail noise criteria

Measurement location	Design level road noise criteria
Balconies and formal external open space	(a) 60dB(A)$L_{10,18hr}$ or less, where existing levels measured at the setback for the zone are greater than 45dB(A)L_{90}(18hr) (b) 57dB(A)L_{10}18hr or less, where existing levels measured at the setback for the zone are less than or equal 45dB(A)$L_{90,18hr}$)

Notes: Road noise Criteria

(1) For the measurements above, all external levels stated are free field, and the expectation is that an additional 2.5 dB (A) increase is applied for the façade correction when the building is constructed. This will achieve a level equal to, or less than, 63 dB (A) and 60 dB (A), respectively, 1m from the most exposed façade of a building.

(2) The calculation and prediction of road noise levels is to be in accordance with the *Road Traffic Noise Management Code of Practice 2008*, published by the Queensland Department of Main Roads, and measurement is to be in accordance with *AS 2702–1984: Acoustics – Methods for the measurement of road traffic noise*. Alternative road traffic noise prediction models may be used where they can be justified as being appropriate to the circumstances of the particular situation and location and have been validated for Australian conditions.

(3) An assessment of road traffic noise is to be based on an ultimate ten-year traffic plan for the road, from the completion of construction of the development.

2.1.1. LIMITS FOR ROAD TRAFFIC NOISE INTRUSION INTO PRIVATE OPEN SPACE AREAS

Section 8.2.14 of the City Plan Regional Infrastructure Overlay Code identifies a pair of noise limits, with one limit of the pair applying depending on the prevailing $L_{A90(18hour)}$ [I] noise level. These limits are as follows:

1. 57 dB(A) $L_{A10(18hour)}$ free field if the measured $L_{A90(18hour)}$ is currently ≤45 dB(A) $L_{A90(18hour)}$.
2. 60 dB(A) $L_{A10(18hour)}$ free field if the measured $L_{A90(18hour)}$ is currently >45 dB(A) $L_{A90(18hour)}$.

[I] $L_{A90(18hour)}$ is defined as the arithmetic mean of each of the eighteen hourly $L_{A90(1hour)}$ levels between 6:00am and 12-midnight on an average weekday.

2.1.2. TRIGGERS FOR ACOUSTIC TREATMENT OF DWELLINGS

It should be noted that City of Gold Coast has not designated any Council-controlled roads as Transport Noise Corridors ("**TNC**") in accordance with Chapter 8B *Transport noise corridors* of Building Act 1975. Accordingly, the subject site is not located within a designated TNC. In the absence of a TNC, the provisions of Queensland Development Code Mandatory Part 4.4 - *Buildings in a Transport Noise Corridor* do not ordinarily apply in building applications for future residential dwellings.

Section 8.2.14 of the City Plan Regional Infrastructure Overlay Code includes Note (1) in relation to the assessment of noise levels of building facades, which specifies a +2.5 dB(A) façade reflection adjustment be applied for the determination of 63 dB(A) or 60 dB(A) $L_{A10(18hour)}$ noise criteria assessed 1m from the most exposed façade of a dwelling. The higher 63 dB(A) $L_{A10(18hour)}$ noise criterion is applicable where the $L_{A90(8hour)}$ noise level is >40 dB(A).

If future dwelling facades are assessed to be exposed to design horizon road traffic noise levels that exceed the façade criterion external to a habitable room then the relevant dwelling façade(s) should be designed and constructed in accordance with *AS3671-1989 Acoustics - Road traffic noise intrusion - Building siting and construction* to achieve the design internal noise levels specified in *AS2107:2016 Acoustics - Recommended design sound levels and reverberation times for building interiors*.

3.0 EXISTING NOISE ENVIRONMENT

3.1. EXISTING NOISE LEVELS

Assessment of existing road traffic noise levels has been based upon unattended noise monitoring conducted adjacent the northwestern boundary of Lot 50 on RP899479 at a location deemed representative of existing Beattie Road traffic noise levels at the most affected part of the subject site.

Unattended noise datalogging was conducted at a free field location over the period 3:05pm on 30 April 2025 to 12:45pm on 8 May 2025. The noise datalogger location is shown on **Figure 2**. The distance to the edge of the nearest running lane of Beattie Road from the position of the datalogger was approximately 5.8m. The height of the microphone above ground level was 1.6m.

Weather during the monitoring period included fine weather, overcast periods and some light rainfall recorded on 4th and 5th May 2024. These light rainfall events were insignificant and did not affect the key statistical noise levels for the Noise Impact Assessment.

The noise datalogger used was a Norsonic NOR139 noise logger and was pre-calibrated to 94 dB at 1kHz using a Bruel & Kjaer Acoustic Calibrator Type 4231 and displayed a deviation of less than -0.2 dB from this level at post-calibration.

The key resultant weekday noise levels are presented in **Table 1**, overpage, as statistical components, which are described as:

- $L_{A10,T}$: Noise level exceeded for 10 percent of the measurement period, referred to as the averaged maximum sound pressure level.
- $L_{A90,T}$: Noise level exceeded for 90 percent of the measurement period. AS 1055–2018 [II] notes that the $L_{A90,T}$ is described as the background sound pressure level.

Based on the overall noise level, the degree to which the data were contaminated by insect noise varies temporally and across the various statistical noise level parameters. However, the times when insect noise has been identified as being a significant extraneous influence on the statistical noise level parameters of interest were:

- $L_{A10,T}$: in the period 8:30pm to 6:00am
- $L_{A90,T}$: in the period 5:30pm to 7:00am

As insects are considered a seasonal noise source, it is accepted best practice to remove insect affect noise from any analysis of prevailing noise level data.

[II] Australian Standard AS 1055-2018 *Acoustics - Description and measurement of environmental noise*.

In these circumstances, data in each of the 1/3rd octaves substantially affected by insect noise (i.e. 3.15 kHz and 4.0 kHz) has been replaced with numerical values determined by linear interpolation of noise level data from the 2.0 kHz and 5.0 kHz 1/3rd octaves for the same statistical noise level parameter.

In this case, the statistical noise parameter adjusted by the method described above is limited to $L_{A90,T}$.

In summary, owing to the low-level contamination of data from which the $L_{A10(18hour)}$ noise level parameter has been derived and having filtered insect noise from levels measured by the $L_{A90,T}$ parameter, it has been determined that none of the averages presented in **Table 1** are materially affected by insect noise.

Table 1: Resultant Range of Weekday Statistical Noise Levels – Free Field 30 April 7 May 2025

DAY	DATE	AVERAGE STATISTCIAL NOISE LEVELS – dB(A)		
		$L_{A10(18hour)}$	$L_{A90(18hour)}$	$L_{A90(8hour)}$
Wednesday	30/042025	-	-	-
Thursday	01/05/2025	66.6	51.1	45.2
Friday	02/05/2025	67.2	51.0	42.1
Monday	05/05/2025	66.6	49.6	42.4
Tuesday	06/05/2025	66.6	49.8	45.7
Wednesday	07/05/2025	67.2	51.0	48.5
WEEKDAY AVERAGE		**66.8**	**50.5**	**44.8**

The complete results are presented as a trace of noise level versus time for the statistical noise level descriptors L_{Amax}, $L_{A1,T}$, $L_{A10,T}$, $L_{A90,T}$ and $L_{Aeq,T}$ as **Attachment 2**.

3.2. NOISE ASSESSMENT CRITERIA

Analysis of the noise level data obtained by monitoring by MWA Environmental demonstrates that the average weekday $L_{A90(18hour)}$ noise level is >45 dB(A) and the average weekday $L_{A90(8hour)}$ noise level is >40 dB(A).

On this basis, the relevant road traffic noise criteria applicable to the proposed development have then been determined to be as detailed in **Table 2**.

Table 2: Noise Criterion and Location for Compliance

NOISE LEVEL LIMIT	PARAMETER	LOCATION	HEIGHT ABOVE GROUND
60 dBA (free-field)	$L_{A10(18hour)}$	Private Open Space areas on lots	1.5 m
63 dBA (façade reflection adjusted)	$L_{A10(18hour)}$	1m from dwelling facades	1.8 m (for Ground Level dwelling facades) & 4.6 m (for Upper Level dwelling facades)

4.0 ROAD TRAFFIC NOISE IMPACT ASSESSMENT

4.1. ROAD TRAFFIC NOISE MODEL

Road traffic noise levels from Beattie Road have been predicted using SoundPLAN 9.0 computer noise modelling software applying the CoRTN 1988 algorithms for road traffic noise prediction. This method for computing road traffic noise levels is accepted by regulatory bodies in Queensland.

The road traffic noise model of the present-day situation has been based upon the following:

- Cadastral information obtained from the Queensland Spatial Catalogue – QSpatial on 16 April 2025.

The road traffic modelling and acoustic barrier design presented in this report for the design horizon has been based on the following:

- Cadastral information obtained from the Queensland Spatial Catalogue – QSpatial on 16 April 2025.
- Design surface levels over Stages 1 and 2 of the development S-8816-009-D MGA GDA2020 Proposed Reconfiguration Plan
- CAD files 22-161_Design_TIN(250507).dwg and x22-161_Base_25050 issued by Citimark 9 May 2025.
- Traffic advice on proposed Beattie Road 2038 (AADT & % heavy vehicle) received from Bitzios consulting via email on 15 May 2025.

4.2. ATTRIBUTES OF ROAD AND TRAFFIC

Adjacent the subject site, Beattie Road is presently a single carriageway consisting of two traffic lanes, one for each direction of travel. The road pavement surface was observed to be worn Chip/Bituminous Seal ("**BS**") with the average diameter of the exposed aggregate not exceeding 15 mm.

By reference to published data summarising the acoustic attributes of pavement surfaces in Queensland, and in keeping with DTMR policy regarding the CoRTN 1988 algorithms, a +1 dB(A) road surface correction factor has been applied in the noise model to account for the effect <15 mm BS road surfaces have on traffic noise levels in Queensland.

The traffic volume, vehicle mix and road speed information for Beattie Road under current conditions (i.e. 2025) has been set by reference to data provided by the project traffic engineers, Bitzios Consulting. In accordance with standard protocols the 18 hour volume for input to CoRTN was estimated as 94 percent of the daily volumes supplied by Bitzios.

The adopted traffic volumes and heavy vehicle percentages for Beattie Road under current conditions are presented in **Table 4**.

Table 4: Beattie Road Traffic Parameters for Existing Situation [III]

DIRECTION	LOCATION	YEAR	18 HOUR VOLUME (VEHICLES)	SPEED LIMIT (km/h)	HEAVY VEHICLES (%)
Eastbound	Ford Road	2024	4738	60	9.9
Westbound	Ford road	2024	4738	60	9.9

Likewise, at the subject site, the traffic volume, vehicle mix and road speed information for Beattie Road at the 10 year design horizon conditions (i.e. Year 2038) have also been set by reference to data and protocols provided by the project traffic engineers, Bitzios Consulting.

The adopted traffic volumes and heavy vehicle percentages for Beattie Road at the Year 2038 are presented in **Table 5**.

Table 5: Beattie Road Traffic Parameters at Year 2038 Design Horizon [III]

DIRECTION	ROADWAY SEGMENT	YEAR	18 HOUR VOLUME (VEHICLES)	SPEED LIMIT (km/h)	HEAVY VEHICLES (%)
Eastbound	West of Minor Access Road	2038	8401	60	9.9
Westbound	West of Minor Access Road	2038	14562	60	9.9
Eastbound	Between Minor and Major Access Road	2038	7846	60	9.9
Westbound	Between Minor and Major Access Road	2038	16121	60	9.9
Eastbound	East of Major Access Road	2038	6669	60	9.9
Westbound	East of Major Access Road	2038	16529	60	9.9

At the subject site, the current design information shows that Beattie Road will be a combination single & dual carriageway road consisting of single carriageway eastbound with dual carriageway westbound direction. The proposed future road surface type is nominated to be Medium Duty Dense Graded Asphalt ("**DGA**").

By reference to published data summarising the acoustic attributes of pavement surfaces in Queensland, and in keeping with DTMR policy regarding the CoRTN 1988 algorithms, a 0 dB(A) correction factor has been applied in the noise model to account for the effect DGA road surfaces have on traffic noise levels in Queensland.

[III] The 18 hour traffic volumes for Year 2024 and 2038 have been derived from data prepared by Bitzios Consulting using the equation: $Volume(18hr) = 5 \times \sum(Peak\ Flows) \times 94\%$.

4.3. ROAD TRAFFIC NOISE MODEL VALIDATION

Using the parameters above for Beattie Road at Year 2025, the $L_{A10(hour)}$ noise level was calculated based upon the existing topography over the site and surrounds with a receiver location representative of the monitoring location at 1.6m above ground level (refer **Figure 2**).

Table 6 summarises the comparison between the calculated [IV] and the measured road traffic noise level at the noise datalogger location.

Table 6: Analysis of Model Performance Against Monitoring Data

MONITORING LOCATION	$L_{A10(18hour)}$ (dB(A))		
	AVERAGE WEEKDAY	MODEL CALCULATED	DIFFERENCE
Noise datalogger	66.6	68.2 (68.9 - 0.7)	1.6

The road traffic noise model for Beattie Road validated to within 2 dB(A) of the target and thus achieves compliance with the ±2 dB(A) tolerance permitted under DTMR policy. Consequently, this result is considered acceptable for calculation of road traffic noise levels across the proposed development prior to Beattie Road being upgraded.

The SoundPLAN validation model result is provided in **Attachment 3**.

Nevertheless, in scenarios such as this, where the design horizon road under consideration is either not yet constructed or will be realigned/upgraded, it is not possible to ascertain with any accuracy how closely the predicted future road traffic noise levels would accord with future on-site noise level measurements.

4.4. DESIGN HORIZON ROAD TRAFFIC NOISE MODELLING

The SoundPLAN model was set up to predict traffic noise from Beattie Road as per the Year 2038 traffic conditions noted in **Table 5**, above.

4.4.1. PRIVATE OPEN SPACE

As shown in **Attachment 4**, without any noise mitigation measures, compliance with the free field 60 dB(A) $L_{A10(18hour)}$ noise level limit in the private open space (POS) areas is not achieved at any allotment along the Beattie Road frontage. Accordingly, to achieve compliance with the noise level limit on these lots, noise control measures will need to be implemented.

[IV] The -0.7 dBA free field CoRTN calibration factor for Queensland conditions specified in DTMR policy has been applied to the calculated road traffic noise level.

The assessment determined that acoustic barriers with height between 2.0m and 2.6m are required achieve compliance with the POS criterion. Details of the acoustic barrier arrangement to be constructed on nominated lots are detailed in **Figure 3** and documented as follows:

- For Lots 1 to 3 the northern boundary is to be provided with 2.6m high barrier. The western boundary of Lot 1 and the eastern boundary of Lot 3 are to be provided with 2.0m incrementally rising to 2.4m high barriers.
- Lot 54 is to be provided with barriers ranging from 2.2 up to 2.6m high for the western and northern boundary respectively.
- Between Lot 54 and Lot 97 a 2.0m high barrier is to be provided along the extent of the boundary.
- Lot 97 to 107 is to be provided with 2.4m high barrier along the northern boundary.
- Lot 107 is to be provided with a barrier 2.4m high barrier on the northern boundary and incrementally reduce down to 2.0m along the eastern boundary.
- Lot 108 is to be provided with a 2.0m high barrier on northern boundary and between 2.0m and 1.8m on the eastern boundary

Lot 1, Lot 3-4 and Lot 54-54 are affected by increased noise levels. The extent is limited to the frontage i.e. driveways of the allotments and provides necessary access. The POS are not expected to be affected.

The heights of the barriers outline above relate to height above the pad. The alignments of the **required acoustic barriers with heights in the range 1.8m to 2.6m high** are as shown on **Figure 3**. The road traffic noise levels within the POS areas with this barrier arrangement in place are as shown in **Attachment 5**.

These acoustic barriers must be constructed free from gaps and of materials such that each panel achieves a minimum superficial density of 12.5kg/m^2 (excluding structural elements).

4.4.2. DWELLING FACADES

The results of the SoundPLAN 9.0 traffic noise modelling are presented as a plots of the predicted L_{10} (18 hour) (façade reflection adjusted) noise levels for Ground Level (+1.8m) and Upper Level (+4.6m) receiver heights in **Attachment 6**.

The results of the external dwelling façade modelling demonstrate that, with the recommended acoustic barriers (refer **Figure 3**), the adopted external façade traffic noise planning criteria will be achieved for ground level building facades on all proposed residential allotments. As such, there is no requirement for acoustic treatment of single storey residential dwellings to mitigate road traffic noise.

If highset dwellings are constructed on the following allotments, as shown on **Figure 4**, then the upper level facades will need to be acoustically treated to achieve the design internal noise levels of AS2107:2016 within habitable rooms:

- Lots 1 to 4;
- Lots 54 to 55; and
- Lots 97 to 108.

No acoustic treatments are required to mitigate road traffic noise at highset dwellings on all other allotments.

Any upper level facades requiring acoustic treatment will also require air-conditioning and/or mechanical ventilation to allow occupants to close doors and windows as desired to achieve acceptable indoor noise amenity.

5.0 CONCLUSIONS

MWA Environmental was commissioned to prepare a Road Traffic Noise Assessment report for a proposed residential subdivision at 78 Beattie Road, (Lot 50 on SP214550).

The assessment was undertaken to address the applicable requirements specified in 32 & 33 of City of Gald Coast Information request (reference COM/2024/380 dated 5th March 2025).

The assessment determined:

1. The existing traffic noise level off Beattie Road.
2. The future level of road traffic noise over lots within 100m of Beattie Road.
3. Acoustic barriers are required to be erected in order to achieve compliance with the private open space criterion.
4. The allotments requiring acoustic treatment to achieve the internal design noise levels of AS2107:2016 and require mechanical ventilation

The alignment of the **required acoustic barriers with heights in the range 1.8m to 2.6m** are as shown in **Figure 3**. The resultant road traffic noise levels within the private open space areas are as shown in **Attachment 6**.

For single storey dwellings all allotments comply with external façade traffic noise planning criteria. For multi storey dwellings the upper level facades will need to be acoustically treated to achieve the design internal noise levels of AS2107:16 as outlined in **Figure 4.**

MWA Environmental
19 June 2025

FIGURES

LEGEND

SITE LOCATION

DRAWING REFERENCES

- JENSEN BOWERS PROPOSED RECONFIGURATION PLAN, NOVELLA WATERS - STAGES 1-4, DWG NO. S-8816-009 ISSUE B.
- © THE STATE OF QUEENSLAND (DEPARTMENT OF RESOURCES) QLDGLOBE.

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PROJECT

TRAFFIC ROAD NOISE ASSESSMENT

PROPOSED RESIDENTIAL DEVELOPMENT

78 BEATTIE ROAD COOMERA QLD

TITLE

ASSESSED RECEIVER LOCATIONS

JOB	COOMERA	**FIGURE 1**
JOB NO.	18-103	
DATE	18/06/25	DWG NUMBER
SCALE	1:2000 (A4)	**18-103-1**
REV.		

mwa ENVIRONMENTAL

Max Winders & Associates Pty Ltd tas MWA Environmental
Level 7, 241 Adelaide St, Brisbane, GPO BOX 3137, Brisbane Qld 4001
P 07 3002 5500 E mail@mwaenviro.com.au
W www.mwaenviro.com.au
ABN 94 010 833 084

LEGEND

SITE LOCATION

NOISE DATALOGGER LOCATION

DRAWING REFERENCE

N

0 20 40 60m

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PROJECT

TRAFFIC ROAD NOISE ASSESSMENT

PROPOSED RESIDENTIAL DEVELOPMENT
78 BEATTIE ROAD
COOMERA QLD

TITLE

NOISE DATALOGGER LOCATION

JOB	COOMERA	**FIGURE 2**
JOB NO.	18-103	
DATE	18/06/25	DWG NUMBER
SCALE	1:2000 (A4)	**18-103-2**
REV.		

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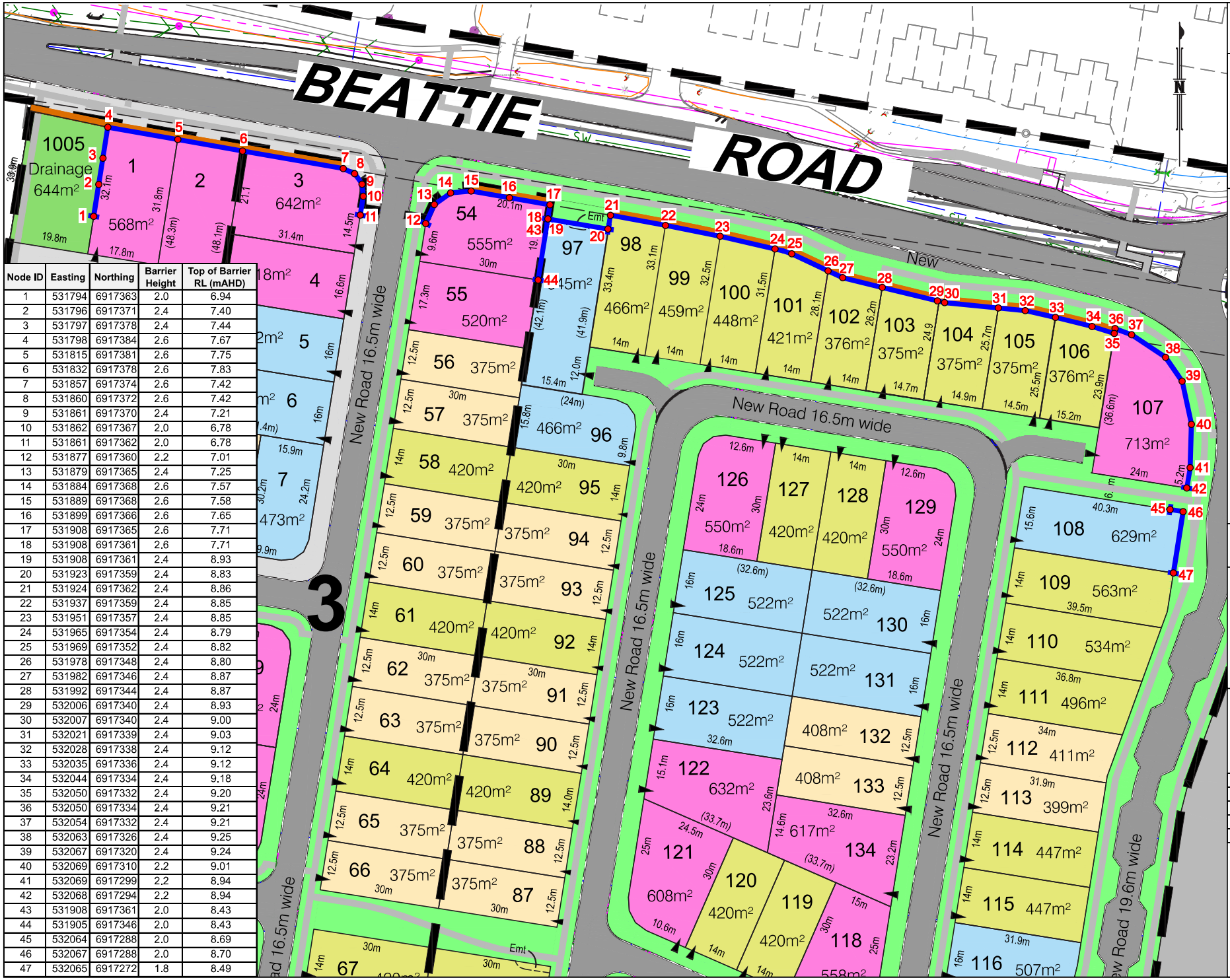
Max Winders & Associates Pty Ltd tas MWA Environmental
Level 7, 241 Adelaide St, Brisbane, GPO BOX 3137, Brisbane Qld 4001
P 07 3002 5500 E mail@mwaenviro.com.au
W www.mwaenviro.com.au
ABN 94 010 833 084



Node ID	Easting	Northing	Barrier Height	Top of Barrier RL (mAHD)
1	531794	6917363	2.0	6.94
2	531796	6917371	2.4	7.40
3	531797	6917378	2.4	7.44
4	531798	6917384	2.6	7.67
5	531815	6917381	2.6	7.75
6	531832	6917378	2.6	7.83
7	531857	6917374	2.6	7.42
8	531860	6917372	2.6	7.42
9	531861	6917370	2.4	7.21
10	531862	6917367	2.0	6.78
11	531861	6917362	2.0	6.78
12	531877	6917360	2.2	7.01
13	531879	6917365	2.4	7.25
14	531884	6917368	2.6	7.57
15	531889	6917368	2.6	7.58
16	531899	6917366	2.6	7.65
17	531908	6917365	2.6	7.71
18	531908	6917361	2.6	7.71
19	531908	6917361	2.4	8.93
20	531923	6917359	2.4	8.83
21	531924	6917362	2.4	8.86
22	531937	6917359	2.4	8.85
23	531951	6917357	2.4	8.85
24	531965	6917354	2.4	8.79
25	531969	6917352	2.4	8.82
26	531978	6917348	2.4	8.80
27	531982	6917346	2.4	8.87
28	531992	6917344	2.4	8.87
29	532006	6917340	2.4	8.93
30	532007	6917340	2.4	9.00
31	532021	6917339	2.4	9.03
32	532028	6917338	2.4	9.12
33	532035	6917336	2.4	9.12
34	532044	6917334	2.4	9.18
35	532050	6917332	2.4	9.20
36	532050	6917334	2.4	9.21
37	532054	6917332	2.4	9.21
38	532063	6917326	2.4	9.25
39	532067	6917320	2.4	9.24
40	532069	6917310	2.2	9.01
41	532069	6917299	2.2	8.94
42	532068	6917294	2.2	8.94
43	531908	6917361	2.0	8.43
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45	532064	6917288	2.0	8.69
46	532067	6917288	2.0	8.70
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LEGEND

ACOUSTIC BARRIER

47 NODE ID NUMBER
BARRIER NODE LOCATION

DRAWING REFERENCE
JENSEN BOWERS PROPOSED RECONFIGURATION PLAN, NOVELLA WATERS - STAGES 1-4, DWG NO. S-8816-009 ISSUE B.

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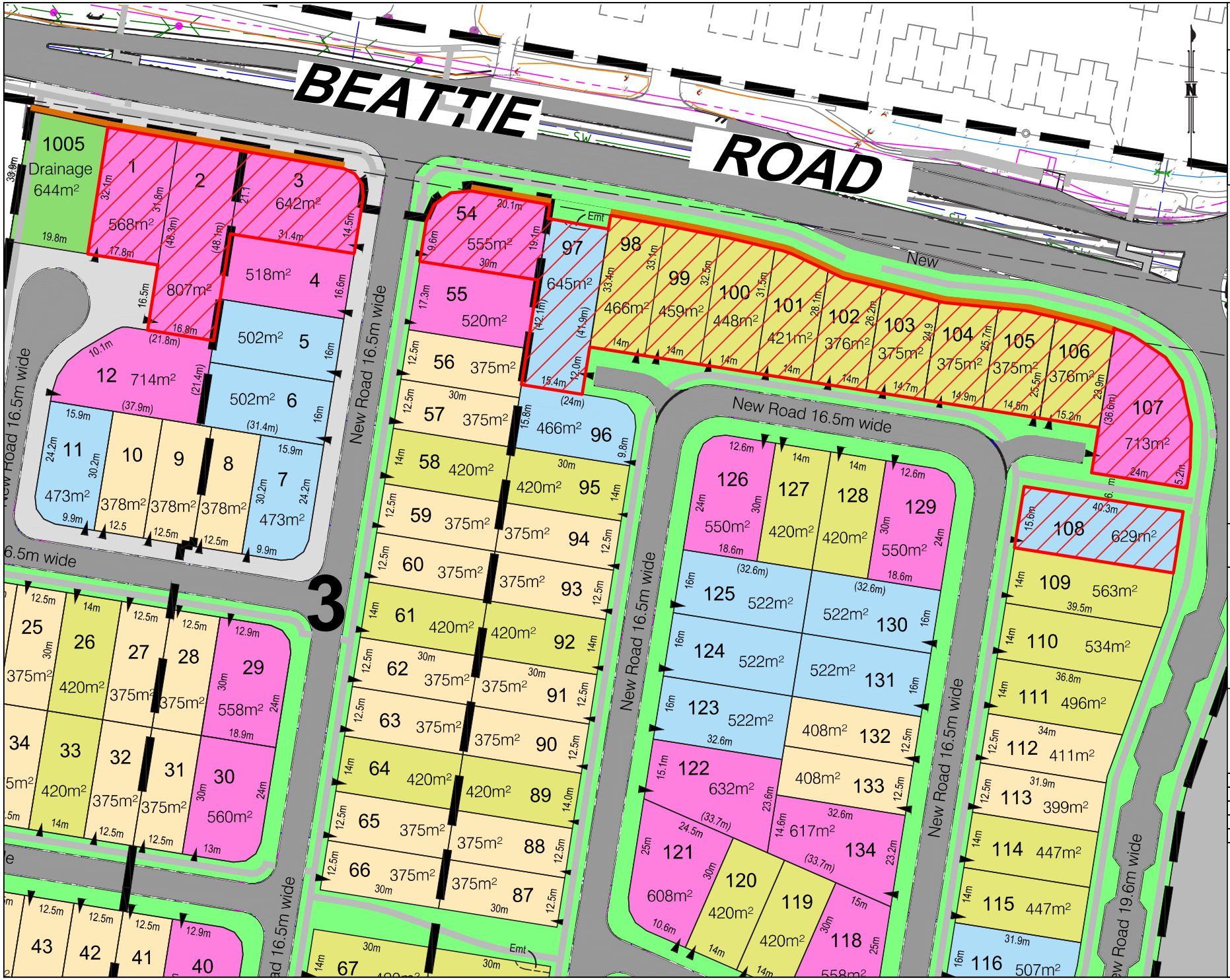
PROJECT
TRAFFIC ROAD NOISE ASSESSMENT
PROPOSED RESIDENTIAL DEVELOPMENT
78 BEATTIE ROAD
COOMERA QLD

TITLE
ACOUSTIC BARRIER DETAILS

JOB	COOMERA	**FIGURE 3**
JOB NO.	18-103	
DATE	18/06/25	DWG NUMBER
SCALE	1:1250 (A4)	**18-103-3**
REV.		

mwa ENVIRONMENTAL
Max Winders & Associates Pty Ltd tas MWA Environmental
Level 7, 241 Adelaide St, Brisbane, GPO BOX 3137, Brisbane Qld 4001
P 07 3002 5500 E mail@mwaenviro.com.au
W www.mwaenviro.com.au
ABN 94 010 833 084



LEGEND

RESIDENTIAL LOTS REQUIRING ACOUSTIC TREATMENT TO UPPER LEVELS

DRAWING REFERENCE
JENSEN BOWERS PROPOSED RECONFIGURATION PLAN, NOVELLA WATERS - STAGES 1-4,
DWG NO. S-8816-009 ISSUE B.

JENSEN BOWERS
SURVEYING
3D SPATIAL SOLUTIONS
DEVELOPMENT ADVISORY
jensenbowers.com.au

CLIENT
CITIMARK PROPERTIES PTY LTD

PROJECT
TRAFFIC ROAD NOISE ASSESSMENT
PROPOSED RESIDENTIAL DEVELOPMENT
78 BEATTIE ROAD
COOMERA QLD

TITLE
LOTS REQUIRING UPPER LEVEL ACOUSTIC TREATMENT

JOB	COOMERA	**FIGURE 4**
JOB NO.	18-103	
DATE	18/06/25	DWG NUMBER
SCALE	1:1250 (A4)	**18-103-4**
REV.		

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P 07 3002 5500 E mail@mwaenviro.com.au
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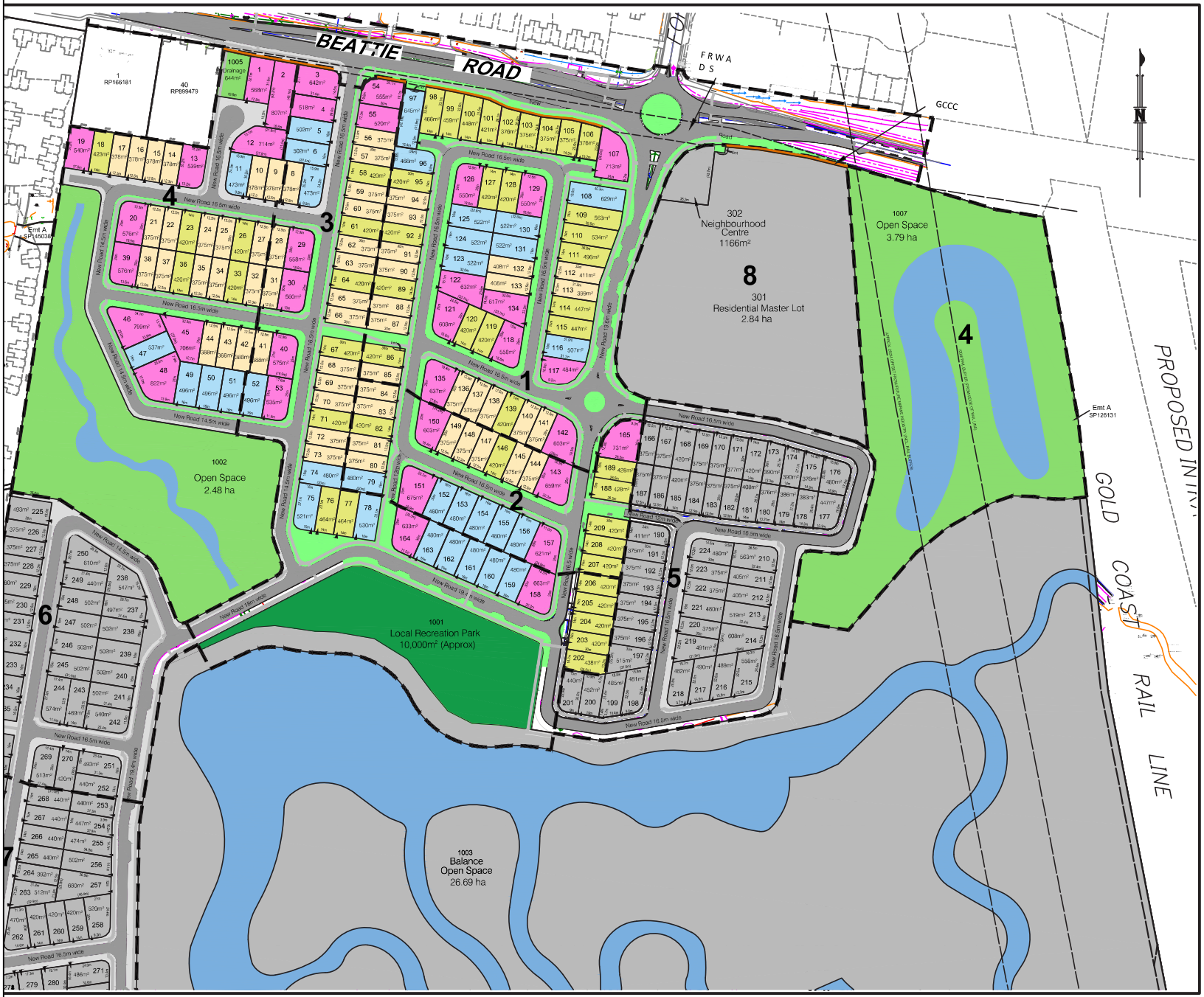
ABN 94 010 833 084

ATTACHMENT 1

Design Drawings



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DEVELOPMENT ADVISORY
jensenbowers.com.au

JENSEN BOWERS

Brisbane (Head Office)
72 Costin Street, Fortitude Valley, Qld, 4006
PO Box 796, Spring Hill, Qld, 4004
T (07) 3852 1771 F (07) 3252 9818

T.H. Jensen & Bowers Pty. Ltd. (Consulting Surveyors)
ABN. 52 010 872 607

Associated Consultants

Local Authority:	Gold Coast City Council
Authority Ref. No:	
RP Description:	Lot 50 on SP214550
Locality:	Coomera
Date of Survey:	-
Level Datum:	-
Origin:	-
Level Bk / Fd Bk:	-
Horizontal Datum:	MGA (GDA2020 - Zone 56)
Contour Interval:	-

Scale

0 25 50 75m
1 : 2500@A3 (Before Reduction)

Notes

The services shown hereon have been located where possible by field survey. Whilst due care and attention have been exercised, T.H. Jensen and Bowers Pty. Ltd. does not warrant that the services have been located in their entirety.

The boundaries shown hereon are for plotting purposes only and are subject to final survey.

The location of underground service lines are approximate only and have been plotted from field survey observations and/or service searches. Should their accurate location be critical to detail design we recommend further investigation.

Disclaimer

Any licence, expressed or implied, to use this document for any purpose whatsoever is restricted to the terms of the agreement or implied agreement between Jensen Bowers and the instructing party.

Drawn:	EC	Date:	19/03/2024
Surveyed:	N/A	Date:	
Checked:	DB	Date:	19/03/2024
Approved:			

Issue	Description	Date	Appd.
A	Original Issue	19/03/24	DB
B	Open Space Added	28/10/24	DB
C	Open Space Updated	13/01/25	DB
D	Lots 1-3, 54,97-67,188,189, 1003,1005 & 1007 Updated	06/02/25	DB

Client
Citimark Properties Pty Ltd

78 Beattie Road COOMERA

Proposed Reconfiguration Plan Novella Waters - Stages 1- 4
(Sheet 2 of 2)

Drawing No.	Issue	Original Size
S-8816-009	B	A3

CLIENT
CITIMARK PROPERTIES PTY LTD

PROJECT
NOISE ASSESSMENT
PROPOSED RESIDENTIAL DEVELOPMENT
78 BEATTIE ROAD COOMERA QLD

TITLE
PROPOSED DEVELOPMENT LAYOUT AND STAGES

JOB	COOMERA	Attachment 1	
JOB NO.	18-103		
DATE	18/06/25	DWG NUMBER	
SCALE	1:4000 (A4)	18-103-A1	
REV.			

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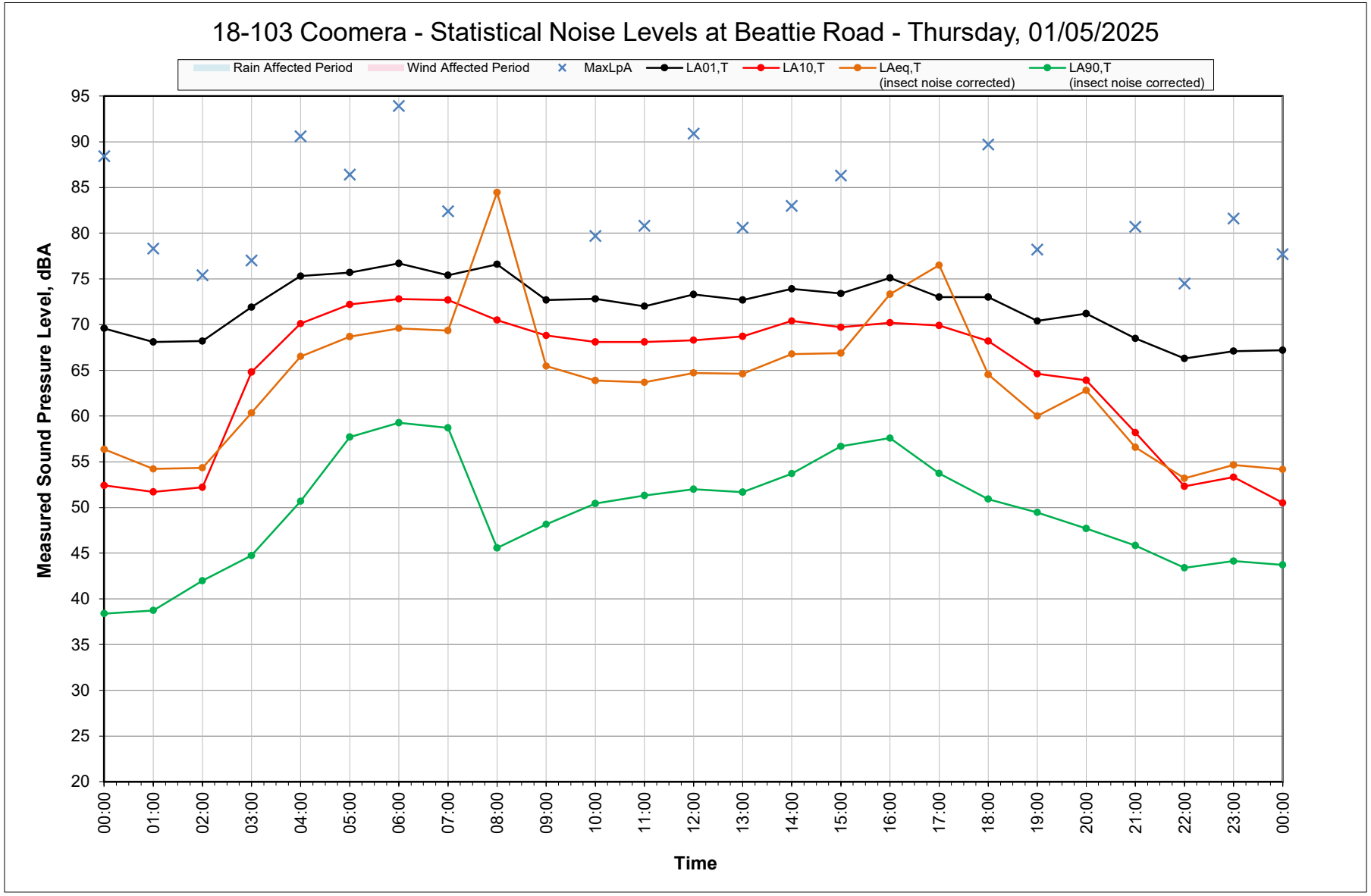
W www.mwaenviro.com.au
ABN 94 010 833 084

ATTACHMENT 2

Noise Datalogger Traces


18-103 Coomera - Statistical Noise Levels at Beattie Road - Thursday, 01/05/2025
Rain Affected Period
Wind Affected Period
MaxLpA
LA01,T
LA10,T
LAeq,T (insect noise corrected)
LA90,T (insect noise corrected)
Measured Sound Pressure Level, dBA
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
00:00
01:00
02:00
03:00
04:00
05:00
06:00
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12:00
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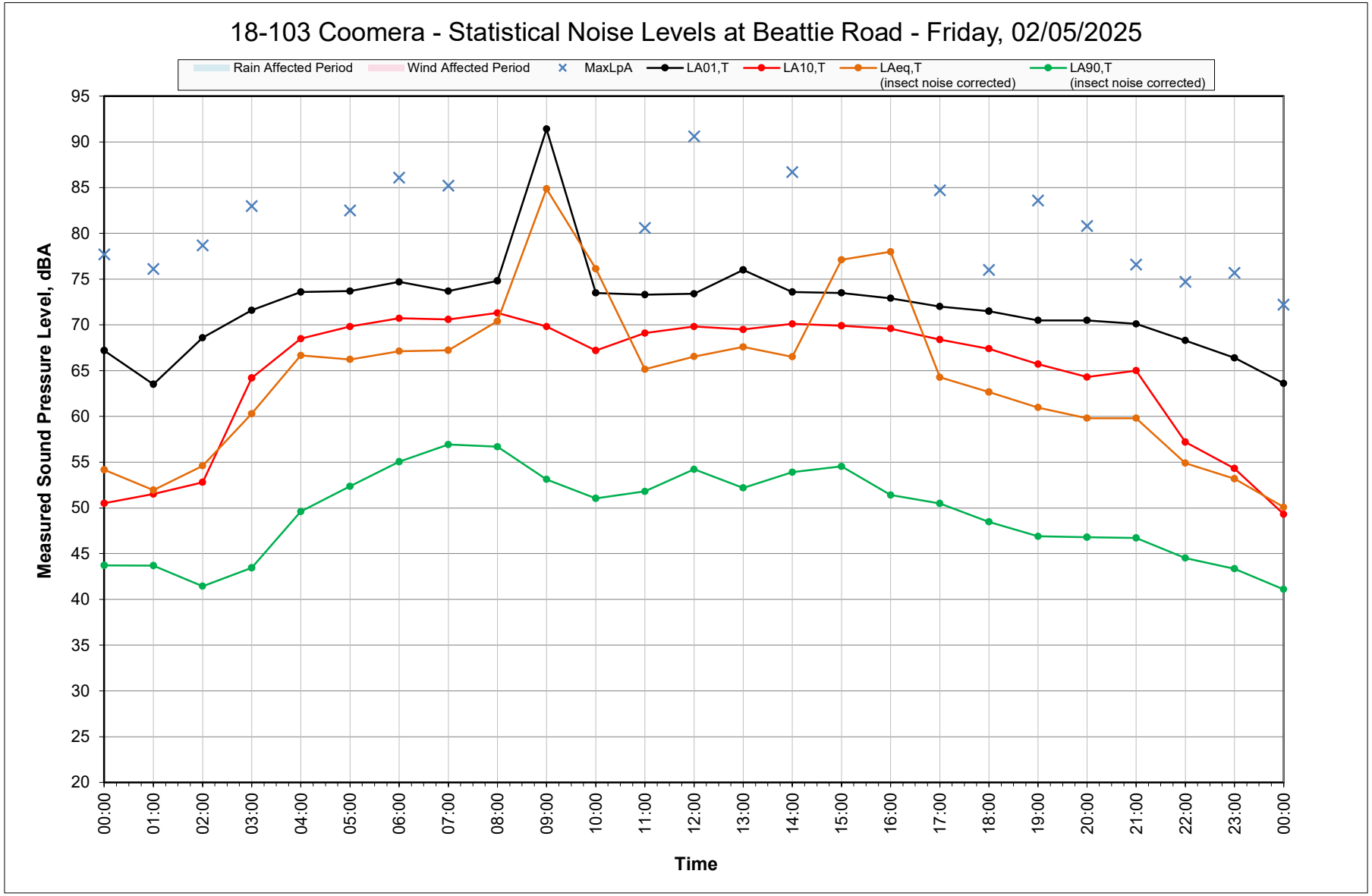
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Time


18-103 Coomera - Statistical Noise Levels at Beattie Road - Friday, 02/05/2025
Rain Affected Period
Wind Affected Period
MaxLpA
LA01,T
LA10,T
LAeq,T (insect noise corrected)
LA90,T (insect noise corrected)
Measured Sound Pressure Level, dBA
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
00:00
01:00
02:00
03:00
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22:00
23:00
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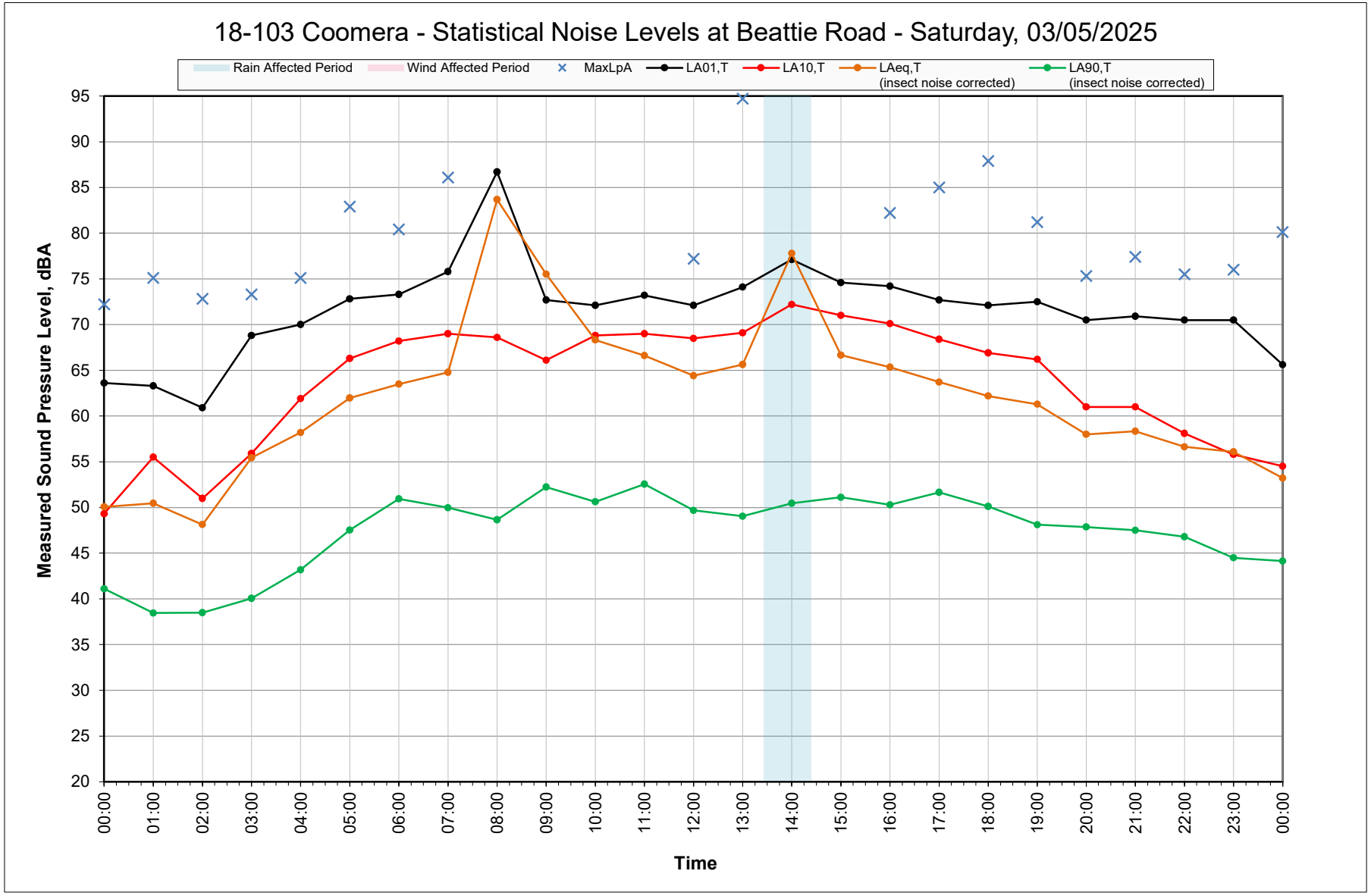
Time


18-103 Coomera - Statistical Noise Levels at Beattie Road - Saturday, 03/05/2025
Rain Affected Period
Wind Affected Period
MaxLpA
LA01,T
LA10,T
LAeq,T (insect noise corrected)
LA90,T (insect noise corrected)
Measured Sound Pressure Level, dBA
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
00:00
01:00
02:00
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16:00
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19:00
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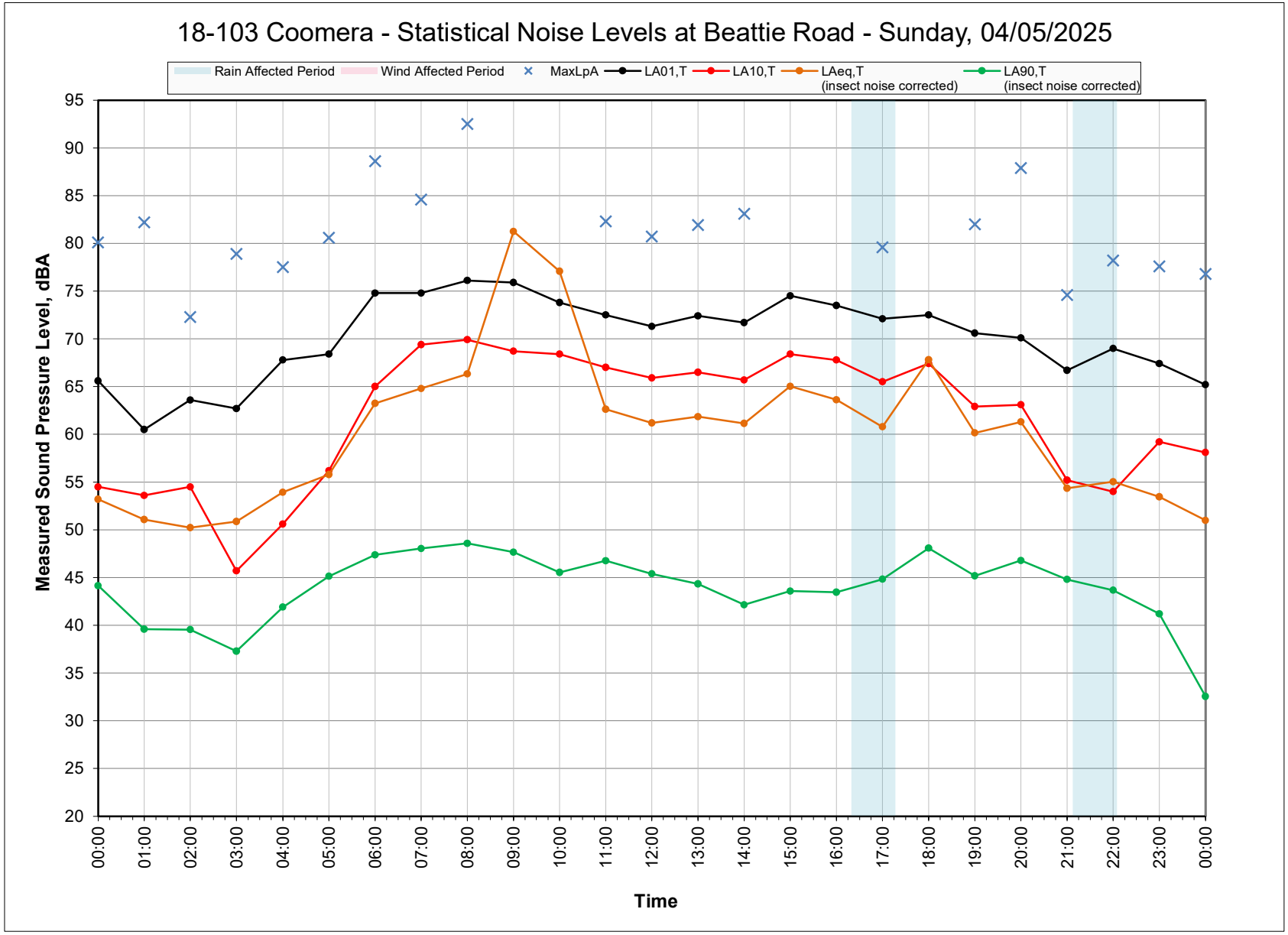
21:00
22:00
23:00
00:00
Time


18-103 Coomera - Statistical Noise Levels at Beattie Road - Sunday, 04/05/2025
Rain Affected Period
Wind Affected Period
MaxLpA
LA01,T
LA10,T
LAeq,T (insect noise corrected)
LA90,T (insect noise corrected)
Measured Sound Pressure Level, dBA
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
00:00
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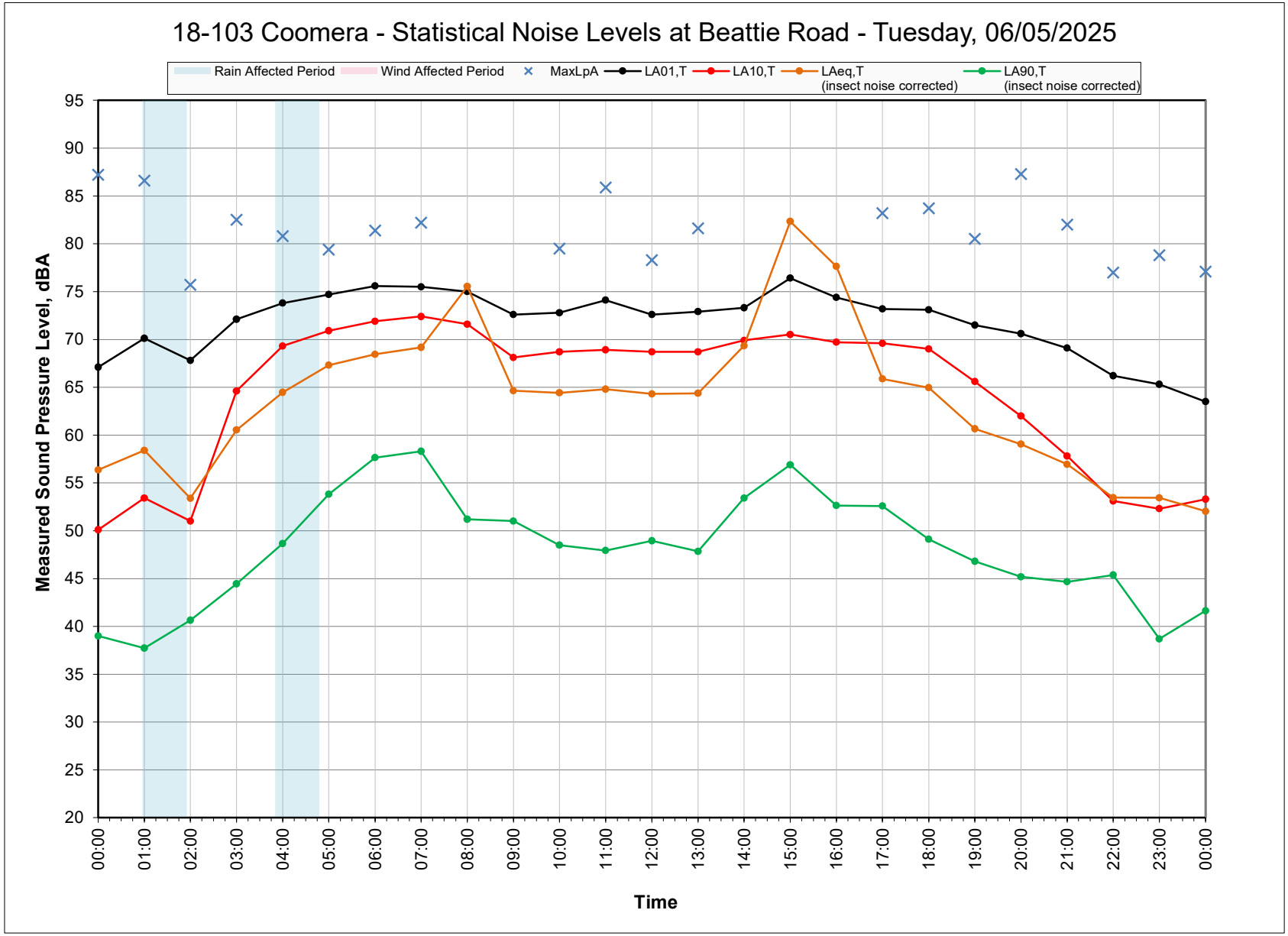
22:00
23:00
00:00
Time


18-103 Coomera - Statistical Noise Levels at Beattie Road - Tuesday, 06/05/2025
Rain Affected Period
Wind Affected Period
MaxLpA
LA01,T
LA10,T
LAeq,T (insect noise corrected)
LA90,T (insect noise corrected)
Measured Sound Pressure Level, dBA
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
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01:00
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21:00
22:00
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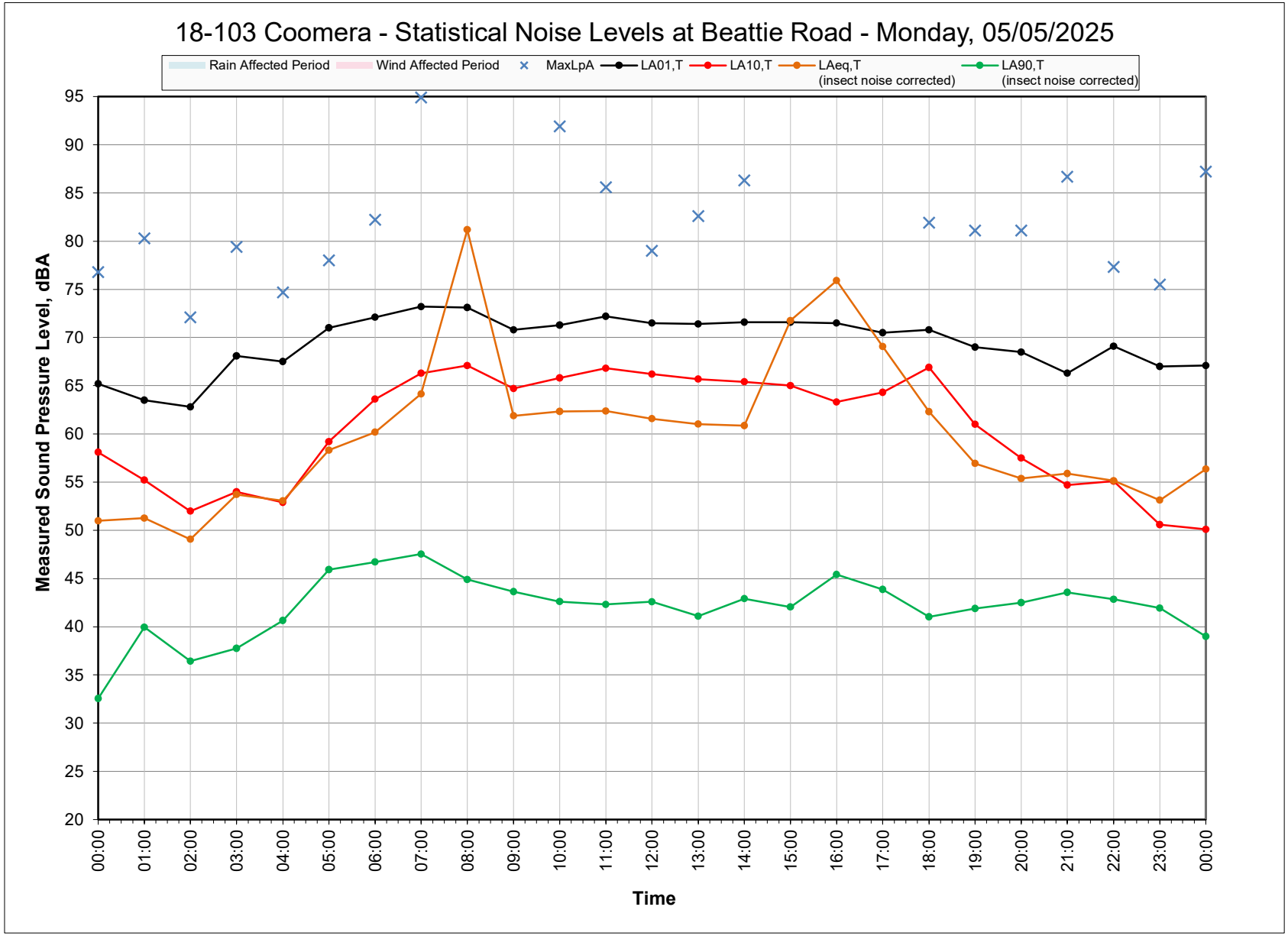
Time


18-103 Coomera - Statistical Noise Levels at Beattie Road - Monday, 05/05/2025
Rain Affected Period
Wind Affected Period
MaxLpA
LA01,T
LA10,T
LAeq,T (insect noise corrected)
LA90,T (insect noise corrected)
Measured Sound Pressure Level, dBA
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
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00:00
01:00
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21:00
22:00
23:00
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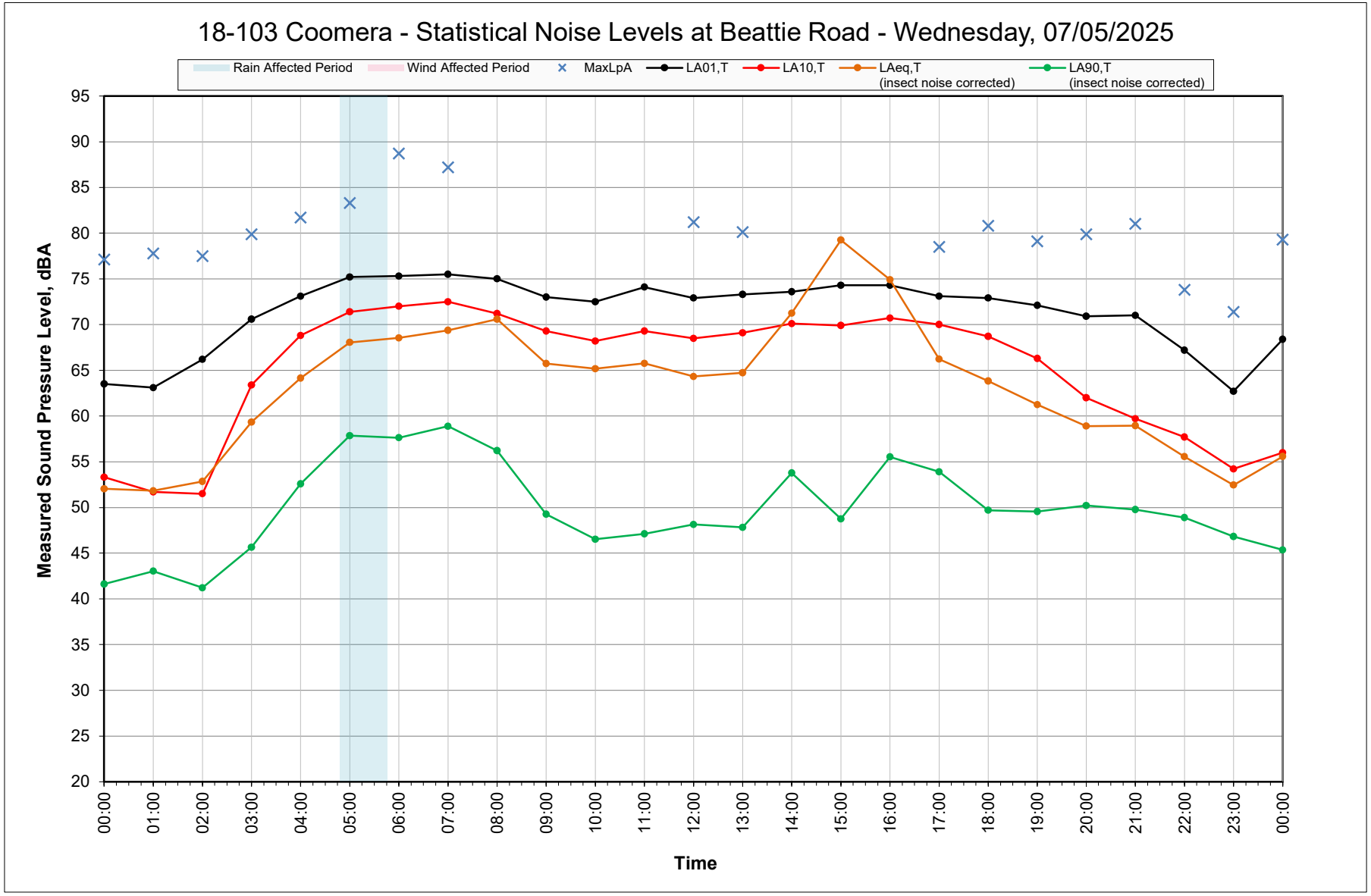
Time


18-103 Coomera - Statistical Noise Levels at Beattie Road - Wednesday, 07/05/2025
Rain Affected Period
Wind Affected Period
MaxLpA
LA01,T
LA10,T
LAeq,T (insect noise corrected)
LA90,T (insect noise corrected)
Measured Sound Pressure Level, dBA
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
00:00
01:00
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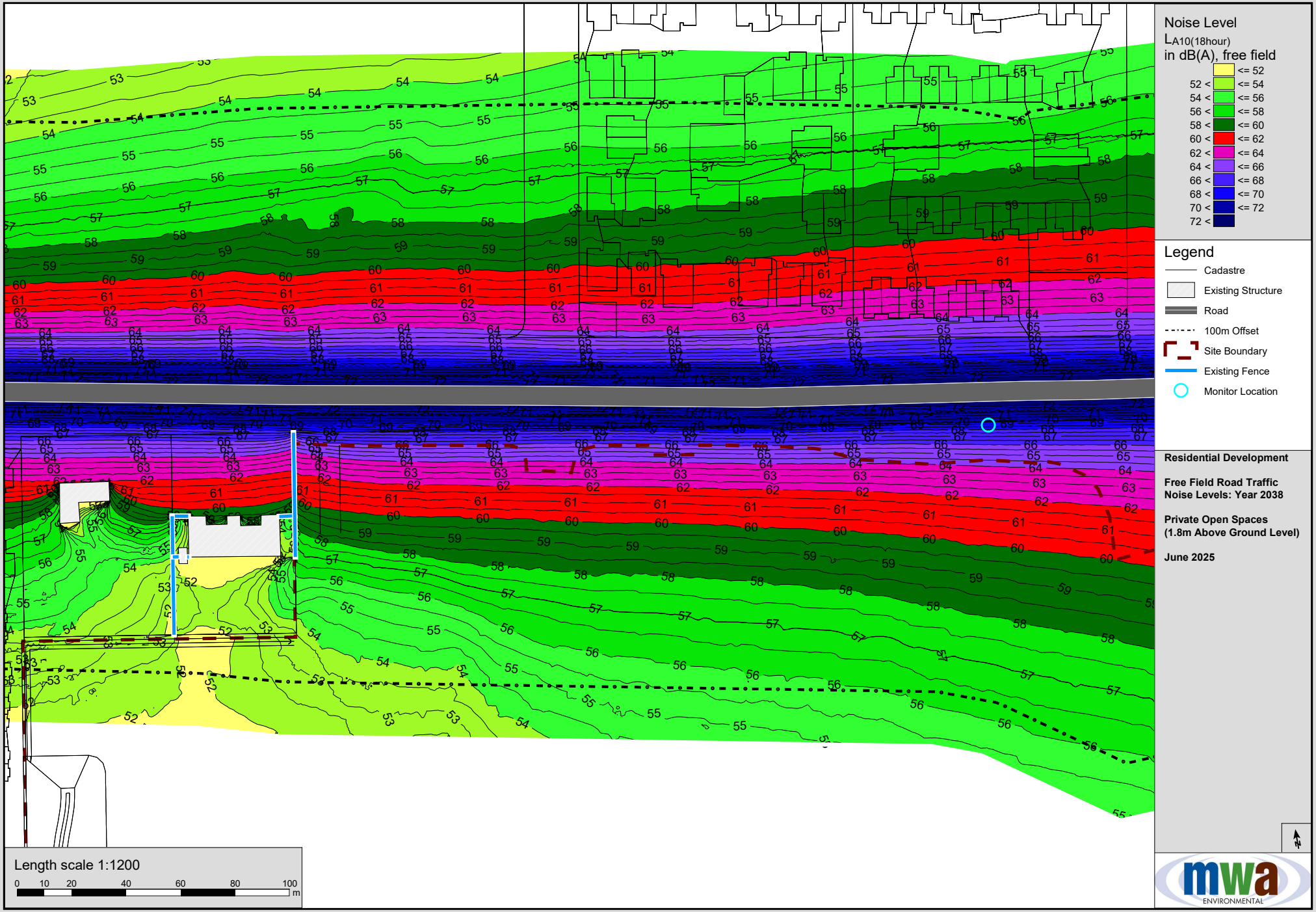
17:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Time

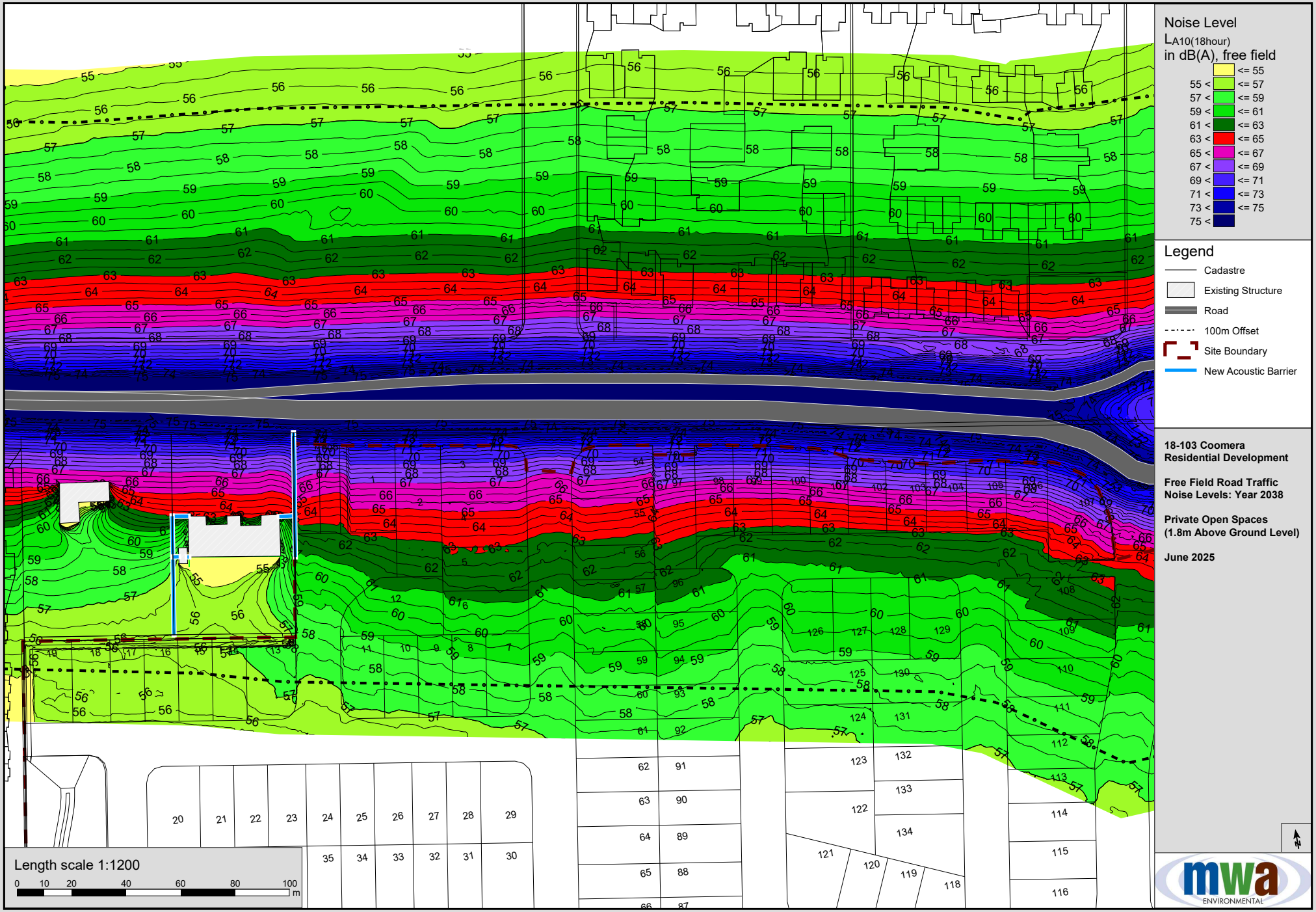
ATTACHMENT 3

SoundPLAN Validation Results


Noise Level
$L_{A10(18hour)}$
in dB(A), free field
<= 52
52 < <= 54
54 < <= 56
56 < <= 58
58 < <= 60
60 < <= 62
62 < <= 64
64 < <= 66
66 < <= 68
68 < <= 70
70 < <= 72
72 <
Legend
Cadastre
Existing Structure
Road
100m Offset
Site Boundary
Existing Fence
Monitor Location
Residential Development
Free Field Road Traffic Noise Levels: Year 2038
Private Open Spaces (1.8m Above Ground Level)
June 2025
Length scale 1:1200
0 10 20 40 60 80 100 m
mwa ENVIRONMENTAL

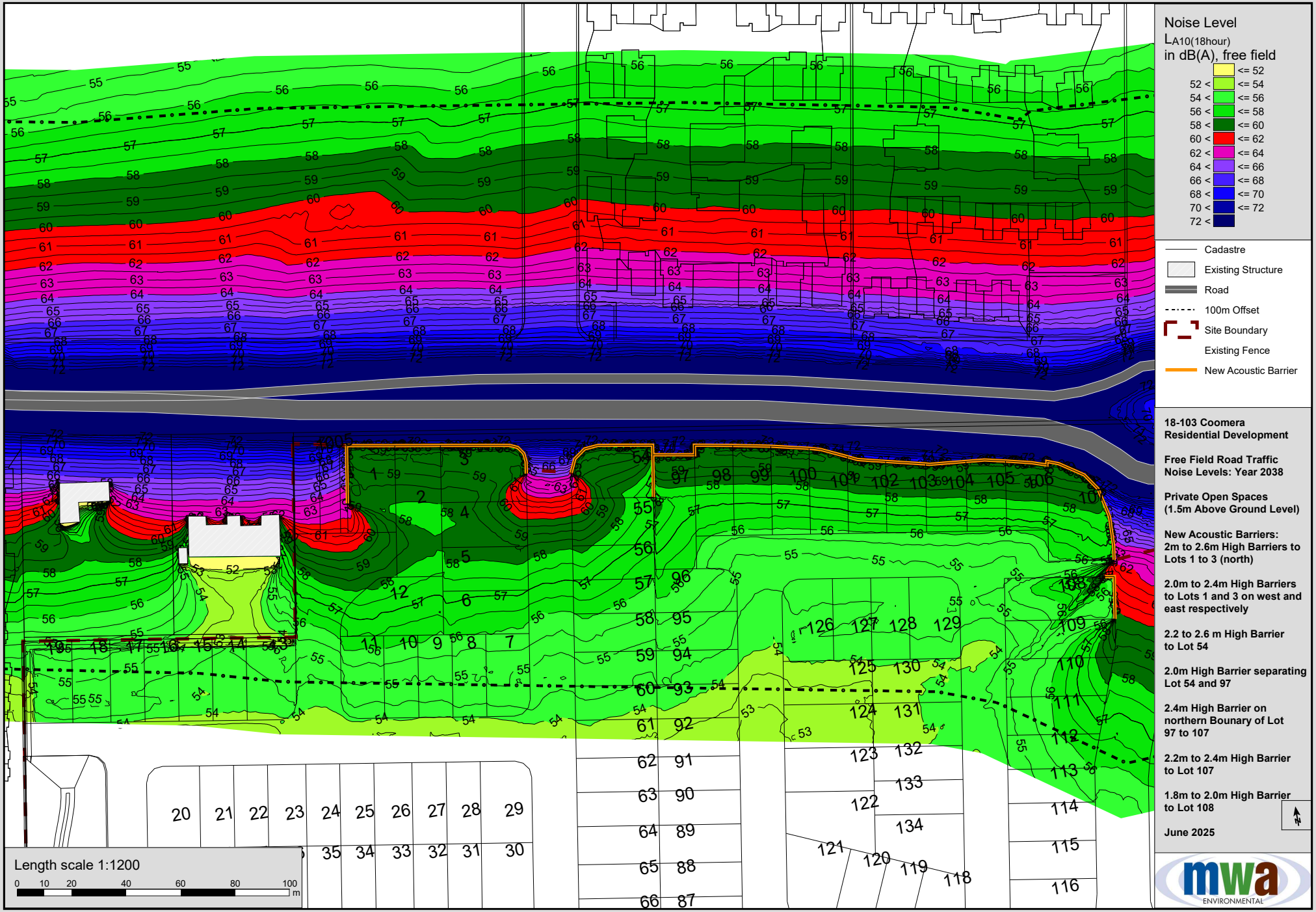
ATTACHMENT 4

SoundPLAN 9.0
Design Horizon Traffic Noise Levels
in Private Open Space Areas
(Without Required Barrier Arrangement)


Noise Level
$L_{A10(18hour)}$
in dB(A), free field
<= 55
55 < <= 57
57 < <= 59
59 < <= 61
61 < <= 63
63 < <= 65
65 < <= 67
67 < <= 69
69 < <= 71
71 < <= 73
73 < <= 75
75 <
Legend
Cadastre
Existing Structure
Road
100m Offset
Site Boundary
New Acoustic Barrier
18-103 Coomera
Residential Development
Free Field Road Traffic
Noise Levels: Year 2038
Private Open Spaces
(1.8m Above Ground Level)
June 2025
Length scale 1:1200
0 10 20 40 60 80 100 m
mwa
ENVIRONMENTAL

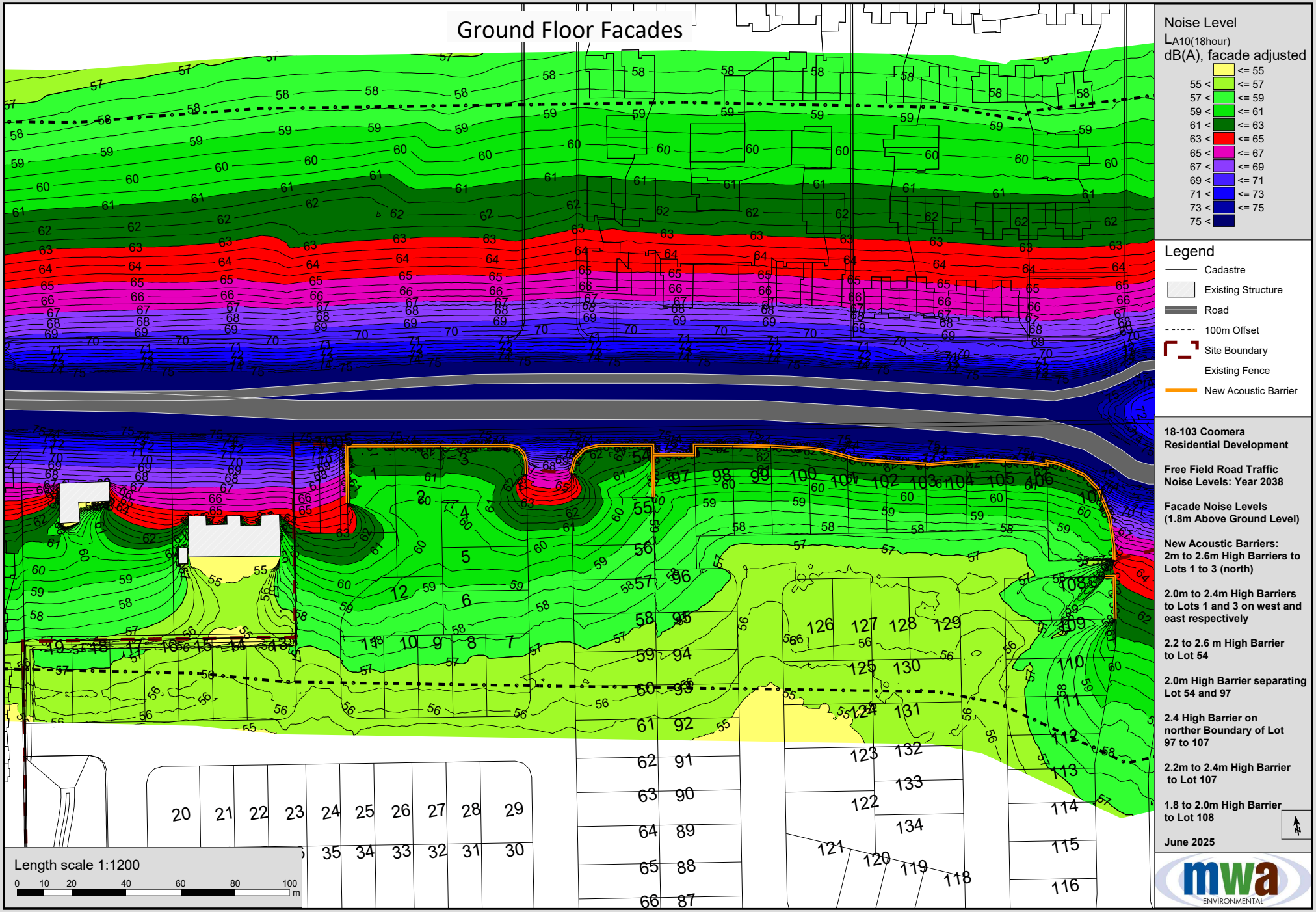
ATTACHMENT 5

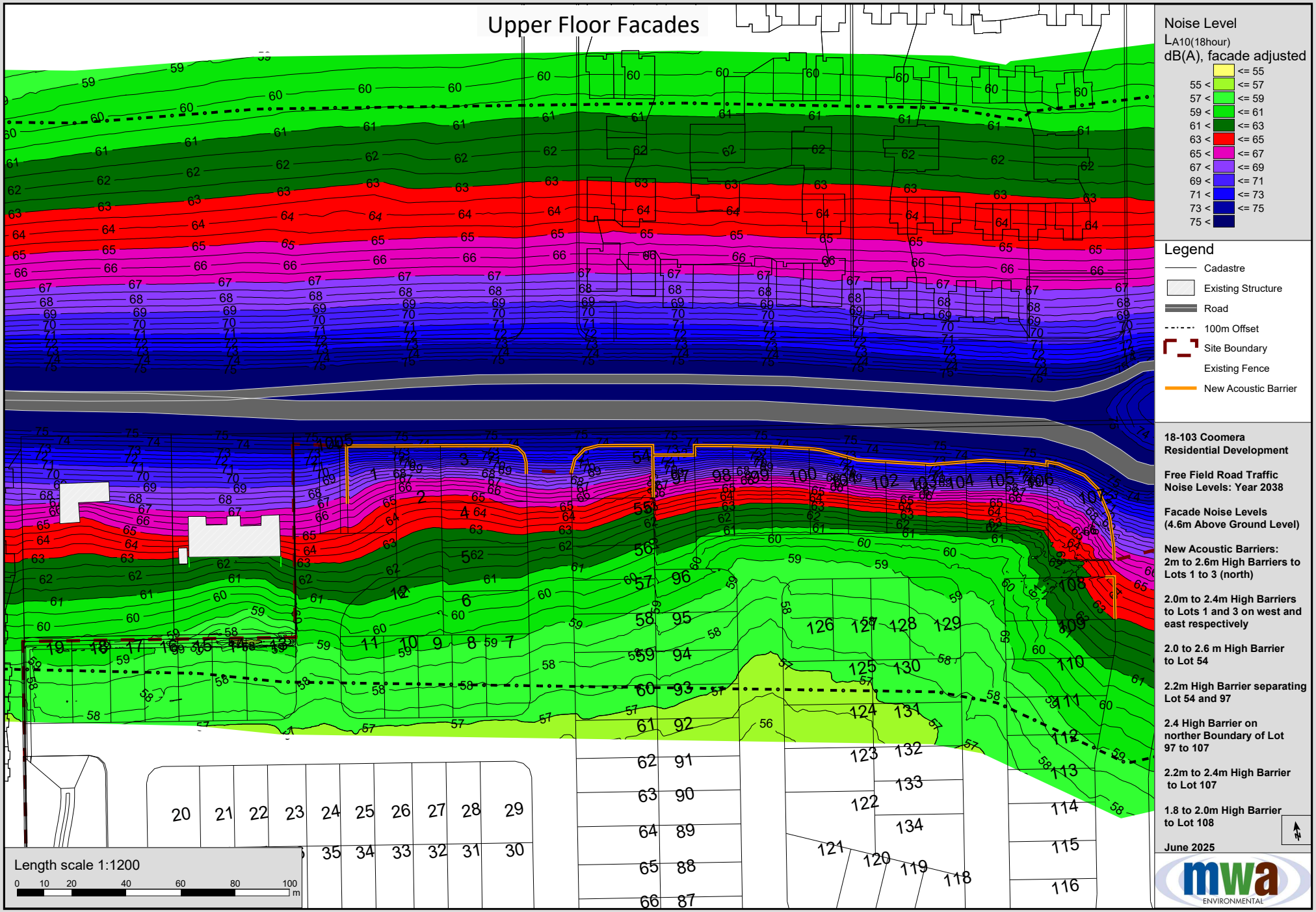
SoundPLAN 9.0
Design Horizon Traffic Noise Levels
in Private Open Space Areas
(With Required Barrier Arrangement)


Noise Level
$L_{A10(18hour)}$
in dB(A), free field
<= 52
52 < <= 54
54 < <= 56
56 < <= 58
58 < <= 60
60 < <= 62
62 < <= 64
64 < <= 66
66 < <= 68
68 < <= 70
70 < <= 72
72 <
Cadastre
Existing Structure
Road
100m Offset
Site Boundary
Existing Fence
New Acoustic Barrier
18-103 Coomera Residential Development
Free Field Road Traffic Noise Levels: Year 2038
Private Open Spaces (1.5m Above Ground Level)
New Acoustic Barriers:
2m to 2.6m High Barriers to Lots 1 to 3 (north)
2.0m to 2.4m High Barriers to Lots 1 and 3 on west and east respectively
2.2 to 2.6 m High Barrier to Lot 54
2.0m High Barrier separating Lot 54 and 97
2.4m High Barrier on northern Bounary of Lot 97 to 107
2.2m to 2.4m High Barrier to Lot 107
1.8m to 2.0m High Barrier to Lot 108
June 2025
Length scale 1:1200
0 10 20 40 60 80 100 m
mwa ENVIRONMENTAL

ATTACHMENT 6

SoundPLAN 9.0
Site-Specific Assessment of
Ground Floor and Upper Floor
Dwelling Façade Noise Levels
(With Required Barrier Arrangement)


Ground Floor Facades
Noise Level
LA10(18hour)
dB(A), facade adjusted
<= 55
55 < <= 57
57 < <= 59
59 < <= 61
61 < <= 63
63 < <= 65
65 < <= 67
67 < <= 69
69 < <= 71
71 < <= 73
73 < <= 75
75 <
Legend
Cadastre
Existing Structure
Road
100m Offset
Site Boundary
Existing Fence
New Acoustic Barrier
18-103 Coomera
Residential Development
Free Field Road Traffic
Noise Levels: Year 2038
Facade Noise Levels
(1.8m Above Ground Level)
New Acoustic Barriers:
2m to 2.6m High Barriers to
Lots 1 to 3 (north)
2.0m to 2.4m High Barriers
to Lots 1 and 3 on west and
east respectively
2.2 to 2.6 m High Barrier
to Lot 54
2.0m High Barrier separating
Lot 54 and 97
2.4 High Barrier on
norther Boundary of Lot
97 to 107
2.2m to 2.4m High Barrier
to Lot 107
1.8 to 2.0m High Barrier
to Lot 108
June 2025
Length scale 1:1200
0 10 20 40 60 80 100
m
mwa
ENVIRONMENTAL


Upper Floor Facades
Noise Level
LA10(18hour)
dB(A), facade adjusted
<= 55
55 < <= 57
57 < <= 59
59 < <= 61
61 < <= 63
63 < <= 65
65 < <= 67
67 < <= 69
69 < <= 71
71 < <= 73
73 < <= 75
75 <
Legend
Cadastre
Existing Structure
Road
100m Offset
Site Boundary
Existing Fence
New Acoustic Barrier
18-103 Coomera Residential Development
Free Field Road Traffic Noise Levels: Year 2038
Facade Noise Levels (4.6m Above Ground Level)
New Acoustic Barriers:
2m to 2.6m High Barriers to Lots 1 to 3 (north)
2.0m to 2.4m High Barriers to Lots 1 and 3 on west and east respectively
2.0 to 2.6 m High Barrier to Lot 54
2.2m High Barrier separating Lot 54 and 97
2.4 High Barrier on norther Boundary of Lot 97 to 107
2.2m to 2.4m High Barrier to Lot 107
1.8 to 2.0m High Barrier to Lot 108
June 2025
Length scale 1:1200
0 10 20 40 60 80 100 m
mwa ENVIRONMENTAL