



PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2025/1667

Date: 23 October 2025



Queensland
Government

TRAFFIC NOISE IMPACT ASSESSMENT

PROPOSED PRECINCT 4H DEVELOPMENT

YARRABILBA

Prepared for:
Stockland

Prepared by:
MWA Environmental

18 July 2025

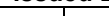
DOCUMENT CONTROL SHEET

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Title:	Traffic Noise Impact Assessment – Proposed Precinct 4H Development, Yarrabilba
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CONTENTS	PAGE
1.0 INTRODUCTION.....	2
1.1 STUDY BRIEF	2
1.2 SITE DESCRIPTION	2
1.3 PROPOSED DEVELOPMENT	2
2.0 RELEVANT NOISE CRITERIA.....	3
2.1 EXTERNAL NOISE CRITERIA	3
2.2 QDC MP4.4 NOISE CATEGORIES	4
3.0 TRAFFIC NOISE IMPACT ASSESSMENT	5
3.1 TRAFFIC NOISE ASSESSMENT	5
3.1.1 Traffic Volume Data	5
3.1.2 Predicted Future Traffic Noise Levels – Residential Outdoor Areas	6
3.1.3 Predicted Future Traffic Noise Levels – QDC MP4.4 Noise Categories ..	7
4.0 CONCLUSIONS.....	11

FIGURES

ATTACHMENTS

1.0 INTRODUCTION

1.1 STUDY BRIEF

MWA Environmental has been engaged to prepare a Traffic Noise Impact Assessment for the proposed 'Precinct 4H' development at Yarrabilba.

The report has assessed the potential road traffic noise impact and mitigation measures associated with the local Sub Arterial corridor within the Yarrabilba development area based on the lot reconfiguration plan and civil earthworks design.

Using standard traffic noise assessment methodology and ultimate planning horizon traffic forecasts, this assessment has been conducted using computer noise modelling of the road traffic volumes on the adjoining roads as part of Yarrabilba development, and considering the following:

- Preliminary design level contours for Precinct 4H by MPN Consulting;
- Proposed reconfiguration of lot for Precinct 4H by RPS;
- Preliminary civil works levels for the ultimate road corridors provided by KN Group; and
- Updated ultimate planning horizon traffic design data for the road corridor as advised by SLR Consulting.

1.2 SITE DESCRIPTION

The proposed Precinct 4H development is located in the central portion of the overall Yarrabilba development. The site location is shown on **Figure 1**.

Wentland Avenue is located along the southern side of the Precinct 4H and McKenny Boulevard is located along the eastern side of Precinct 4H.

1.3 PROPOSED DEVELOPMENT

The proposed overall Precinct 4H development comprises approximately 140 residential allotments, detention basin, open space, recreational park, a childcare site and associated internal road network.

The development plan is shown on **Attachment 1**.

2.0 RELEVANT NOISE CRITERIA

2.1 EXTERNAL NOISE CRITERIA

The Logan Planning Scheme 2015 requirements for the assessment and mitigation of road traffic noise from Council-controlled roadways are limited to regulation of the acoustic treatment of houses within designated 'transport noise corridors' through the Queensland Development Code. There are no external traffic noise criteria in the current Logan Planning Scheme 2015 and there does not appear to be a specific requirement for assessment of road traffic noise for a reconfiguration of lot adjacent to a road that is not a designated 'transport noise corridor'.

Logan City Council has gazetted transport noise corridors under the Building Act 1975 which provides for the regulation of the acoustic treatment of dwellings affected by road traffic noise in accordance with Queensland Development Code Mandatory Part 4.4 '*Buildings in a transport noise corridor*' ("**MP4.4**"). This process is managed by private certifiers based upon overlay mapping managed by the Queensland Department of Housing and Public Works.

Wentland Avenue and McKenny Boulevard road corridors are not currently gazetted as a transport noise corridor but is likely to be at some stage in the future if and when traffic volumes exceed 5,000 vehicles per day. Until such time the road corridors are gazetted as a 'transport noise corridor', there is unlikely to be a requirement for acoustic treatment of houses in proximity to the road. There is the potential that houses may already be constructed on allotments adjacent to the road prior to a 'transport noise corridor' being gazetted and thus no acoustic treatment requirements would be applied.

This notwithstanding, this assessment has addressed the methodology and criteria of the TMR *Road Traffic Noise Management: Code of Practice*, Queensland Development Code (QDC) *MP4.4 – Buildings in a Transport Noise Corridor* and *State Code 1: Development in a state-controlled road environment (SDAP) version 3.2*.

The assessment has considered what noise levels would be experienced at the private open spaces of the proposed allotments to comply with a **60 dB(A) L₁₀ 18 hour** noise limit typically applied by the more recent SDAP and the MP4.4 'noise categories' (which define standard of acoustic treatment required) that would be expected within a transport noise corridor if gazetted after completion.

The relevant criteria for the assessment of noise impacts are outlined in *State Code 1*, as follows:

Involving the creation of 6 or more new residential lots adjacent to a state-controlled road or type 1 multi-modal corridor	
PO38 Reconfiguring a lot minimises free field noise intrusion from a state-controlled road .	AO38.1 Development provides noise barrier or earth mound which is designed, sited and constructed: 1. to achieve the maximum free field acoustic levels in reference table 2 (item 2.1); 2. in accordance with: a. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013; b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019; c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020. OR AO38.2 Development achieves the maximum free field acoustic levels in reference table 2 (item 2.1) by alternative noise attenuation measures where it is not practical to provide a noise barrier or earth mound.

Table 2: Maximum free field acoustic levels

Applicable use	Acoustic levels
2.1: Private open space for residential lots	a. ≤ 57 dB(A) L_{10} (18 hour) free field (measured L_{90} (18 hour) free field between 6am and 12 midnight ≤ 45 dB(A)) OR b. ≤ 60 dB(A) L_{10} (18 hour) free field (measured L_{90} (18 hour) free field between 6am and 12 midnight > 45 dB(A))
2.2: Private open space for an accommodation activity (including lots created for a future accommodation activity)	
2.3: Outdoor education areas and outdoor play areas in a childcare centre or educational establishment	≤ 63 dB(A) L_{10} (12 hour) free field (between 6am and 6pm)

2.2 QDC MP4.4 NOISE CATEGORIES

Since implementation in August 2010, assessment of internal road traffic noise amenity (i.e. within habitable rooms) for dwellings adjacent to state-controlled roads is regulated by the Queensland Development Code (QDC) MP4.4 *Buildings in a Transport Noise Corridor* (“**QDC MP4.4**”).

An objective of this noise assessment is to determine which QDC MP4.4 noise categories are appropriate for proposed allotments. Under MP4.4 the specific acoustic treatment requirements for proposed dwellings are dependent upon the noise exposure category of the building site, as follows:

Table 1: Summary of QDC MP4.4 Traffic Noise Categories

QDC MP4.4 Noise Category	L_{10} 18 hour* for state-controlled roads
Category 4	≥ 73 dB(A)
Category 3	68 – 72 dB(A)
Category 2	63 – 67 dB(A)
Category 1	58 – 62 dB(A)
Category 0 (no acoustic treatment required)	≤ 57 dB(A)

* measured at 1 m from the façade of the proposed or existing building.

3.0 TRAFFIC NOISE IMPACT ASSESSMENT

3.1 TRAFFIC NOISE ASSESSMENT

In order to assess compliance with the SDAP noise criteria, ultimate design horizon traffic noise predictions have been predicted across the site. The ultimate design horizon is applied considering that the Yarrabilba masterplan is 100 percent developed, which assumes that:

- Wentland Drive is extended southeast to connect with Plunkett Road.
- Yarrabilba Drive is extended south to connect with Plunkett Road.
- Hootman Drive connection between Wentland Drive and Plunkett Road.
- Jimbillunga Drive connection between Wentland Drive and Waterford-Tamborine Road.
- Mibinba Drive connection between Jimbillunga Drive and Waterford-Tamborine Road.
- Southern Infrastructure Corridor (SIC) (along northern boundary of Yarrabilba) is in place.
- McKenny Boulevard extended north to connect with SIC.

The noise model has represented the design horizon of the development traffic on Wentland Avenue and McKenny Boulevard adjacent to the proposed precinct based upon the design topographical contours of the road and of Precinct 4H allotments.

The SoundPLAN 9.0 model was setup to predict the external L_{10} (18 hour) traffic noise levels under ultimate design traffic flow conditions.

Adjustment of CoRTN predictions has been made for Australian roads as per the Department of Transport and Main Roads - Code of Practice guidance. Corrections of -0.7 dB for free-field predictions and -1.7 dB for façade adjusted predictions have been applied.

3.1.1 Traffic Volume Data

The design horizon traffic volumes (daily two way total) and speed limits provided by SLR are as provided in the **Table 2** below.

The 18 hour (6am to Midnight) traffic volume has been approximated as 94% of the daily volume. Heavy vehicle percentage is considered to be a conservative 3% for modelling purposes as advised by SLR.

Table 2: Design Traffic Volume Data

Planning Horizon	Road Section	Daily Vehicles Volume (AADT)	Speed (km/hr)
Ultimate Design	Wentland Avenue	10,995	60
	McKenny Boulevard	11,170	60

3.1.2 Predicted Future Traffic Noise Levels – Residential Private Open Space

A SoundPLAN 9.0 model was setup to predict the external L_{10} (18 hour) traffic noise levels under ultimate design traffic flow conditions for Ground Level (+1.8m) and Upper Level (+4.6m) receptors **with acoustic barriers**. The recommended acoustic barriers were represented at height of **1.8 metres above finished boundary level** as shown on **Figure 2**.

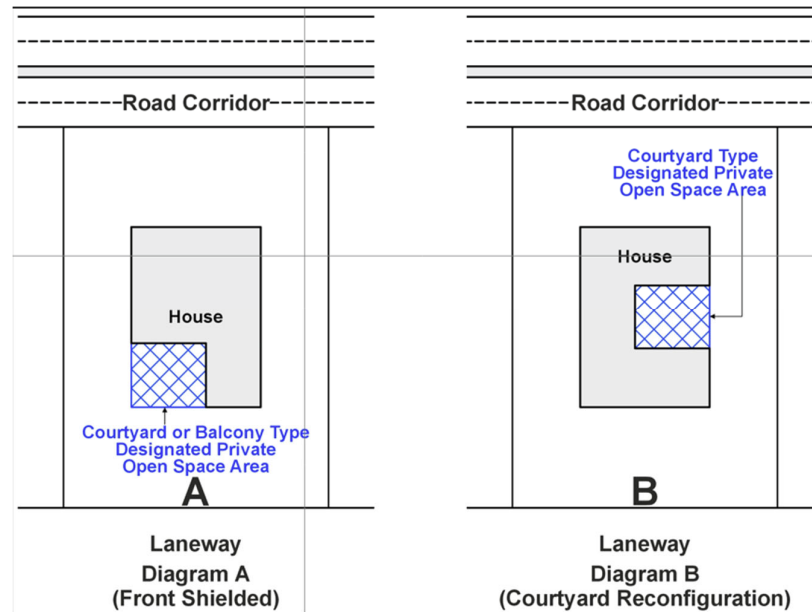
The results of the traffic noise modelling for ground level receptors within Precinct 4H indicates that the adopted SDAP noise criterion of 60 dB(A) L_{10} (18 hour) for private open space (outdoor recreational / backyards) will comply at the proposed Lots 4050 to 4053 and 4060 to 4076 along Wentland Avenue.

The design intent for Lots 4037 to 4049 fronting McKenny Boulevard is for future dwellings on these lots to have their main entry doors and front access via McKenny Boulevard, with garages positioned at the rear, accessible via the proposed laneway.

Given the design intent for Lots 4037 to 4049, it was not practical to provide an acoustic barrier along the boundary of the lots to McKenny Boulevard. Alternatively, specific design features (e.g. more shielded location to shield road traffic noise) may be incorporated in order to comply with the 60 dB(A) L_{10} (18 hour) noise amenity criteria for private open spaces to Lots 4037 to 4049.

The following design solutions can be considered for future private open spaces for Lots 4037 to 4049:

1. A private open space (courtyard or upper level balcony) on the front façade of the dwelling (located at front façade facing the laneway) (see Diagram A below); or
2. A more centrally located private open space in the form of courtyard to maximise building façade shielding (see Diagram B below).



With the above design feature(s) residents will have access to private open space that is compliant with the relevant external noise amenity criteria.

The predicted road traffic noise contour maps which demonstrate Lots 4050 to 4053 and 4060 to 4076 compliance of the 60 dB(A) L_{10} (18 hour) for private open spaces are provided in **Attachment 2**.

3.1.3 Predicted Future Traffic Noise Levels – QDC MP4.4 Noise Categories

Under the *Building Act 1975*, the transport Chief Executive may designate land as being within a transport noise corridor and compliance with QDC MP4.4 is required if the land is within:

- 100 metres of a state-controlled road; or
- Up to 250 metres of a state-controlled road if the noise of traffic on the road is at least 58 dB(A).

Effectively, for the purposes of land use planning assessment and the design of future dwellings in accordance with the QDC, acoustic treatment may be required for dwellings located within 250 metres of the roadway if external L_{10} (18 hour) noise levels exceed 58 dB(A). This notwithstanding, it is noted that this may occur some stage in the future under an ultimate design horizon or when the Southern Infrastructure Corridor is commissioned, however it is expected that up to and after Year 2034 the land within 100 metres of the Wentland Avenue and McKenny Boluvard would at some time be designated as being within a transport noise corridor.

In the event that major roads were to be gazetted as a 100 metre transport noise corridor then, based upon our modelling for Precinct 4H, single-storey dwellings adjoining the road corridor boundaries would be subject to QDC MP4.4 'Noise Category 0 to 2' acoustic treatment requirements.

For the upper level of any two-storey houses within Precinct 4H a maximum 'Noise Category 1 to 3' acoustic treatment requirement would apply.

Table 3 below presents the affected allotments within a 100 metre transport corridor and the applicable QDC MP4.4 noise categories for any future single or two storey dwellings on the allotments within Precinct 4H.

A copy of the Queensland Development Code (QDC) *MP4.4 – Buildings in a Transport Noise Corridor* is included in **Attachment 3** including indicative acceptable forms of construction.

Table 3: Recommended QDC MP4.4 'Noise Categories' for 'Precinct 4H' Allotments

QDC MP4.4 Noise Categories PRECINCT 4H		
Lot #	Single storey house / ground floor	Upper floor of two storey house
4001	Noise Category 0	Noise Category 1
4002	Noise Category 0	Noise Category 1
4003	Noise Category 0	Noise Category 1
4004	Noise Category 0	Noise Category 1
4005	Noise Category 0	Noise Category 1
4006	Noise Category 0	Noise Category 1
4007	Noise Category 0	Noise Category 1
4008	Noise Category 0	Noise Category 1
4009	Noise Category 0	Noise Category 1
4010	Noise Category 0	Noise Category 1
4022	Noise Category 1	Noise Category 1
4023	Noise Category 1	Noise Category 1
4024	Noise Category 1	Noise Category 1
4025	Noise Category 1	Noise Category 1
4026	Noise Category 1	Noise Category 1
4027	Noise Category 1	Noise Category 1
4028	Noise Category 1	Noise Category 1
4029	Noise Category 1	Noise Category 1
4030	Noise Category 1	Noise Category 1
4031	Noise Category 1	Noise Category 1
4032	Noise Category 1	Noise Category 1
4033	Noise Category 1	Noise Category 1
4034	Noise Category 1	Noise Category 1
4035	Noise Category 1	Noise Category 1
4036	Noise Category 1	Noise Category 1
4037	Noise Category 3	Noise Category 3
4038	Noise Category 3	Noise Category 3
4039	Noise Category 3	Noise Category 3
4040	Noise Category 3	Noise Category 3
4041	Noise Category 3	Noise Category 3
4042	Noise Category 3	Noise Category 3
4043	Noise Category 3	Noise Category 3
4044	Noise Category 3	Noise Category 3
4045	Noise Category 3	Noise Category 3
4046	Noise Category 3	Noise Category 3
4047	Noise Category 3	Noise Category 3
4048	Noise Category 3	Noise Category 3
4049	Noise Category 3	Noise Category 3
4050	Noise Category 2	Noise Category 3
4051	Noise Category 1	Noise Category 3

*Noise Category 0 – No acoustic treatment is required

Table 3 – Continued

QDC MP4.4 Noise Categories PRECINCT 4H		
Lot #	Single storey house / ground floor	Upper floor of two storey house
4052	Noise Category 1	Noise Category 3
4053	Noise Category 1	Noise Category 3
4060	Noise Category 1	Noise Category 2
4061	Noise Category 1	Noise Category 2
4062	Noise Category 1	Noise Category 2
4063	Noise Category 1	Noise Category 2
4064	Noise Category 1	Noise Category 2
4065	Noise Category 1	Noise Category 2
4066	Noise Category 1	Noise Category 2
4067	Noise Category 1	Noise Category 2
4068	Noise Category 1	Noise Category 2
4069	Noise Category 1	Noise Category 2
4070	Noise Category 1	Noise Category 2
4071	Noise Category 1	Noise Category 2
4072	Noise Category 1	Noise Category 2
4073	Noise Category 1	Noise Category 2
4074	Noise Category 1	Noise Category 2
4075	Noise Category 1	Noise Category 2
4076	Noise Category 1	Noise Category 2
4077	Noise Category 1	Noise Category 1
4078	Noise Category 0	Noise Category 1
4079	Noise Category 0	Noise Category 1
4080	Noise Category 0	Noise Category 1
4081	Noise Category 0	Noise Category 1
4082	Noise Category 0	Noise Category 1
4083	Noise Category 0	Noise Category 1
4084	Noise Category 0	Noise Category 1
4085	Noise Category 0	Noise Category 1
4086	Noise Category 0	Noise Category 1
4087	Noise Category 0	Noise Category 1
4088	Noise Category 0	Noise Category 1
4089	Noise Category 0	Noise Category 1
4090	Noise Category 0	Noise Category 1
4091	Noise Category 0	Noise Category 1
4092	Noise Category 0	Noise Category 1
4093	Noise Category 0	Noise Category 1
4094	Noise Category 0	Noise Category 1
4095	Noise Category 0	Noise Category 1
4096	Noise Category 0	Noise Category 1
4097	Noise Category 0	Noise Category 1
4098	Noise Category 0	Noise Category 1
4099	Noise Category 0	Noise Category 1
4128	Noise Category 0	Noise Category 1
4129	Noise Category 0	Noise Category 1
4130	Noise Category 0	Noise Category 1
4131	Noise Category 0	Noise Category 1
4132	Noise Category 0	Noise Category 1

*Noise Category 0 – No acoustic treatment is required

The SoundPLAN model predictions are presented as plots of predicted L_{10} (18 hour) traffic noise levels (including +2.5dB façade reflection) over the proposed residential subdivision for ground level (+1.8m) receptors (refer **Attachment 4**).

The SoundPLAN model predictions are also presented as plots of predicted L_{10} (18 hour) traffic noise levels (including +2.5dB façade reflection) over the proposed residential subdivision for upper level (+4.6m) receptors (refer **Attachment 5**).

4.0 CONCLUSIONS

MWA Environmental has been engaged to prepare a Traffic Noise Impact Assessment for the proposed 'Precinct 4H' development at Yarrabilba.

The report has assessed the potential road traffic noise impact and mitigation measures associated with the adjacent Wentland Avenue and McKenny Boulevard road corridors within the Yarrabilba development area based on Precinct 4H lot reconfiguration plan and civil earthworks design.

The road corridor is not currently gazetted as a transport noise corridor but it is likely to be at some stage in the future if and when traffic volumes exceed 5,000 vehicles per day. Until such time as the road corridor is gazetted as a 'transport noise corridor' there is unlikely to be a requirement for acoustic treatment of houses in proximity to the road. There is the potential that houses may be constructed on allotments adjacent to the road prior to a 'transport noise corridor' being gazetted and thus no acoustic treatment requirements would be applied at the time of construction.

This notwithstanding, the assessment has addressed the methodology and criteria of the TMR *Road Traffic Noise Management: Code of Practice, State Code 1: Development in a state-controlled road environment (SDAP)* and Queensland Development Code (QDC) *MP4.4 – Buildings in a Transport Noise Corridor*.

The assessment has considered what noise levels would be experienced at the private open space of the proposed allotments to comply with a 60 dB(A) L_{10} 18 hour noise limit typically applied and the MP4.4 'noise categories' (which define standard of acoustic treatment required) would be expected within a transport noise corridor if gazetted after completion.

The results of the traffic noise modelling for private open space within Precinct 4H indicates that the adopted noise criterion of 60 dB(A) L_{10} (18 hour) for private open space will achieve compliance at the proposed Lots 4050 to 4053 and 4060 to 4076 along Wentland Avenue with the inclusion of acoustic barriers at height of **1.8 metres above finished boundary level**, as shown on **Figure 2**.

The design intent for Lots 4037 to 4049 fronting McKenny Boulevard is for future dwellings on these lots to have their main entry doors and front access via McKenny Boulevard, with garages positioned at the rear, accessible via the proposed laneway.

Given the design intent for Lots 4037 to 4049, it was not practical to provide an acoustic along the boundary fronting McKenny Boulevard. Alternatively, specific design features (e.g. more shielded locations to shield road traffic noise) may be incorporated to achieve compliance with the 60 dB(A) L_{10} (18hour) noise amenity criteria for private open spaces to Lots 4037 to 4049.

The following design solutions can be considered for future private open spaces for Lots 4037 to 4049:

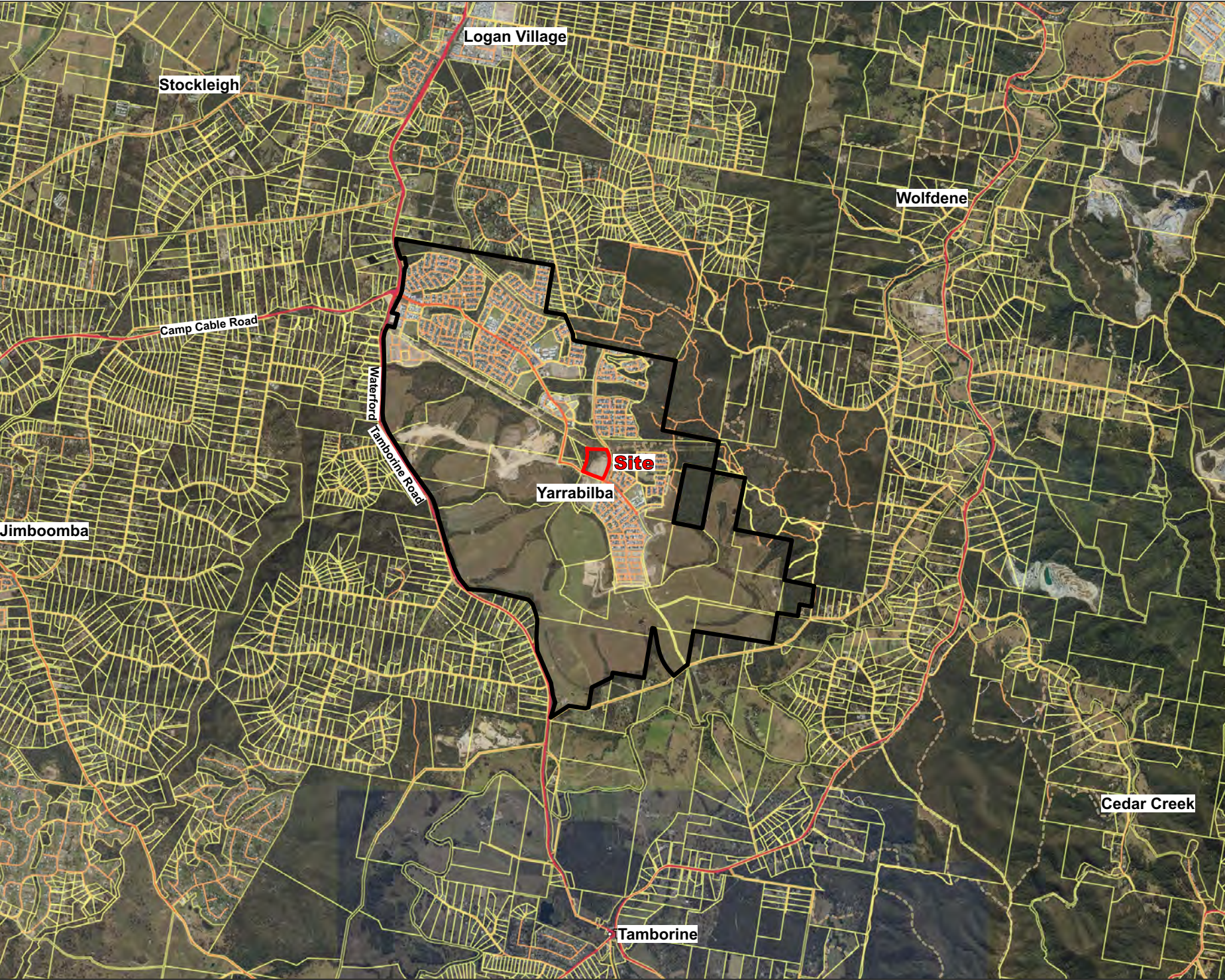
1. An private open space (courtyard or upper level balcony) located to the laneway side of the dwelling (located to the façade facing the laneway) (see Diagram A – Section 3.1.2); or
2. A more centrally located private open space in the form of courtyard to maximise building façade shielding (see Diagram B Section 3.1.2).

In the event that major roads were to be gazetted as a 100 metre transport noise corridor then, based upon our modelling for Precinct 4H, single-storey dwellings adjoining the road corridor boundaries would be subject to QDC MP4.4 'Noise Category 0 to 1' acoustic treatment requirements. For the upper level of any two-storey houses within Precinct 4H a maximum 'Noise Category 1 to 3' acoustic treatment requirement would apply.

Table 3 of this report presents the affected allotments and the applicable QDC MP4.4 noise categories for any future single or double storey dwellings on the allotment within Precinct 4H.

MWA Environmental
18 July 2025

FIGURES



LEGEND

PROPERTY BOUNDARY

SITE LOCATION
(PRECINCT 4H)

DRAWING REFERENCE

© THE STATE OF QUEENSLAND
(DEPARTMENT OF RESOURCES)
QLDGLOBE.

N

0

1.0

2.0km

CLIENT

STOCKLAND

PROJECT

TRAFFIC NOISE
IMPACT ASSESSMENT
PROPOSED PRECINCT 4H
DEVELOPMENT
YARRABILBA QLD

TITLE

SITE LOCATION

JOB	YARRABILBA	FIGURE 1
JOB NO.	25050	
DATE	17/07/25	
SCALE	1:70000 (A4)	
REV.		25050-1

mwa

ENVIRONMENTAL

Max Winders & Associates Pty Ltd t/as MWA Environmental
Level 7, 241 Adelaide St, Brisbane, QLD 4001
P 07 3002 5500 E mail@mwaenviro.com.au
W www.mwaenviro.com.au
ABN 94 010 833 084

Legend

- Precinct Boundary
- - - Stage Boundary
 Barrier Height Above
Finished Boundary Level
Acoustic Barrier



Stage 405

LINEAR
OPEN SPACE

2003
5.760ha

Stage 404

STORMWATER
QUALITY BASIN

2002
9370m²

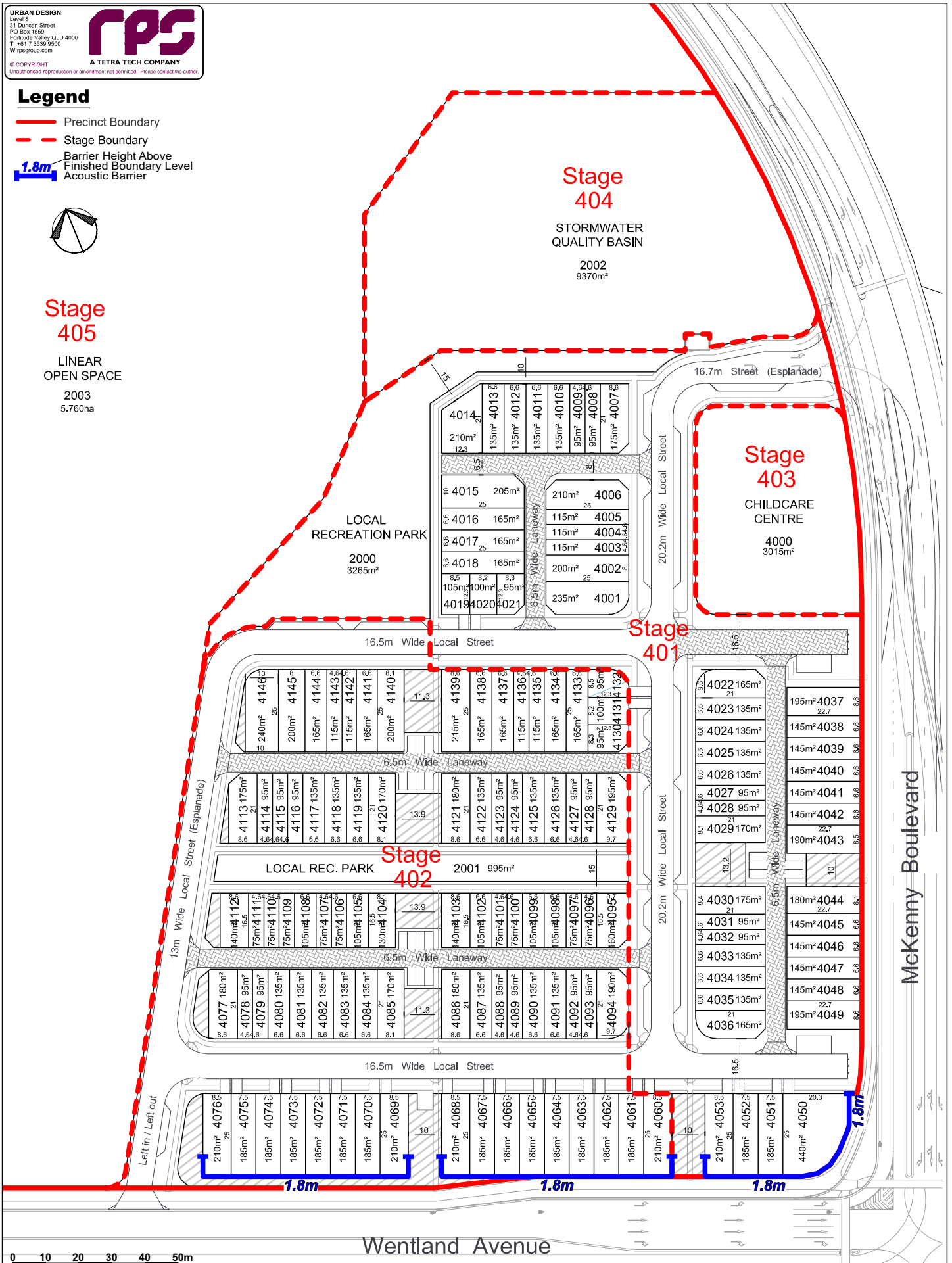
Stage 403

CHILDCARE
CENTRE

4000
3015m²

Stage 401

Stage 402



TRAFFIC NOISE IMPACT ASSESSMENT PROPOSED PRECINCT 4H DEVELOPMENT YARRABILBA QLD

PROJECT

CLIENT

DRAWING
REFERENCE

STOCKLAND

RPS YARRABILBA PRECINCT 4 - APPLICATION 8
PLAN OF SUBDIVISION, PLAN 150827 - 36, 17 July 2025.

TITLE

ACOUSTIC BARRIER LOCATIONS

JOB

YARRABILBA

JOB NO.

25050

DATE

17/07/25

SCALE

1:1500 (A4)

FIGURE 2

DRAWING NUMBER

25050-2

Attachment 1

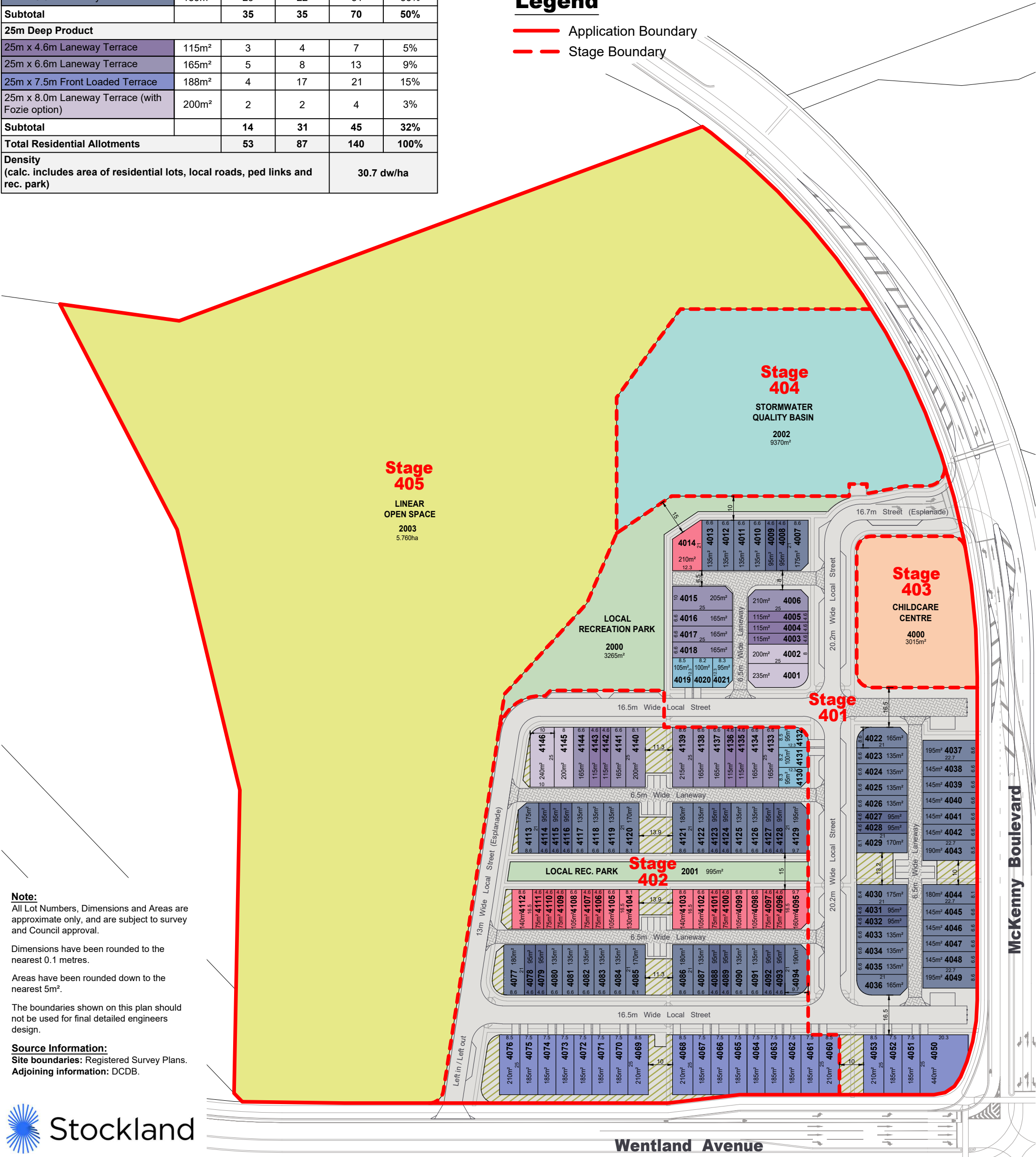
Development Plans

Yield Breakdown					
Allotment Typology	Typical Area	Stage 401	Stage 402	Overall	
12m Deep Product					
12m x 8.2m Front Loaded Urban Loft	98m²	3	3	6	4%
Subtotal		3	3	6	4%
16.5m Deep Product					
16.5m x 4.6m Laneway Terrace	76m²	—	9	9	6%
16.5m x 6.6m Laneway Terrace	109m²	1	9	10	7%
Subtotal		1	18	19	14%
21m Deep Product					
21m x 4.6m Laneway Terrace	97m²	6	13	19	14%
21m x 6.6m Laneway Terrace	139m²	29	22	51	36%
Subtotal		35	35	70	50%
25m Deep Product					
25m x 4.6m Laneway Terrace	115m²	3	4	7	5%
25m x 6.6m Laneway Terrace	165m²	5	8	13	9%
25m x 7.5m Front Loaded Terrace	188m²	4	17	21	15%
25m x 8.0m Laneway Terrace (with Fozie option)	200m²	2	2	4	3%
Subtotal		14	31	45	32%
Total Residential Allotments		53	87	140	100%
Density (calc. includes area of residential lots, local roads, ped links and rec. park)				30.7 dw/ha	

Land Use	Stage 401	Stage 402	Stage 403	Stage 404	Stage 405	Overall	
Childcare Centre	—	—	0.302 ha	—	—	0.302 ha	2.6%
Residential Allotments	0.836 ha	1.232 ha	—	—	—	2.068 ha	17.9%
Local Roads	1.023 ha	0.817 ha	—	—	—	1.840 ha	15.9%
Pedestrian Links / Widened Road Reserve for Planting	0.061 ha	0.162 ha	—	—	—	0.223 ha	1.9%
Local Recreation Park	0.327 ha	0.099 ha	—	—	—	0.426 ha	3.7%
Drainage Open Space	—	—	—	0.927 ha	—	0.927 ha	8.0%
Linear Open Space	—	—	—	—	5.764 ha	5.764 ha	49.9%
Total	2.247 ha	2.310 ha	0.302 ha	0.927 ha	5.764 ha	11.550 ha	100.0%

Legend

- Application Boundary
- Stage Boundary



Note:
All Lot Numbers, Dimensions and Areas are approximate only, and are subject to survey and Council approval.

Dimensions have been rounded to the nearest 0.1 metres.

Areas have been rounded down to the nearest 5m².

The boundaries shown on this plan should not be used for final detailed engineers design.

Source Information:
Site boundaries: Registered Survey Plans.
Adjoining information: DCDB.



YARRABILBA PRECINCT 4 - APPLICATION 8 PLAN OF SUBDIVISION

URBAN DESIGN
Level 8
31 Duncan Street
PO Box 1559
Fortitude Valley QLD 4006
T +61 7 3539 9500
W rpsgroup.com



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A TETRA TECH COMPANY

PLAN REF: 150827 – 36

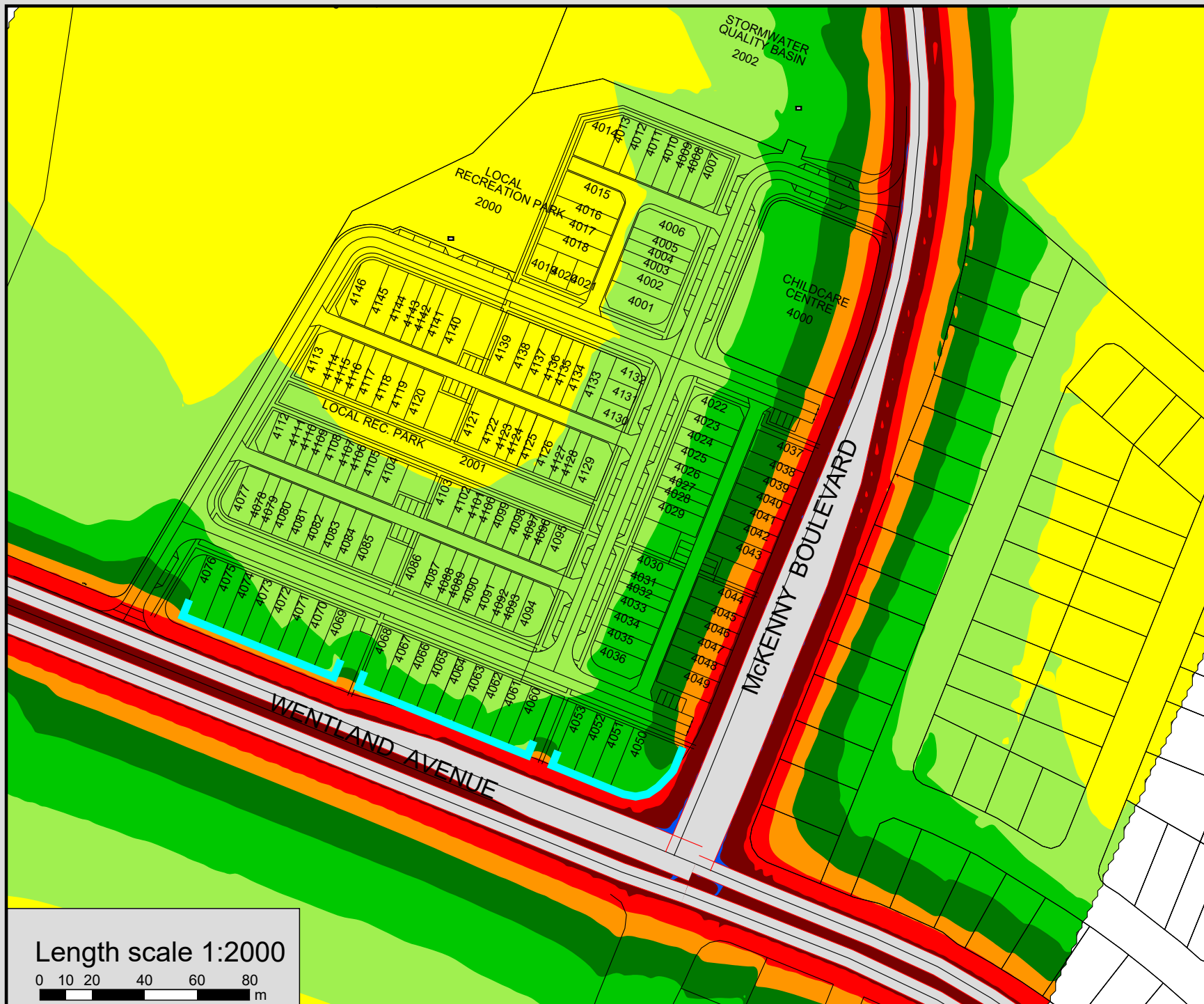
Rev No: -
DATE: 17 July 2025
CLIENT: Stockland
DRAWN BY: BM / MM
CHECKED BY: BM / PE



0 20 40 60 80 100 1 : 1,500 @ A3

Attachment 2

*SoundPLAN 9.0 Modelling
Design Horizon Traffic Noise Predictions – Private Open Space*



Noise level
L10(18hr)
in dB(A)

	<= 54
54 <	<= 57
57 <	<= 60
60 <	<= 63
63 <	<= 66
66 <	<= 69
69 <	<= 72
72 <	<= 75

Legend

- Cadastral
- 1.8m Acoustic Barrier
- Road

**Yarrabilba 25050
Precinct 4H**

Traffic Noise Levels

**Outdoor Recreational
Noise Impact With
Barriers**

July 2025

Length scale 1:2000



Attachment 3

QDC MP4.4 – Acceptable Solutions

Schedule 1

Noise category	Minimum transport noise reduction (dB (A)) required for habitable rooms	Component of building's external envelope	Minimum R_w required for each component
Category 4	40	Glazing	43
		External walls	52
		Roof	45
		Floors	51
		Entry doors	35
Category 3	35	Glazing	38 (where total area of glazing for a <i>habitable room</i> is greater than 1.8m ²)
			35 (where total area of glazing for a <i>habitable room</i> is less than or equal to 1.8m ²)
		External walls	47
		Roof	41
		Floors	45
		Entry doors	33

Noise category	Minimum transport noise reduction (dB (A)) required for habitable rooms	Component of building's external envelope	Minimum R_w required for each component
Category 2	30	Glazing	35 (where total area of glazing for a <i>habitable room</i> is greater than 1.8m ²)
			32 (where total area of glazing for a <i>habitable room</i> is less than or equal to 1.8m ²)
		External walls	41
		Roof	38
		Floors	45
		Entry doors	33
Category 1	25	Glazing	27 (where total area of glazing for a <i>habitable room</i> is greater than 1.8m ²)
			24 (where total area of glazing for a <i>habitable room</i> is less than or equal to 1.8m ²)
		External walls	35
		Roof	35
		Entry Doors	28
Category 0	No additional acoustic treatment required – standard building assessment provisions apply.		

Schedule 2

Component of building's external envelope	Minimum R_w	Acceptable forms of construction
Glazing	43	Double glazing consisting of two panes of minimum 5mm thick glass with at least 100mm air gap and full perimeter <i>acoustically rated seals</i> .
	38	Minimum 14.38mm thick laminated glass, with full perimeter <i>acoustically rated seals</i> ; OR Double glazing consisting of one pane of minimum 5mm thick glass and one pane of minimum 6mm thick glass with at least 44mm air gap, and full perimeter <i>acoustically rated seals</i>
	35	Minimum 10.38mm thick laminated glass, with full perimeter <i>acoustically rated seals</i> .
	32	Minimum 6.38mm thick laminated glass with full perimeter <i>acoustically rated seals</i> .
	27	Minimum 4mm thick glass with full perimeter <i>acoustically rated seals</i>
	24	Minimum 4mm thick glass with standard weather seals

Component of building's external envelope	Minimum R_w	Acceptable forms of construction
External walls	52	Two leaves of clay brick masonry, at least 270mm in total, with subfloor vents fitted with noise attenuators.
	47	Two leaves of clay brick masonry at least 110mm thick with: (i) cavity not less than 50mm between leaves; and (ii) 50mm thick mineral insulation or 50mm thick glass wool insulation with a density of 11kg/m³ or 50mm thick polyester insulation with a density of 20kg/m³ in the cavity. OR Two leaves of clay brick masonry at least 110mm thick with: (i) cavity not less than 50mm between leaves; and (ii) at least 13mm thick cement render on each face OR Single leaf of clay brick masonry at least 110mm thick with: (i) a row of at least 70mm x 35mm timber studs or 64mm steel studs at 600mm centres, spaced at least 20mm from the masonry wall; and (ii) Mineral insulation or glass wool insulation at least 50mm thick with a density of at least 11 kg/m³ positioned between studs; and (iii) One layer of plasterboard at least 13mm thick fixed to outside face of studs. OR Single leaf of minimum 150mm thick masonry of hollow, dense concrete blocks, with mortar joints laid to prevent moisture bridging.

Component of building's external envelope	Minimum R_w	Acceptable forms of construction
	41	Two leaves of clay brick masonry at least 110mm thick with cavity not less than 50mm between leaves OR Single leaf of clay brick masonry at least 110mm thick with: (i) a row of at least 70mm x 35mm timber studs or 64mm steel studs at 600mm centres, spaced at least 20mm from the masonry wall; and (ii) mineral insulation or glass wool insulation at least 50mm thick with a density of at least 11 kg/m³ positioned between studs; and (iii) One layer of plasterboard at least 10mm thick fixed to outside face of studs OR Single leaf of brick masonry at least 110mm thick with at least 13mm thick render on each face OR Concrete brickwork at least 110mm thick OR In-situ concrete at least 100mm thick OR Precast concrete at least 100mm thick and without joints.

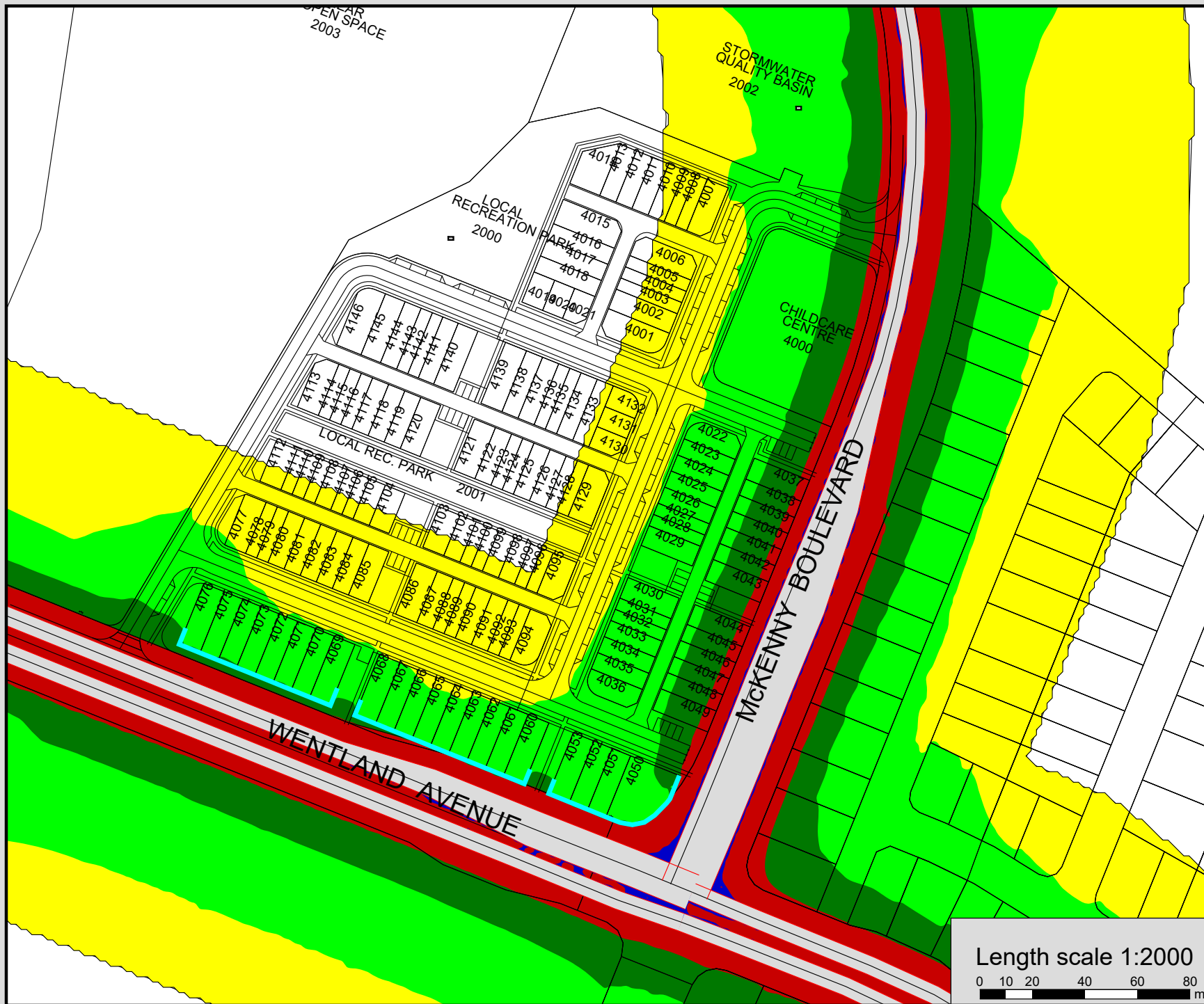
Component of building's external envelope	Minimum R_w	Acceptable forms of construction
	35	Single leaf of clay brick masonry at least 110mm thick with: (i) a row of at least 70mm x 35mm timber studs or 64mm steel studs at 600mm centres, spaced at least 20mm from the masonry wall; and (ii) One layer of plasterboard at least 10mm thick fixed to outside face of studs OR Minimum 6mm thick fibre cement sheeting or weatherboards or plank cladding externally, minimum 90mm deep timber stud or 92mm metal stud, standard plasterboard at least 13mm thick internally.
Roof	45	Concrete or terracotta tile or sheet metal roof with sarking, <i>acoustically rated plasterboard</i> ceiling at least 13mm thick fixed to ceiling joists, cellulose fibre insulation at least 100mm thick with a density of at least 45kg/m³ in the cavity. OR Concrete or terracotta tile or sheet metal roof with sarking, 2 layers of <i>acoustically rated plasterboard</i> at least 16mm thick fixed to ceiling joists, glass wool insulation at least 50mm thick with a density of at least 11kg/m³ or polyester insulation at least 50mm thick with a density of at least 20kg/m³ in the cavity.
	41	Concrete or terracotta tile or metal sheet roof with sarking, plasterboard ceiling at least 10mm thick fixed to ceiling joists, glass wool insulation at least 50mm thick with a density of at least 11kg/m³ or polyester insulation at least 50mm thick with a density of at least 20kg/m³ in the cavity. OR Concrete suspended slab at least 100mm thick.
	38	Concrete or terracotta tile or metal sheet roof with sarking, plasterboard ceiling at least 10mm thick fixed to ceiling cavity, mineral insulation or glass wool insulation at least 50mm thick with a density of at least 11 kg/m³.

Component of building's external envelope	Minimum R_w	Acceptable forms of construction
	35	Concrete or terracotta tile or metal sheet roof with sarking, plasterboard ceiling at least 10mm thick fixed to ceiling cavity.
Floors	51	Concrete slab at least 150mm thick.
	45	Concrete slab at least 100mm thick OR Tongued and grooved boards at least 19mm thick with: (i) timber joists not less than 175mm x 50mm; and (ii) mineral insulation or glass wool insulation at least 75mm thick with a density of at least 11kg/m ³ positioned between joists and laid on plasterboard at least 10mm thick fixed to underside of joists; and (iii) mineral insulation or glass wool insulation at least 25mm thick with a density of at least 11kg/m ³ laid over entire floor, including tops of joists before flooring is laid; and (iv) secured to battens at least 75mm x 50mm; and (v) the assembled flooring laid over the joists, but not fixed to them, with battens lying between the joists.
Entry Doors	35	Solid core timber not less than 45mm thick, fixed so as to overlap the frame or rebate of the frame by not less than 10mm, with full perimeter <i>acoustically rated seals</i> .
	33	Fixed so as to overlap the frame or rebate of the frame by not less than 10mm, fitted with full perimeter <i>acoustically rated seals</i> and constructed of - (i) solid core, wood, particleboard or blockboard not less than 45mm thick; and/or (ii) acoustically laminated glass not less than 10.38mm thick.

Component of building's external envelope	Minimum R_w	Acceptable forms of construction
	28	Fixed so as to overlap the frame or rebate of the frame, constructed of - (i) Wood, particleboard or blockboard not less than 33mm thick; or (ii) Compressed fibre reinforced sheeting not less than 9mm thick; or (iii) Other suitable material with a mass per unit area not less than 24.4kg/m²; or (iv) Solid core timber door not less than 35mm thick fitted with full perimeter <i>acoustically rated seals</i>.

Attachment 4

*SoundPLAN 9.0 Modelling
Design Horizon Traffic Noise Predictions –
Ground Level QDC MP4.4 Noise Categories*



Noise level
L10(18hr)
incl. facade reflection
in dB(A)

Noise Category 0
≤ 58.0
Noise Category 1
58.0 < ≤ 63.0
Noise Category 2
63.0 < ≤ 68.0
Noise Category 3
68.0 < ≤ 73.0
Noise Category 4
73.0 <

Legend

— Cadastral
— Road
— 1.8m Acoustic Barrier

**Yarrabilba 25050
Precinct 4H**

Ultimate Traffic Noise

MP4.4 Noise Categories

**Ground Level Facades
With Barriers**

July 2025

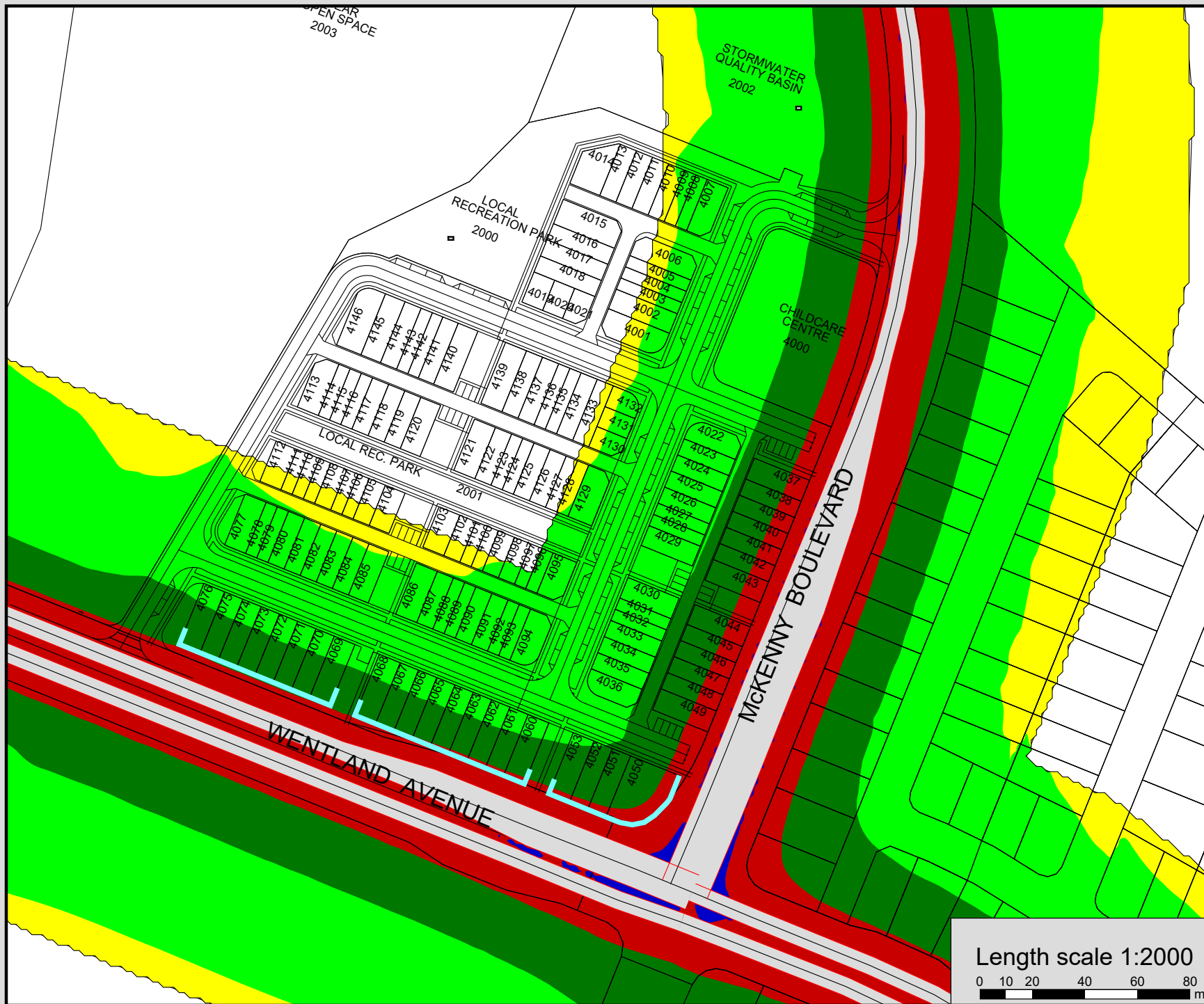
Length scale 1:2000

0 10 20 40 60 80
m



ATTACHMENT 5

*SoundPLAN 9.0 Modelling
Design Horizon Traffic Noise Predictions –
Upper Level QDC MP4.4 Noise Categories*



Noise level
L10(18hr)
incl. facade reflection
in dB(A)

Noise Category 0
≤ 58.0
Noise Category 1
58.0 < ≤ 63.0
Noise Category 2
63.0 < ≤ 68.0
Noise Category 3
68.0 < ≤ 73.0
Noise Category 4
73.0 < ≤ 78.0

Legend

— Cadastral
— Road
— 1.8m Acoustic Barrier

**Yarrabilba 25050
Precinct 4H**

Ultimate Traffic Noise

MP4.4 Noise Categories

**Upper Level Facades
With Barriers**

July 2025

Length scale 1:2000

0 10 20 40 60 80 m

