PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2023/1448

Date: 7 June 2024

Queensland Government

TRAFFIC NOISE IMPACT ASSESSMENT

PROPOSED PRECINCT 6 ROL2 DEVELOPMENT

YARRABILBA

Prepared for:
Lendlease

Prepared by:
MWA Environmental

9 May 2024

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Job Name: Yarrabilba

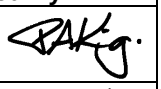
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1.0 INTRODUCTION

1.1 STUDY BRIEF

MWA Environmental has been engaged to prepare a Traffic Noise Impact Assessment for the proposed 'Precinct 6 ROL2' development at Yarrabilba.

The report has assessed the potential road traffic noise impact and mitigation measures associated with the local Sub Arterial and Major Collector 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 6 ROL2 by KN Group;
- Proposed reconfiguration of lot for Precinct 6 ROL2 by KN Group;
- Preliminary civil works levels for the ultimate Sub Arterial and Major Collector Road corridors provided by KN Group; and
- Updated ultimate planning horizon traffic design data for the road corridor as advised by SLR.

1.2 SITE DESCRIPTION

The proposed Precinct 6 ROL2 development is located in the southwestern portion of the overall Yarrabilba development. The site location is shown on **Figure 1.**

The Sub Arterial Road, Town Centre North-South Road is located along the western side of the Precinct 6 ROL2 and Major Collector, Ridge East West Link road is located along the southern side of Precinct 6 ROL2.

1.3 PROPOSED DEVELOPMENT

The proposed overall Precinct 6 ROL2 development comprises approximately 516 residential allotments 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.

The Arterial and Major Collector 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 as the road corridors 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 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)*.

The assessment has considered what noise levels would be experienced at the backyard of the proposed allotments to comply with a 60 dB(A) L_{10} 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 Yarrabilba masterplan is near 100 percentage developed, this implies that:

- Wentland Drive extended east to connect with Plunkett Road.
- Town Centre North South Road extended south to connect with Plunkett Road.
- Southern Infrastructure Corridor (SIC) (along northern boundary of Yarrabilba) is in place.

The noise model has represented the design horizon of the development traffic on the Sub Arterial and Major Collector roads adjacent to the proposed precinct based upon the design topographical contours of the road and of Precinct 6 ROL2 allotments.

The SoundPLAN 8.2 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	Yarrabilba Drive	13,100	60
	Town Centre North-South Road	10,400	
	Ridge East West Link	8,600	

3.1.2 Predicted Future Traffic Noise Levels – Residential Outdoor Areas

A SoundPLAN 8.2 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 to 2.0 metres above the proposed allotment pad level or on top of the retaining wall,** whichever is the higher point as shown on **Figure 2.**

The results of the traffic noise modelling for ground level receptors within Precinct 6 ROL2 indicates that the adopted SDAP noise criterion of 60 dB(A) L_{10} (18 hour) for outdoor recreation space (backyards) will comply at the proposed allotments within Precinct 6 ROL2.

The predicted road traffic noise contour maps which demonstrate areas in compliance of the 60 dB(A) L_{10} (18 hour) for outdoor 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 Sub Arterial and Major Collector Roads 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 6 ROL2, 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 6 ROL2 a maximum ‘Noise Category 0 and 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 6 ROL2.

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 6 ROL2' Allotments

QDC MP4.4 Noise Categories PRECINCT 6 ROL2		
Lot #	**Single storey house / ground floor**	**Upper floor of two storey house**
688	Category 0	Category 0
689	Category 0	Category 0
690	Category 0	Category 0
691	Category 0	Category 0
692	Category 0	Category 1
693	Category 0	Category 1
694	Category 1	Category 3
695	Category 1	Category 3
696	Category 1	Category 3
697	Category 1	Category 3
698	Category 1	Category 3
699	Category 1	Category 3
700	Category 1	Category 3
701	Category 1	Category 3
702	Category 1	Category 3
703	Category 1	Category 3
704	Category 1	Category 3
705	Category 0	Category 0
706	Category 0	Category 0
707	Category 0	Category 0
716	Category 0	Category 0
717	Category 0	Category 0
718	Category 0	Category 0
719	Category 0	Category 0
720	Category 0	Category 0
721	Category 0	Category 0
734	Category 0	Category 0
735	Category 0	Category 0
736	Category 0	Category 0
737	Category 1	Category 3
738	Category 1	Category 3
739	Category 2	Category 3
740	Category 1	Category 1
741	Category 0	Category 1
742	Category 0	Category 0
743	Category 0	Category 0

*Noise Category 0 – No acoustic treatment is required

Table 3 – Continued

QDC MP4.4 Noise Categories PRECINCT 6 ROL2		
Lot #	**Single storey house / ground floor**	**Upper floor of two storey house**
744	Category 0	Category 0
899	Category 0	Category 0
900	Category 0	Category 0
901	Category 0	Category 1
902	Category 1	Category 1
903	Category 1	Category 1
904	Category 1	Category 3
905	Category 1	Category 3
906	Category 0	Category 3
907	Category 0	Category 0
908	Category 0	Category 0
909	Category 0	Category 0
910	Category 0	Category 0
911	Category 0	Category 0
912	Category 0	Category 0
1052	Category 0	Category 0
1053	Category 0	Category 0
1054	Category 0	Category 0
1055	Category 0	Category 0
1056	Category 0	Category 0
1057	Category 0	Category 0
1070	Category 0	Category 0
1071	Category 0	Category 0
1072	Category 0	Category 0
1073	Category 1	Category 2
1074	Category 0	Category 2
1075	Category 0	Category 2
1076	Category 0	Category 0
1077	Category 0	Category 0
1078	Category 0	Category 0
1092	Category 0	Category 0
1093	Category 0	Category 0
1094	Category 0	Category 0
1097	Category 0	Category 0
1098	Category 0	Category 0
1099	Category 0	Category 0
1100	Category 0	Category 0
1101	Category 0	Category 0
1102	Category 0	Category 0
1105	Category 0	Category 0
1106	Category 0	Category 0
1107	Category 0	Category 0
1108	Category 0	Category 0
1109	Category 0	Category 0
1110	Category 0	Category 1
1111	Category 0	Category 0
1112	Category 0	Category 0
1113	Category 0	Category 0
1114	Category 0	Category 0
1115	Category 1	Category 3

*Noise Category 0 – No acoustic treatment is required

Table 3 – Continued

QDC MP4.4 Noise Categories PRECINCT 6 ROL2		
Lot #	**Single storey house / ground floor**	**Upper floor of two storey house**
1116	Category 1	Category 3
1117	Category 1	Category 2
1118	Category 1	Category 2
1119	Category 1	Category 2
1120	Category 1	Category 2
1121	Category 1	Category 2
1122	Category 1	Category 3
1123	Category 1	Category 3
1124	Category 1	Category 3
1125	Category 1	Category 2
1126	Category 1	Category 2
1127	Category 1	Category 2
1128	Category 1	Category 2
1129	Category 1	Category 2
1130	Category 1	Category 2
1131	Category 1	Category 2
1132	Category 0	Category 2
1133	Category 0	Category 2
1140	Category 0	Category 2
1141	Category 0	Category 2
1142	Category 0	Category 2
1143	Category 0	Category 2
1144	Category 0	Category 2
1145	Category 0	Category 2
1146	Category 1	Category 2

*Noise Category 0 – No acoustic treatment is required

The SoundPLAN model predictions are presented as plots of predicted Year 2034 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 Year 2034 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 by Lend Lease to prepare a Traffic Noise Impact Assessment for the proposed 'Precinct 6 ROL2' development at Yarrabilba.

The report has assessed the potential road traffic noise impact and mitigation measures associated with the adjacent Sub Arterial and Major Collector Road corridors within the Yarrabilba development area based on Precinct 6 ROL2 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, this 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 backyard 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.

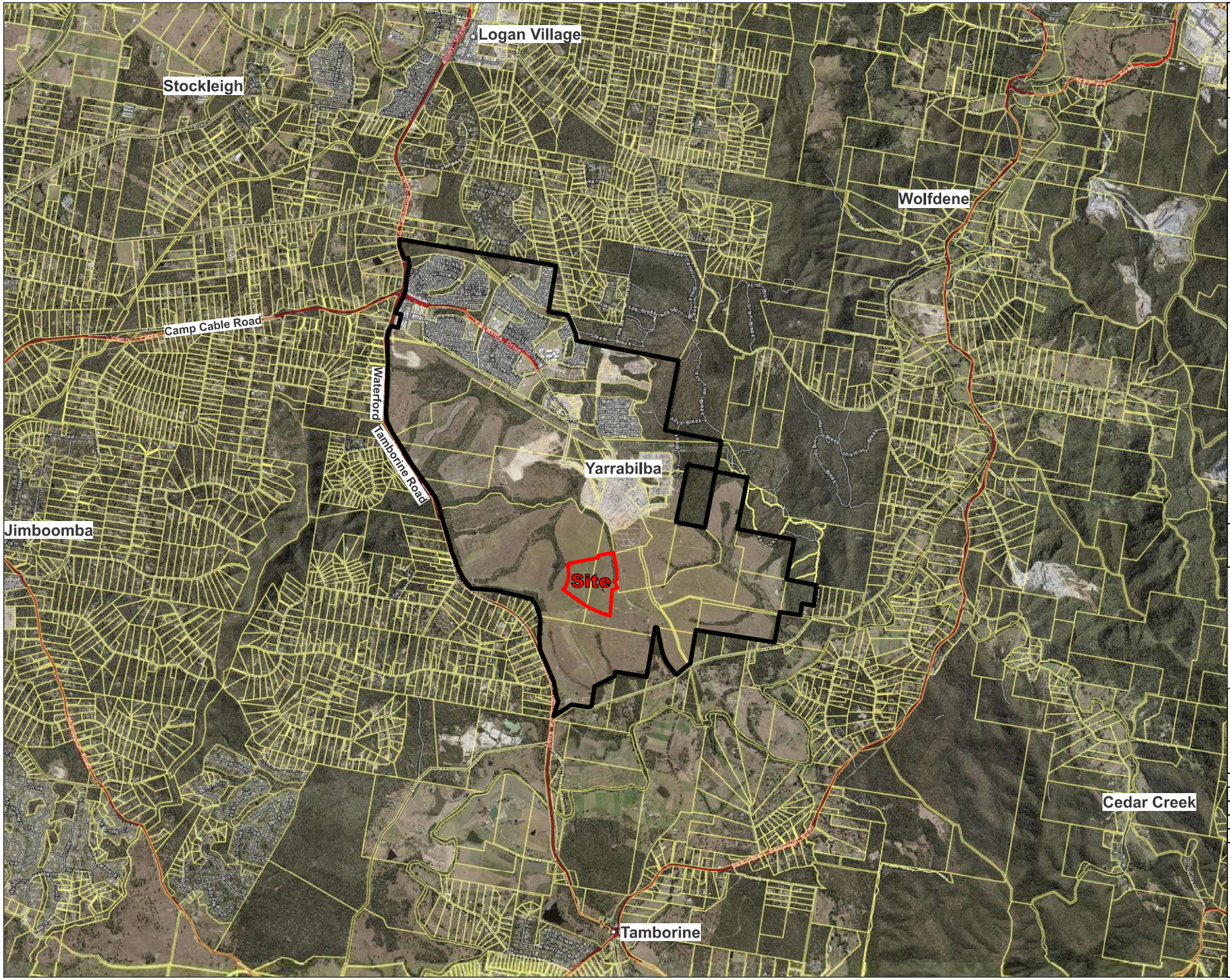
The results of the traffic noise modelling for outdoor areas within Precinct 6 ROL2 indicates that the adopted noise criterion of 60 dB(A) L_{10} (18 hour) for outdoor recreation space (backyards) will achieve compliance at the proposed allotment within Precinct 6 ROL2 with the inclusion of acoustic barriers at height of **1.8 to 2.0 metres above the allotment pad level or on top of the retaining wall,** whichever is the higher point as shown on **Figure 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 6 ROL2, 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 6 ROL2 a maximum 'Noise Category 0 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 6 ROL2.

MWA Environmental
9 May 2024

FIGURES



LEGEND

PROPERTY BOUNDARY

SITE LOCATION (PRECINCT 6 ROL2)

DRAWING REFERENCE

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

0 1.0 2.0km

CLIENT

LENDLEASE

PROJECT

TRAFFIC NOISE IMPACT ASSESSMENT

PROPOSED PRECINCT 6 ROL2 DEVELOPMENT YARRABILBA QLD

TITLE

SITE LOCATION

JOB	YARRABILBA	**FIGURE 1**
JOB NO.	23060	
DATE	10/05/24	DWG NUMBER
SCALE	1:70000 (A4)	**23060-1**
REV.		

mwa ENVIRONMENTAL

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YARRABILBA

- PRECINCT SIX- APPLICATION TWO BOUNDARY
- STAGE BOUNDARY
- OPEN SPACE - LINEAR AND STORMWATER QUALITY BASIN
- OPEN SPACE - NEIGHBOURHOOD RECREATION PARK
- OPEN SPACE - LOCAL RECREATION PARK
- LOCAL STAGE ROAD
- PATHWAY CONNECTION
- VILLAGE ROAD
- MAJOR ROAD

LOT TYPE
TRADITIONAL (T1)
TRADITIONAL (T2)
COURTYARD (C2)
COURTYARD (C3)
PREMIUM VILLA (PV)
VILLA (V)
TOWN COURTYARD (TCY2)
TOWN COURTYARD (TCY3)
TOWN PREMIUM VILLA (TPV)
TOWN VILLA (TV)
TERRACE (TCD)
MULTI-FAMMILY STRATA (MFS)

LEGEND

2.0m — BARRIER HEIGHT ABOVE PAD LEVEL OR ON TOP OF RETAINING WALL WHICHEVER IS THE HIGHER ACOUSTIC BARRIER

1.8m — ACOUSTIC BARRIER

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CLIENT	LENDLEASE
JOB	YARRABILBA
JOB NO.	23060
DATE	10/05/24
SCALE	1:3000 (A4)

FIGURE 2A

DRAWING NUMBER 23060-2A

PROJECT
TRAFFIC NOISE IMPACT ASSESSMENT
PROPOSED PRECINCT 6 ROL2 DEVELOPMENT YARRABILBA QLD

TITLE
ACOUSTIC BARRIER LOCATIONS

PRECINCT 06 - APPLICATION TWO
RECONFIGURATION OF A LOT

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0 20 40 60 80 100m
Scale 1:2,000 at A3

North

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YARRABILBA

- PRECINCT SIX- APPLICATION TWO BOUNDARY
- STAGE BOUNDARY
- OPEN SPACE - LINEAR AND STORMWATER QUALITY BASIN
- OPEN SPACE - NEIGHBOURHOOD RECREATION PARK
- OPEN SPACE - LOCAL RECREATION PARK
- LOCAL STAGE ROAD
- PATHWAY CONNECTION
- VILLAGE ROAD
- MAJOR ROAD

LOT TYPE
TRADITIONAL (T1)
TRADITIONAL (T2)
COURTYARD (C2)
COURTYARD (C3)
PREMIUM VILLA (PV)
VILLA (V)
TOWN COURTYARD (TCY2)
TOWN COURTYARD (TCY3)
TOWN PREMIUM VILLA (TPV)
TOWN VILLA (TV)
TERRACE (TCD)
MULTI-FAMMILY STRATA (MFS)

LEGEND
2.0m — BARRIER HEIGHT ABOVE PAD LEVEL OR ON TOP OF RETAINING WALL WHICHEVER IS THE HIGHER ACOUSTIC BARRIER
1.8m — ACOUSTIC BARRIER

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PROJECT
TRAFFIC NOISE IMPACT ASSESSMENT
PROPOSED PRECINCT 6 ROL2 DEVELOPMENT YARRABILBA QLD

CLIENT	LENDLEASE
JOB	YARRABILBA
JOB NO.	23060
DATE	10/05/24
SCALE	1:3000 (A4)

FIGURE 2B
DRAWING NUMBER
23060-2B

TITLE
ACOUSTIC BARRIER LOCATIONS

PRECINCT 06 - APPLICATION TWO
RECONFIGURATION OF A LOT

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0 20 40 60 80 100m
Scale 1:2,000 at A3
North

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File No. YAR-P06 Dgn No. YAR-P06-ROL2-ROL-240423 SHT 3 OF 3 Date 23 APR 2024

Attachment 1

Development Plans

YARRABILBA

- PRECINCT SIX - APPLICATION TWO BOUNDARY
- STAGE BOUNDARY
- LOW BUSHFIRE HAZARD RATING
- MEDIUM BUSHFIRE HAZARD RATING
- MANAGED BUFFER - LATER APPLICATIONS
- POTENTIAL BUSHFIRE IMPACT ZONE
- LINEAR PARK MANAGED
- LINEAR PARK UNMANAGED
- MINIMUM BUILDING SETBACKS

PREPARED BY LENDLEASE ON BEHALF OF BUSHLAND PROTECTION SYSTEMS

PRECINCT 06 - APPLICATION TWO
BUSHFIRE HAZARD ASSESSMENT AND MANAGEMENT PLAN

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0 40 80 120 160 200m

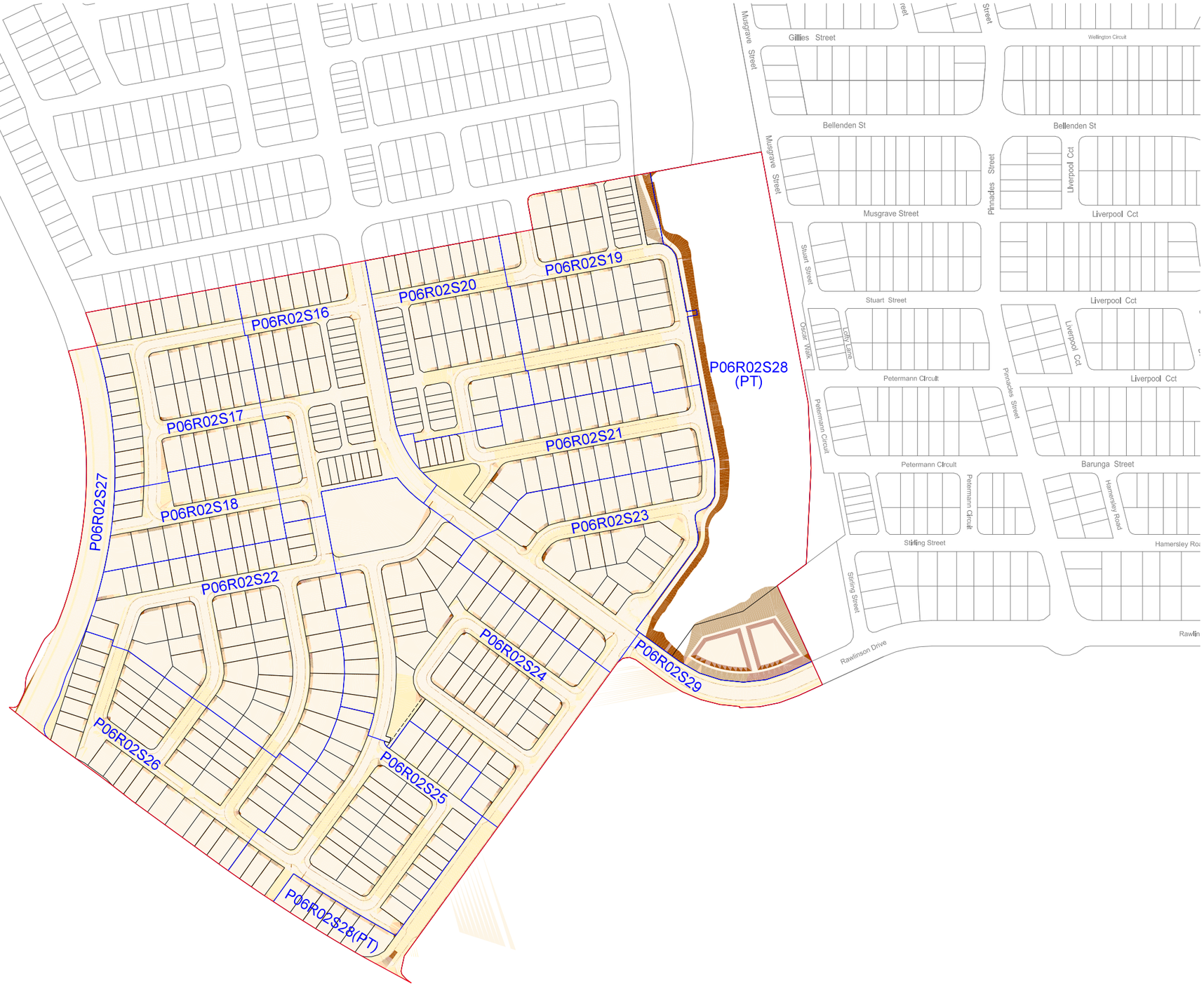
Scale 1:4,000 at A3

North

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File No. YAR - P06 Dgn No. YAR-P06-ROL2-BHA-240423 Date 23 APR 2024

YARRABILBA



PRECINCT SIX - APPLICATION TWO BOUNDARY

STAGE BOUNDARY

- 0 - 5%
- 5 - 10%
- 10 - 16%
- 16 - 20%
- 20 - 25%
- 25 - 100%

PRECINCT 06 - APPLICATION TWO
DESIGN SURFACE SLOPE ANALYSIS

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0 40 80 120 160 200m

Scale 1:4,000 at A3

North

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File No. YAR - P06 Dgn No. YAR-P06-ROL2-DSA-240430 Date 30 APR 2024

YARRABILBA

PRECINCT SIX -
APPLICATION TWO BOUNDARY

STAGE BOUNDARY

LOTS LESS THAN 250sqm

LOTS BETWEEN 250sqm AND 450sqm

PRECINCT 06 - APPLICATION TWO
LOTS LESS THAN 450sqm

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0 40 80 120 160 200m

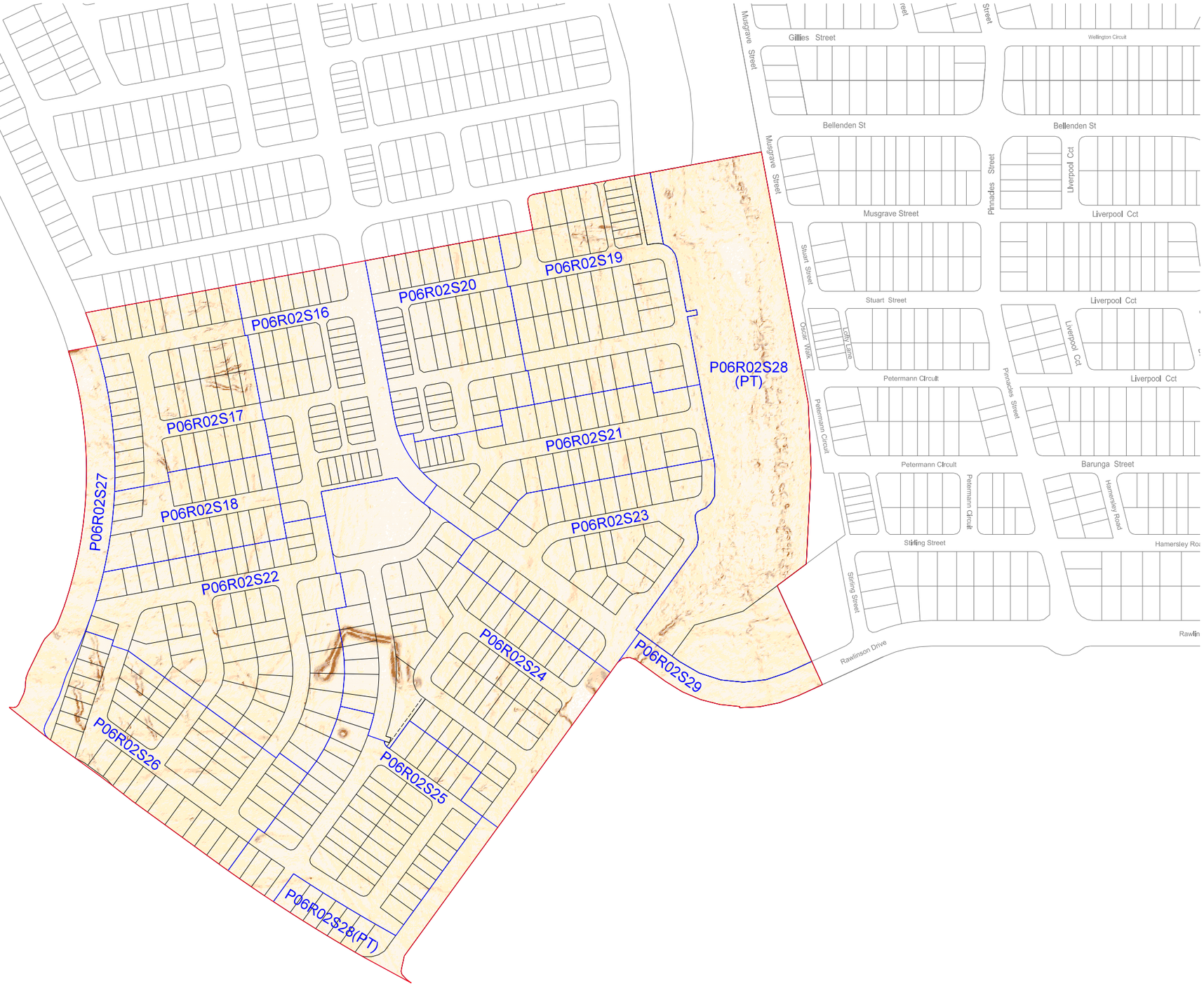
Scale 1:4,000 at A3

North

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File No. YAR - P06 Dgn No. YAR-P06-ROL2-<450-240423 Date 23 APR 2024

YARRABILBA



PRECINCT SIX - APPLICATION TWO BOUNDARY

STAGE BOUNDARY

- 0 - 5%
- 5 - 10%
- 10 - 16%
- 16 - 20%
- 20 - 25%
- 25 - 100%

PRECINCT 06 - APPLICATION TWO
NATURAL SURFACE SLOPE ANALYSIS

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0 40 80 120 160 200m

Scale 1:4,000 at A3

North

lendlease

File No. YAR - P06 Dgn No. YAR-P06-ROL2-NSA-240423 Date 23 APR 2024

YARRABILBA

- PRECINCT SIX- APPLICATION TWO BOUNDARY
- STAGE BOUNDARY
- OPEN SPACE - LINEAR
- OPEN SPACE - STORMWATER QUALITY BASIN
- OPEN SPACE - NEIGHBOURHOOD RECREATION PARK
- OPEN SPACE - LOCAL RECREATION PARK
- PATHWAY CONNECTION

PRECINCT 06 - APPLICATION TWO
OPEN SPACE TYPES

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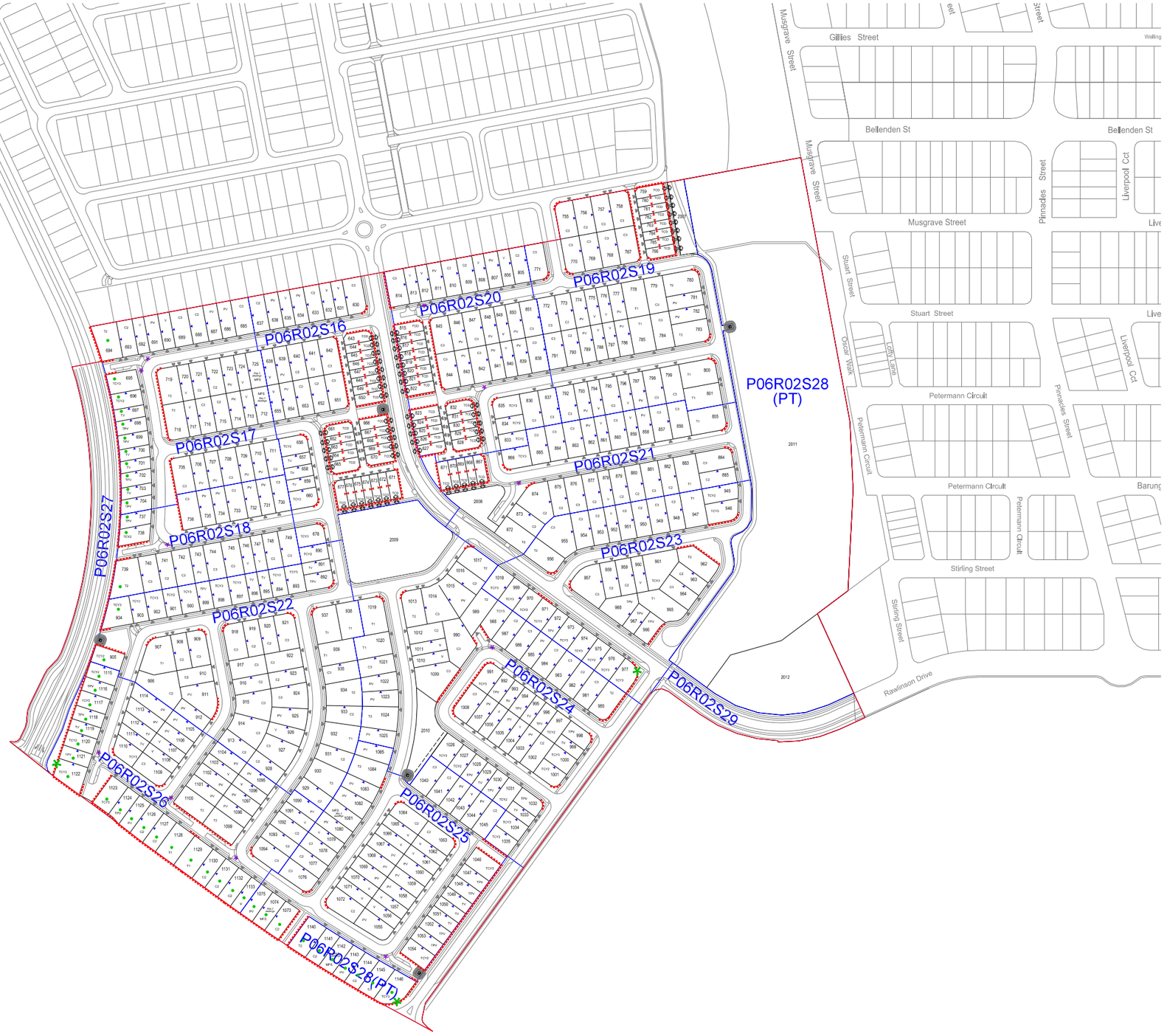
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Scale 1:4,000 at A3

North

lendlease

File No. YAR-P06 Dgn No. YAR-P06-ROL2-OST-240423 Date 23 APR 2024



YARRABILBA

LEGEND

- MANDATORY BUILD TO BOUNDARY
- OPTIONAL BUILD TO BOUNDARY
- MANDATORY PRIMARY FRONTAGE ^^^
- NO VEHICULAR ACCESS
- PROPOSED STAGE BOUNDARY
- PRECINCT 6 - APPLICATION TWO BOUNDARY
- POTENTIAL ENTRY STATEMENT LOCATION
- BIN PADS FOR SHARED COMMON DRIVEWAYS
- ACOUSTIC ATTENUATION MAY BE REQUIRED (In accordance with Traffic Noise Assessment report prepared by MWA Environmental)
- NO BUILDING ADJOINING ELECTRICAL TRANSFORMER

^^^ Dwelling to address the primary frontage by Incorporating the following;
- Entry, portico/verandah
- Principal front door and windows
- Letterbox
- Pedestrian Access
- Max. fence height of 1.2m

SETBACK TABLE

LOT TYPE		GROUND FLOOR			FIRST FLOOR			CORNER LOTS - SECONDARY FRONTAGE
		FRONT - PRIMARY FRONTAGE	REAR AND SIDE(to wall)	BUILD TO BOUNDARY	FRONT	SIDE	REAR	
(T1, T2)	TRADITIONAL	3.0	0.9	N/A	3.0	2.0	0.9	1.5
(C2, C3)	COURTYARD	3.0	0.9	0.0	3.0	1.0	0.9	1.5
(PV)	PREMIUM VILLA	3.0	0.9	0.0	3.0	1.0	0.9	1.5
(V)	VILLA	3.0	0.9	0.0	3.0	1.0	0.9	1.5
(TCY2, TCY3)	TOWN COURTYARD	3.0	0.9	0.0	3.0	1.0	0.9	1.5
(TPV)	TOWN PREMIUM VILLA	3.0	0.9	0.0	3.0	1.0	0.9	1.5
(TV)	TOWN VILLA	3.0	0.9	0.0	3.0	1.0	0.9	1.5
(TCD)	TERRACE (DUAL FRONTAGE)	2.4	0.5*	0.0	2.4	0.0	0.5	1.0
(MFS)	MULTI-FAMILY STRATA**	3.0	0.9	N/A	3.0	1.0	0.9	1.5

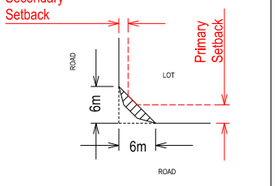
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WHERE THE LOWER FACE OF A REAR BOUNDARY RETAINING WALL EXCEEDS 2M IN HEIGHT THE MINIMUM SETBACK IS 2.5M TO THE GROUND AND SECOND FLOOR OF THE DWELLING.
* INCLUDES GARAGES
** CONSTITUTES MULTIPLE RESIDENTIAL DEVELOPMENT

RETAINING WALL HEIGHT TABLE

LOT TYPE		Traditional	Courtyard Town Courtyard	Premium Villa Town Premium Villa Town Cottage	Villa Town Villa Small Villa Smart	Terrace	MFS (Multi Family Strata)	Maximum Retaining Height
	EARTHWORKS							
Front Boundaries	Cut Average	1.5	1.4	1.25	1.0	0.5	0.5	1.8
		Fill Maximum height of 1.0 m						1.0
Side Boundaries	Cut Average	1.0	0.7	0.6	0.5	0.5	0.5	1.8
	Fill Average	1.5	0.7	0.6	0.5	0.5	0.5	1.0
Rear Boundary	Cut Average		1.5	1.5	1.5	1.5	1.5	1.8
		Fill Maximum height of 1.0 m						1.0

NOTE: RETAINING WALLS WITH A HEIGHT OF 1.0M OR MORE REQUIRE RPEQ CERTIFICATION

SPECIAL SITING REQUIREMENTS FOR CORNER ALLOTMENTS



NO BUILDING ALLOWED IN THE SHADED AREA

THESE CRITERIA MUST BE READ IN CONJUNCTION WITH RESIDENTIAL PLAN OF DEVELOPMENT SHEET 4 OF 4 [DGN No P06-ROL2-POD240423] - DESIGN CRITERIA FOR RESIDENTIAL DEVELOPMENT

PRECINCT 06 - APPLICATION TWO
PLAN OF DEVELOPMENT

0 40 80 120 160 200m

Scale 1:4,000 at A3

North

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YARRABILBA

LEGEND

- MANDATORY BUILD TO BOUNDARY
- OPTIONAL BUILD TO BOUNDARY
- MANDATORY PRIMARY FRONTAGE ^^^
- NO VEHICULAR ACCESS
- PROPOSED STAGE BOUNDARY
- PRECINCT 6 - APPLICATION TWO BOUNDARY
- POTENTIAL ENTRY STATEMENT LOCATION
- BIN PADS FOR SHARED COMMON DRIVEWAYS
- ACOUSTIC ATTENUATION MAY BE REQUIRED (In accordance with Traffic Noise Assessment report prepared by MWA Environmental)
- NO BUILDING ADJOINING ELECTRICAL TRANSFORMER

^^^ Dwelling to address the primary frontage by incorporating the following:
- Entry, portico/verandah
- Principal front door and windows
- Letterbox
- Pedestrian Access
- Max. fence height of 1.2m

SETBACK TABLE

LOT TYPE		GROUND FLOOR			FIRST FLOOR			
		FRONT - PRIMARY FRONTAGE	REAR AND SIDE(to wall)	BUILD TO BOUNDARY	FRONT	SIDE	REAR	CORNER LOTS - SECONDARY FRONTAGE
(T1, T2)	TRADITIONAL	3.0	0.9	N/A	3.0	2.0	0.9	1.5
(C2, C3)	COURTYARD	3.0	0.9	0.0	3.0	1.0	0.9	1.5
(PV)	PREMIUM VILLA	3.0	0.9	0.0	3.0	1.0	0.9	1.5
(V)	VILLA	3.0	0.9	0.0	3.0	1.0	0.9	1.5
(TCY2, TCY3)	TOWN COURTYARD	3.0	0.9	0.0	3.0	1.0	0.9	1.5
(TPV)	TOWN PREMIUM VILLA	3.0	0.9	0.0	3.0	1.0	0.9	1.5
(TV)	TOWN VILLA	3.0	0.9	0.0	3.0	1.0	0.9	1.5
(TCD)	TERRACE (DUAL FRONTAGE)	2.4	0.5*	0.0	2.4	0.0	0.5	1.0
(MFS)	MULTI-FAMILY STRATA**	3.0	0.9	N/A	3.0	1.0	0.9	1.5

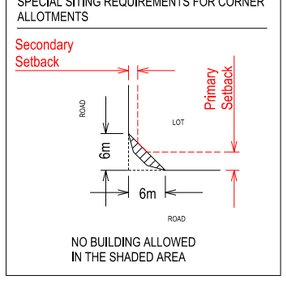
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RETAINING WALL HEIGHT TABLE

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	EARTHWORKS							
Front	Cut Average	1.5	1.4	1.25	1.0	0.5	0.5	1.8
Boundaries		Fill Maximum height of 1.0 m						1.0
Side	Cut Average	1.0	0.7	0.6	0.5	0.5	0.5	1.8
Boundaries	Fill Average	1.5	0.7	0.6	0.5	0.5	0.5	1.0
Rear	Cut Average		1.5	1.5	1.5	1.5	1.5	1.8
Boundary		Fill Maximum height of 1.0 m						1.0

NOTE: RETAINING WALLS WITH A HEIGHT OF 1.0M OR MORE REQUIRE RPEQ CERTIFICATION

SPECIAL SITING REQUIREMENTS FOR CORNER ALLOTMENTS



THESE CRITERIA MUST BE READ IN CONJUNCTION WITH RESIDENTIAL PLAN OF DEVELOPMENT SHEET 4 OF 4 [DGN No P06-ROL2-POD240423] - DESIGN CRITERIA FOR RESIDENTIAL DEVELOPMENT

PRECINCT 06 - APPLICATION TWO
PLAN OF DEVELOPMENT

0 20 40 60 80 100m

Scale 1:2,000 at A3

North

lendlease

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YARRABILBA

LEGEND

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SETBACK TABLE

LOT TYPE		GROUND FLOOR FRONT - PRIMARY FRONTAGE	GROUND FLOOR REAR AND SIDE(to wall)	GROUND FLOOR BUILD TO BOUNDARY	FIRST FLOOR FRONT	FIRST FLOOR SIDE	FIRST FLOOR REAR	CORNER LOTS - SECONDARY FRONTAGE
(T1, T2)	TRADITIONAL	3.0	0.9	N/A	3.0	2.0	0.9	1.5
(C2, C3)	COURTYARD	3.0	0.9	0.0	3.0	1.0	0.9	1.5
(PV)	PREMIUM VILLA	3.0	0.9	0.0	3.0	1.0	0.9	1.5
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(TPV)	TOWN PREMIUM VILLA	3.0	0.9	0.0	3.0	1.0	0.9	1.5
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(TCD)	TERRACE (DUAL FRONTAGE)	2.4	0.5*	0.0	2.4	0.0	0.5	1.0
(MFS)	MULTI-FAMILY STRATA**	3.0	0.9	N/A	3.0	1.0	0.9	1.5

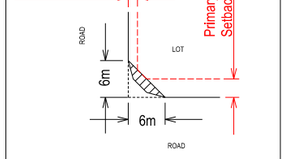
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	Fill Maximum height of 1.0 m							1.0
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	Fill Average	1.5	0.7	0.6	0.5	0.5	0.5	1.0
Rear Boundary	Cut Average		1.5	1.5	1.5	1.5	1.5	1.8
	Fill Maximum height of 1.0 m							1.0

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SPECIAL SITING REQUIREMENTS FOR CORNER ALLOTMENTS



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PRECINCT 06 - APPLICATION TWO
PLAN OF DEVELOPMENT

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0 20 40 60 80 100m

Scale 1:2,000 at A3

North

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1. General:

i. Easements over infrastructure have not been shown which may affect setbacks. Eaves must not protrude into easements.
ii. The maximum height of unattached buildings shall not exceed 8.5m above natural ground level. For attached buildings on lots greater than 450sqm a building height of 10.5m may be permitted as measured from the natural ground level.
iii. It is assumed that the pad level of each block will be the average of the four corners of the block.
iv. Buildings will be built to this pad level unless the consent of property owners on both sides of the block is obtained to vary the pad level.
v. Acoustic treatment may be required for some lots, refer to report prepared by MWA Environmental.
vi. Construction standards/setbacks may be affected by bushfire risk. Refer to the Sub-Precinct Specific Bushfire Hazard Assessment and Mitigation Plan for Precinct 6 Application 2 Yarrabilba, prepared by Bushfire Protection Systems Pty Ltd.

2. Setbacks:

i. Setbacks are as per the Setback Table included on the Plan of Development unless otherwise specified.
ii. All setbacks are measured to the wall. No projection will be closer to a side boundary than 450mm including gutter or fascia, with the exception of any eave returning to a build to boundary wall.
iii. Front verandah and covered areas to the front door are permitted to extend into the front setback on the condition that the roofed area is not enclosed. For front setbacks, this roofed area can extend to1.0m from the front property line.
iv. The build to boundary line is nominated on this plan. The length of wall built to this boundary is not to exceed 15.0m (excluding the terrace product) unless specified otherwise in a Plan of Development. Parapets are considered to be a wall and are to comply with the Setback table included on the Plan of Development.
v. Buildings to be sited in accordance with the 'Special Siting Requirements for Corner Allotments'.
vi. Front setbacks on corner lots are determined by the frontage that the primary facade is addressing. The primary frontage is taken to be the frontage where the front door and letterbox is located.
vii. Allotments containing or adjoining the lower face of a rear retaining wall exceeding 2.0 metres in height are required to have a minimum rear setback of 2.5m to the rear property boundary from the ground and second floor of the dwelling.

3. Site Cover and Amenity:

i. Site cover for each lot is not to exceed the following:
   a. 80% for dual attached lots;
   b. 65% for build to the boundary lots;
   c. 60% for lots that do not use a build to boundary;
ii. Total outdoor private open space accessible from the ground floor dwelling, either covered or uncovered, should be generally flat without any fall exceeding 70mm vertical or every 1.0 m horizontally. Private outdoor space excludes area for driveways and must include an area with a minimum dimension of 2.4m. The total outdoor space should equal at least 15% of the total site area.

4. Parking, Garages and Carports:

i. Each allotment must provide one covered car parking space.
ii. Carports must include a roof design, design features and materials which are consistent with the form and materials of the home.
iii. Carports must include either a garage door at the front or screening to the rear.
iv. Any column or wall provided to support a carport must be set back a minimum of 5.0m from the front boundary of the property.
v. For garages on front loaded lots less than 10m in width the following criteria must be met:
   - Single storey homes must have a single or tandem garage
   - Double storey homes can have a double garage provided the 2nd floor front wall or balcony is a minimum of 560mm forward of the garage wall.

5. Driveways:

i. The driveway must be laid at the grade of the adjacent verge area. No grade change to the verge for the construction of a driveway will be allowed.
ii. Where there is a footpath within the verge, the driveway prevails, i.e. the portion of the footpath where the driveway crosses is removed.
iii. Maximum driveway grades within lots must not exceed 1:5 or 1:4 with transitions at both ends of the driveway.
iv. Driveways must be offset at least 300mm from the side property boundary.
v. Driveways must be completed prior to occupation and be located as shown on the approved Functional Layout Roadworks Plan, unless otherwise agreed by DSDMIP.
vi. Driveways across the verge cannot exceed 3.0m for a single garage or 5.0m for a double garage.
vii. Driveways, unless varied by a provision above, shall accord with Logan City Council's standards (except for the driveway siting requirements in relation to intersections which is as per the approved POD). Prior to construction, approval from Logan City Council for Vehicular Access to Residential Premises is required.

6. Retaining Walls, Earthworks and Sloping Land (where occurring following construction by Lendlease):

i. Retaining wall heights must not exceed those nominated in the Retaining Wall Heights table included on the Residential Plan of Development.
ii. If these requirements are not able to be achieved, construction methods other than slab on ground construction are to be used.
iii. If elevated construction is to be used, under floor services must be located or screened to minimise their appearance to adjoining properties and public spaces.
iv. Retaining walls along street or park frontages cannot exceed 1.0 m in height. A planted strip of a minimum width of 500mm must exist between any terraced retaining walls.
v. Retaining walls to side boundaries between lots cannot exceed 1.8 metres high at the front wall of the house and must taper down to natural ground level forward of the house.
vi. Retaining walls over 900mm high require a 1 metre high fence above the wall and adequate landscape screening.
vii. Where the block allows for build to the boundary, the build to the boundary wall must be projected to 150mm below the likely pad level of the adjacent block. The pad level can be assumed to be the average of the four corners of the adjacent block using the As Built levels. The build down or the build to boundary wall must be in a material consistent with the wall above it.
viii. The front wall of the home must not be more than 50% below the midpoint level of the front boundary.

7. External Building Materials:

No raw, unfinished or untreated materials are permitted for external building works. This includes galvanised iron, zinc or aluminium coated steel, corrugated or unpainted fibre cement sheeting and bare, painted or uncoloured concrete block work or commons brickwork.

8. Front Facade Articulation:

i. Facades of the home fronting the street must include a highly visible entry and include a substantial verandah or include two materials or finishes to the entry.
ii. Homes must include articulation between the alignment of the front wall and the garage on the primary frontage. The minimum acceptable alignment variation is 560mm. Garages are permitted to be a maximum 1.0m forward of the front building wall where the roof of the entry is positioned forward of the roof of the garage.
iii. Double storey homes which incorporate a verandah or balcony to the first floor to at least 40% of the front elevation width do not require articulation between the alignment of the front wall and the garage.

9. Homes with more than one Visible Facade (Corner Homes/Homes with frontage to park):

Homes on corners or with park frontage must provide feature windows and detailing to match the front elevation along the secondary frontage or extend the detailing of the priority street facade to the front four metres of the secondary frontage.

10. Fencing:

i. Any fencing on the primary street frontage is to be a maximum of 1.2 metres in height and decorative in style, except for regulation fencing required around pools.
ii. Fencing up to 1.5 m in height will be permitted on primary street frontages if it is:
   a. an open style fence that is 50% transparent, or
   b. is a courtyard wall constructed of face brickwork or masonry piers with coloured render or textured finish
iii. Fencing provided to a secondary street frontage can be up to 1.8 metres in height and must be decorative fencing.
iv. All side fencing must either return to the house a minimum of 1.0 metre behind the front building line or continue forward of the front building line as decorative fencing.
v. Decorative fencing is to be constructed of rendered and painted masonry piers or painted or stained posts, with infill panels of coloured metal tube, painted or stained timber palings or horizontal battens. Timber paling fences will only be accepted if they are painted and treated with decorative capping or trims and provided with pronounced posts.
vi. Secondary street frontage fencing must finish 4 metres behind the front wall of your home.
vii. Untreated or coloured metal sheeting or fibrous cement is not acceptable as a decorative fence.
viii. Fencing and retaining walls erected by Lendlease must not be altered, removed or modified in any way, without the prior written approval from Lendlease.

11. Landscaping:

At least 50% of your front yard is landscaped with grass and/or garden beds. 25% of the front yard must be planted garden beds with trees and/or shrubs capable of growing to 3 metres tall and at least 600mm high at the time of planting. Refer to the preferred Yarrabilba plant species list for guidance.

12. Outdoor Structure and Services

i. All outdoor structures visible from the street or public spaces including but not limited to, roof or wall mounted air-conditioning units, satellite dishes, antennas, sheds, water tanks and clotheslines must be suitably screened and located to minimise detrimental visual impact.
ii. Solar panels and collectors for hot water units are the exception to this standard when orientated to maximise their effectiveness.

13. Houses on Narrow Residential Lots (10m-12.49m in width)

Houses on Lots 10m-12.49m in width must adhere to the following design criteria:

i. The front facing building wall, which comprises the garage door must not exceed an external width of 5.7m.
ii. The garage door:
   a. Width must not exceed 4.8m;
   b. Must have a minimum 450mm eave above it;
   c. Must be setback a minimum of 240mm behind the garage ~~door~~ wall and
   d. Must have a sectional, tilt or a roller door.
iii. The front facade of the dwelling must be forward of the alignment of the garage wall and must include the following:
   a. A front entrance door and windows and a side light is required where there is no habitable room facing the street.
   b. A front verandah, portico or porch located over the front entrance, which extends a minimum of 1600mmmm forward of the entrance door.
   c. The verandah, portico or porch is to include front piers with distinct materials and / or colours.

14. Residential Lots with Park Frontage

i. Fencing along park frontages must be:
   a. 1.2m high solid; or
   b. Up to 1.8m high if containing openings that make it more than 50% transparent.
ii. Dwellings are designed to include habitable rooms that face the park.

15. Secondary Dwellings

Minimum Lot Size	Secondary dwellings are not permitted on lots less than 400sqm in size.
Floor Area of Secondary Dwelling	Maximum 60sqm GFA
Design and Siting of buildings and structures	The dwelling / secondary dwelling must have the design effect of one (1) single dwelling from the road / street frontage or within public view.
Materials and Detailing	Materials, detailing, colours and roof forms and consistent with those of the primary house.
Outdoor Living Space	Minimum 9sqm with a minimum dimension of 3m and directly accessible from a main living area.
Driveway	The secondary dwelling must share the driveway of the primary dwelling.
Car Parking and Garaging	Minimum one space in addition to the primary dwelling requirement – with minimum dimensions of 5m x 3m.
Street Surveillance	On a single street frontage, the secondary dwelling entry must be hidden from view from the street, so as to give the effect that the home is one (1) single residential dwelling.
Letterboxes	Any secondary dwelling is not permitted its own letterbox and must be shared with the primary dwelling.
Titling	Any secondary dwelling is unable to be separately titled to the primary dwelling.
Separate Services	No separate infrastructure servicing to the secondary dwelling is permitted (i.e., water, gas, electricity).

16. Electronic Vehicle Readiness:

Each dwelling is to include a separate dedicated electrical circuit (conduit and wiring) into the garage or carport to enable the installation of Electric Vehicle Supply Equipment. Where not used for Electric Vehicle Supply Equipment, the circuit is to be fitted with a minimum 15amp GPO outlet.

17. Design Criteria for Multi Family Strata (MFS) Lots (Constitutes Multiple Residential Development)

i. MFS lots are identified on this Plan of Development and can be developed for the purpose of a House or Multiple Residential development (i.e., two or more dwellings on a single lot).
ii. The maximum number of dwellings per MFS lot is shown on this Plan of Development and must not be exceeded.
iii. Where an MFS lot is to be developed as Multiple Residential, the following design criteria apply:
   a. The Multiple Residential development must address all street frontages and present with the appearance of a traditional house.
   b. Each dwelling comprising the Multiple Residential development must include a laundry, food preparation area, sanitary facilities, bin storage and clothes drying areas.
   c. Bin storage and clothes drying areas must not be visible from any street frontage.
   d. The Multiple Residential development must be sited in accordance with this Plan of Development.
   e. The Multiple Residential development must address all streets as primary frontages with a minimum of one (1) dwelling per frontage.
   f. All buildings with a width of more than 10 metres that are visible from a road or a park, are to be articulated to reduce the mass of the building by one or more of the following
      i. Windows are recessed into the facade;
      ii. Balconies, porches or verandas are provided;
      iii. Window hoods are provided; or
      iv. Shadow lines are created on the building through minor changes in the facade (100mm minimum).
   g. Lots that have a park frontage are to address the park through the inclusion of at least three of the following design elements:
      i. A verandah, porch or portico;
      ii. Awning and shade structures;
      iii. Variation to roof and building lines;
      iv. Inclusion of window openings; or
      v. Use of varying building materials and treatments.
   h. The extent of garages must not exceed 40% of the lot frontage on any street frontage, except where Houses on Narrow Residential Lots requirements are met.
   i. Private open space must be provided at a minimum rate of 25sqm for each dwelling comprising the Multiple Residential development and must:
      i. Incorporate a minimum of one single area of 16m² on the ground floor, or 12m² for elevated areas of outdoor living space;
      ii. Primary outdoor spaces must be accessible from indoor living spaces and must have a minimum dimension of 4.0 metres for ground level living or 2.0 metres for elevated outdoor living spaces.
      iii. Primary spaces must not have a slope of more than 10%; and
      iv. Private outdoor living spaces must be clearly delineated for each dwelling.
   j. Site cover for MFS lots shall not exceed 60%.

18. Criteria for Variations to an approved plan assessed via compliance assessment

Applications for compliance assessment to vary the layout must be in accordance with the criteria outlined below. Changes that are not in accordance with these criteria will require lodgement of a change application, pursuant to Section 99 of the Economic Development Act 2012.

i. Minor variation to the boundaries of parks subject to achieving the following:
   a. The size of the park does not vary by +/- 5%;
   b. The boundary of a park does not vary by more than 10m in any direction; and
   c. No change to the location and classification of the proposed park are made; and
   d. Minimum park size and embellishments under Community Greenspace IMP and EDQ Park Planning and Design Guideline 12 and met; and if it is required to accommodate a pad mount transformer- with a maximum area of 5m x 5m.
ii. Minor variations to the road network subject to achieving the following:
   a. The classification of the road is not varied;
   b. The location of a road is moved by not more than 10m in any direction;
   c. Any change to a road location does not result in a new intersection within 50m of another intersection; and
   d. The change of the road does not result in a block length of more than 200m; and
   e. Retains grid or modified grid responsive to site characteristics; and
   f. Does not result in an additional cul de sac; and
   g. Demonstrate the variation accords with provisions within Guidelines 5, 6 and 13.
iii. Variation to lots subject to achieving the following:
   a. The total number of lots is within +/- 5% of the number of lots already approved; and
   b. The footprint of the lots is within the existing residential lot footprint (with the exception being where a road is moved in accordance with the provisions in Item b(i) above; and
   c. It can be demonstrated where a lot increase is proposed that adequate on-street parking exists for visitors to the lots; and
   d. Where a paramount transformer is required- max 5m x 5m.
iv. Variation to the approved POD where:
   a. To amend setbacks as a result of a lot change; or
   b. To change the location of a built to boundary wall or driveway.
   c. It is noted a compliance assessment process cannot be used once any lot in the stage subject to the change has been sold.
v. Variations to staging or creation of sub-stages:
   a. Permitted when not resulting in a park being created in a stand-alone stage or where a park is in the final stage with less than 10 residential lots associated with it.

Where a variation is proposed, the applicant must submit to EDQ for compliance assessment:

i. A statement demonstrating compliance with the criteria above and relevant section of PDA Guidelines and Practice Notes.
ii. Where minor variations are required due to detailed engineering design a statement outlining the
iii. Reason for the variation and how the variation responds to Guidelines 13-Engineering Standards.
iv. Updated ROL and POD plans as applicable.
v. Updated Functional Layout Plans (if applicable)

YARRABILBA

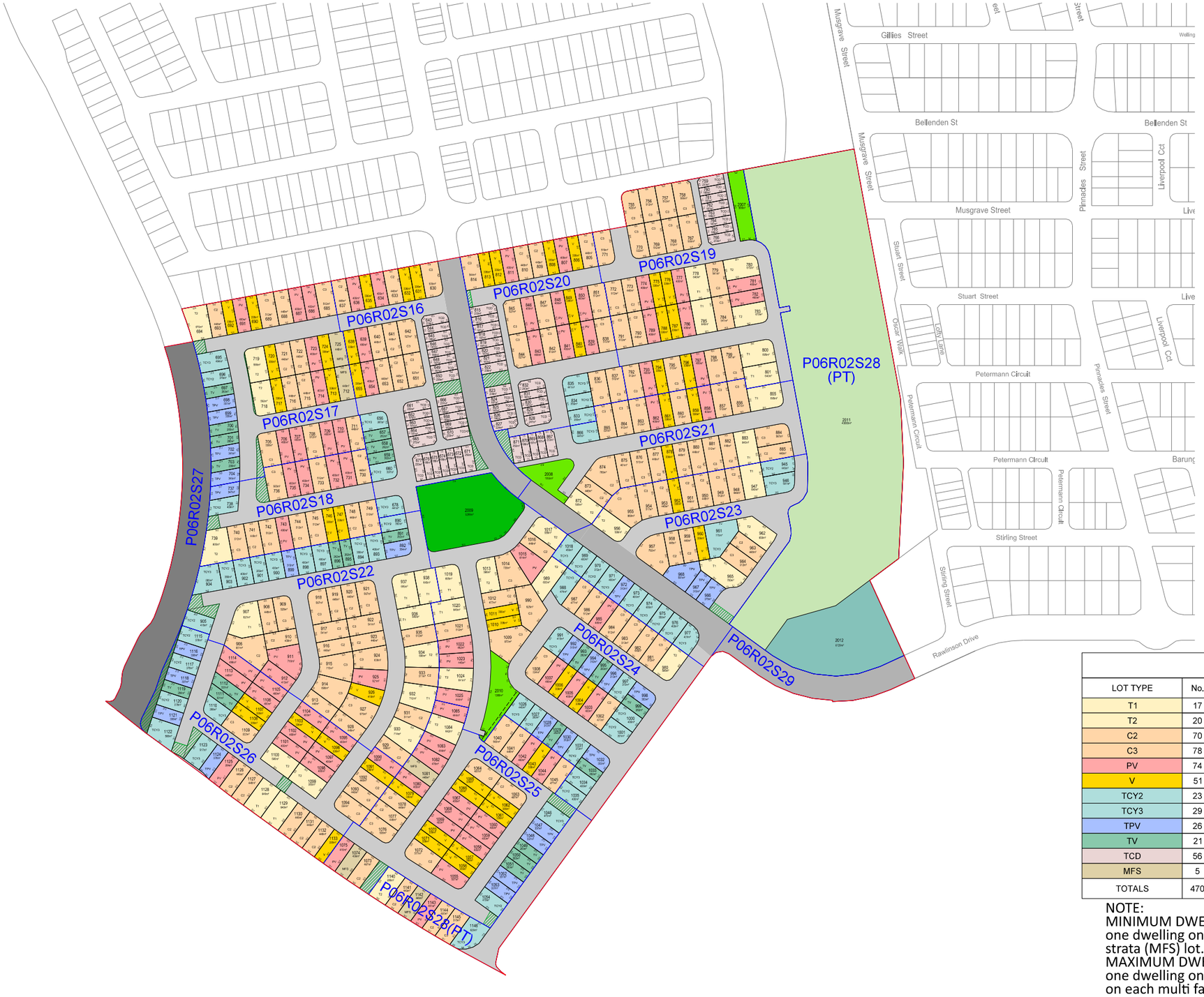
File No. YAR-P06 Dgn No. YAR-P06-ROL1-ROL-240423 SHT 4 OF 4 Date 23 APR 2024

PRECINCT 06 - APPLICATION TWO - PLAN OF DEVELOPMENT - DESIGN CRITERIA

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North

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YARRABILBA

- PRECINCT SIX- APPLICATION TWO BOUNDARY
- STAGE BOUNDARY
- OPEN SPACE - LINEAR AND STORMWATER QUALITY BASIN
- OPEN SPACE - NEIGHBOURHOOD RECREATION PARK
- OPEN SPACE - LOCAL RECREATION PARK
- LOCAL STAGE ROAD
- PATHWAY CONNECTION
- VILLAGE ROAD
- MAJOR ROAD

LAND USE	AREA (ha)
Residential	19.813 ha
Open Space - Local	0.341 ha
Open Space - Neighbourhood	0.529 ha
Open Space - Linear	4.982 ha
Road - Major Road	1.063 ha
Road - Village Road	1.447 ha
Road - Local Road	7.963 ha
TOTAL	36.137 ha

MINIMUM RESIDENTIAL DENSITY - 30.09 ha
470 dw
15.62 dw/ha

MAXIMUM RESIDENTIAL DENSITY - 30.09 ha
480 dw
15.95w/ha

LOT YIELD BY LOT TYPE

LOT TYPE	No.	No.%	AREA	AREA%	MINIMUM	MAXIMUM	AVERAGE
T1	17	3.62%	11487.33m²	5.80%	640.00m²	826.58m²	675.73m²
T2	20	4.26%	12619.87m²	6.37%	586.20m²	804.92m²	630.99m²
C2	70	14.89%	32575.78m²	16.44%	446.22m²	850.59m²	465.37m²
C3	78	16.60%	43011.51m²	21.71%	512.00m²	871.70m²	551.43m²
PV	74	15.74%	30831.85m²	15.56%	393.66m²	709.68m²	416.65m²
V	51	10.85%	17217.82m²	8.69%	336.00m²	417.82m²	337.60m²
TCY2	23	4.89%	8700.70m²	4.39%	350.00m²	439.76m²	378.29m²
TCY3	29	6.17%	13247.63m²	6.69%	398.88m²	769.87m²	456.81m²
TPV	26	5.53%	8978.16m²	4.53%	312.50m²	591.02m²	345.31m²
TV	21	4.47%	5800.96m²	2.93%	262.50m²	336.81m²	276.24m²
TCD	56	11.91%	11421.99m²	5.77%	186.49m²	271.50m²	203.96m²
MFS	5	1.06%	2231.13m²	1.13%	437.93m²	449.20m²	446.23m²
TOTALS	470	100%	198124.71m²	100%	186.49m²	871.70m²	421.54m²

NOTE:
MINIMUM DWELLINGS is based on the development of one dwelling on each single family and multi-family strata (MFS) lot.
MAXIMUM DWELLINGS is based on the development of one dwelling on each single family lot, and three dwellings on each multi family strata (MFS).

DENSITY calculations include the area of residential lots, local roads and credited park. The boundaries, roads and pathways shown hereon are subject to detailed engineering design, final survey and approval of subsequent development applications by the relevant authorities.

PRECINCT 06 - APPLICATION TWO RECONFIRGUATION OF A LOT

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0 40 80 120 160 200m

Scale 1:4,000 at A3

North

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YARRABILBA

- PRECINCT SIX- APPLICATION TWO BOUNDARY
- STAGE BOUNDARY
- OPEN SPACE - LINEAR AND STORMWATER QUALITY BASIN
- OPEN SPACE - NEIGHBOURHOOD RECREATION PARK
- OPEN SPACE - LOCAL RECREATION PARK
- LOCAL STAGE ROAD
- PATHWAY CONNECTION
- VILLAGE ROAD
- MAJOR ROAD

LOT TYPE
TRADITIONAL (T1)
TRADITIONAL (T2)
COURTYARD (C2)
COURTYARD (C3)
PREMIUM VILLA (PV)
VILLA (V)
TOWN COURTYARD (TCY2)
TOWN COURTYARD (TCY3)
TOWN PREMIUM VILLA (TPV)
TOWN VILLA (TV)
TERRACE (TCD)
MULTI-FAMMILY STRATA (MFS)

PRECINCT 06 - APPLICATION TWO
RECONFIGURATION OF A LOT

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0 20 40 60 80 100m

Scale 1:2,000 at A3

North

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File No. YAR-P06 Dgn No. YAR-P06-ROL2-ROL-240423 SHT 2 OF 3 Date 23 APR 2024



YARRABILBA

- PRECINCT SIX- APPLICATION TWO BOUNDARY
- STAGE BOUNDARY
- OPEN SPACE - LINEAR AND STORMWATER QUALITY BASIN
- OPEN SPACE - NEIGHBOURHOOD RECREATION PARK
- OPEN SPACE - LOCAL RECREATION PARK
- LOCAL STAGE ROAD
- PATHWAY CONNECTION
- VILLAGE ROAD
- MAJOR ROAD

LOT TYPE
TRADITIONAL (T1)
TRADITIONAL (T2)
COURTYARD (C2)
COURTYARD (C3)
PREMIUM VILLA (PV)
VILLA (V)
TOWN COURTYARD (TCY2)
TOWN COURTYARD (TCY3)
TOWN PREMIUM VILLA (TPV)
TOWN VILLA (TV)
TERRACE (TCD)
MULTI-FAMMILY STRATA (MFS)

PRECINCT 06 - APPLICATION TWO
RECONFIGURATION OF A LOT

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0 20 40 60 80 100m

Scale 1:2,000 at A3

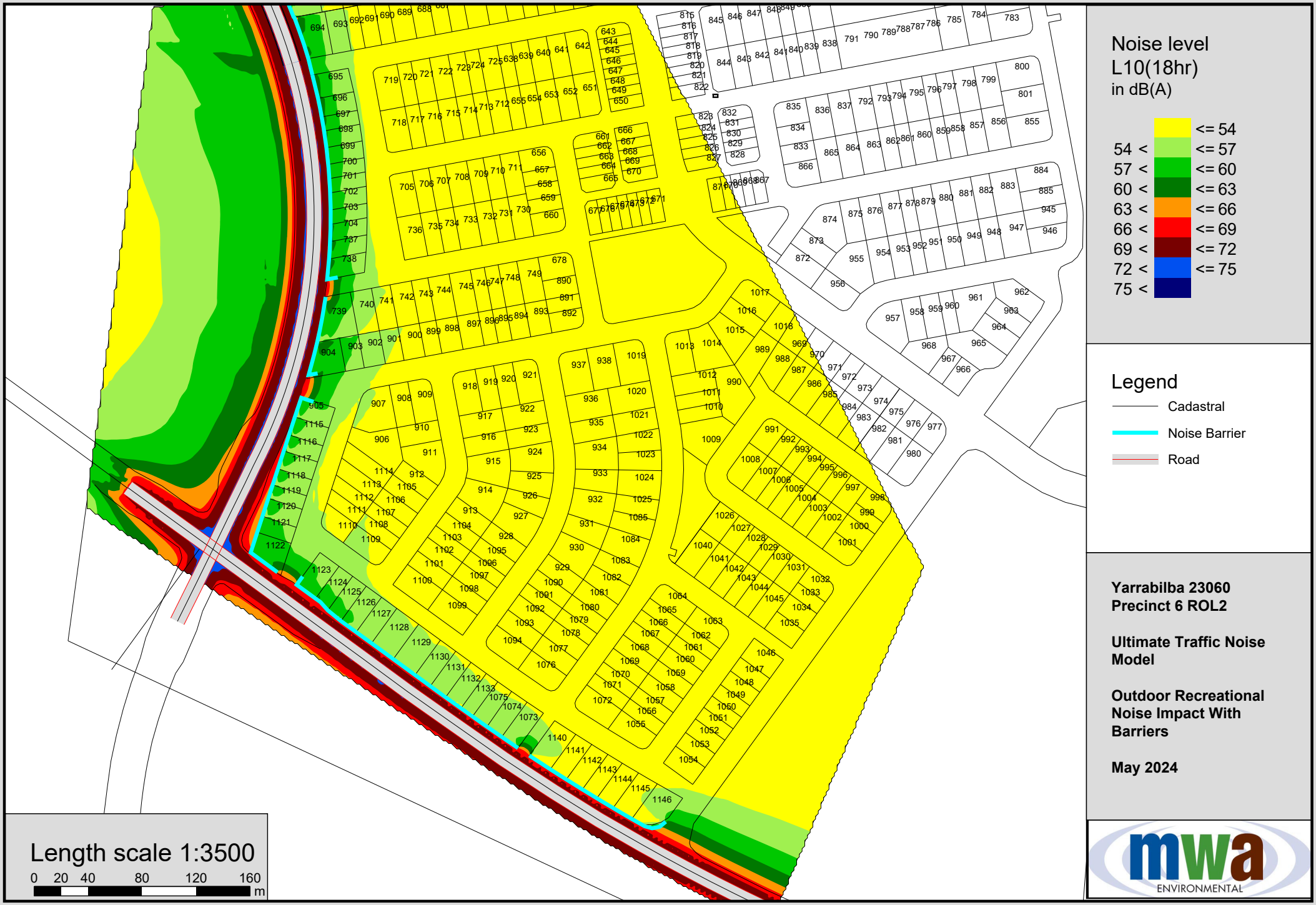
North

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File No. YAR-P06 Dgn No. YAR-P06-ROL2-ROL-240423 SHT 3 OF 3 Date 23 APR 2024

Attachment 2

SoundPLAN 8.2 Modelling
Design Horizon Traffic Noise Predictions – Outdoor Recreation Space


Noise level
L10(18hr)
in dB(A)
<= 54
54 < <= 57
57 < <= 60
60 < <= 63
63 < <= 66
66 < <= 69
69 < <= 72
72 < <= 75
75 <
Legend
Cadastral
Noise Barrier
Road
Length scale 1:3500
0 20 40 80 120 160
m
Yarrabilba 23060
Precinct 6 ROL2
Ultimate Traffic Noise Model
Outdoor Recreational Noise Impact With Barriers
May 2024
mwa
ENVIRONMENTAL

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 *habitable room* is greater than 1.8m^2)
			35 (where total area of glazing for a *habitable room* 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 *habitable room* is greater than 1.8m^2)
			32 (where total area of glazing for a *habitable room* 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 *habitable room* is greater than 1.8m^2)
			24 (where total area of glazing for a *habitable room* 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 *acoustically rated seals*.
	38	Minimum 14.38mm thick laminated glass, with full perimeter *acoustically rated seals*; 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 *acoustically rated seals*
	35	Minimum 10.38mm thick laminated glass, with full perimeter *acoustically rated seals*.
	32	Minimum 6.38mm thick laminated glass with full perimeter *acoustically rated seals*.
	27	Minimum 4mm thick glass with full perimeter *acoustically rated seals*
	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/m^3 or 50mm thick polyester insulation with a density of 20kg/m^3 in the cavity. OR Two leaves of clay brick masonry at last 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/m^3 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 last 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/m^3 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.

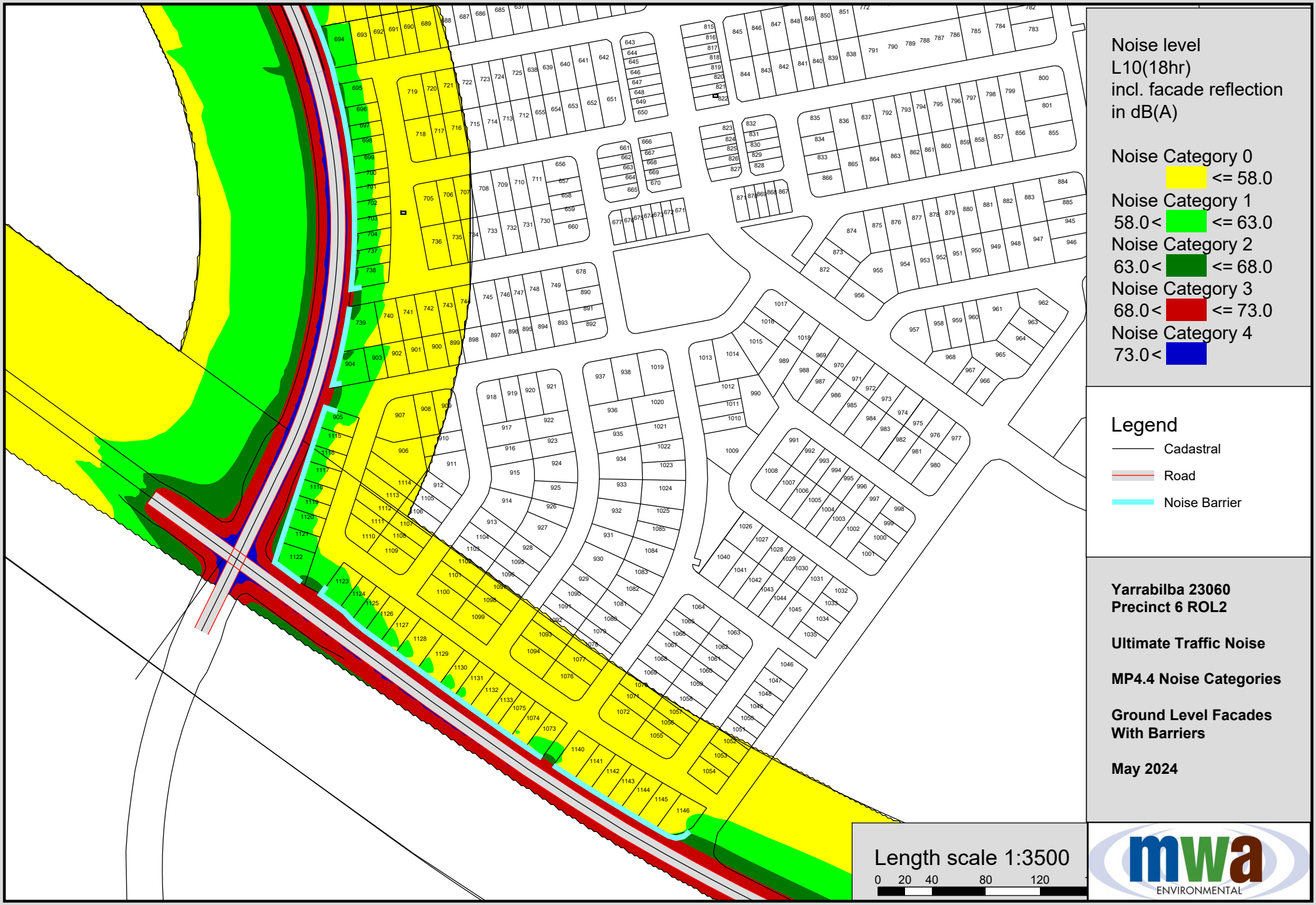
Component of building's *external envelope*	Minimum R_w	Acceptable forms of construction
	35	Single leaf of clay brick masonry at least 110mm thick with: (i) a row of at least 70mm x 35mm timber studs or 64mm steel studs at 600mm centres, spaced at least 20mm from the masonry wall; and (ii) One layer 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, *acoustically rated plasterboard* ceiling at least 13mm thick fixed to ceiling joists, cellulose fibre insulation at least 100mm thick with a density of at least 45kg/m^3 in the cavity. OR Concrete or terracotta tile or sheet metal roof with sarking, 2 layers of *acoustically rated plasterboard* at least 16mm thick fixed to ceiling joists, glass wool insulation at least 50mm thick with a density of at least 11kg/m^3 or polyester insulation at least 50mm thick with a density of at least 20kg/m^3 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/m^3 or polyester insulation at least 50mm thick with a density of at least 20kg/m^3 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/m^3.

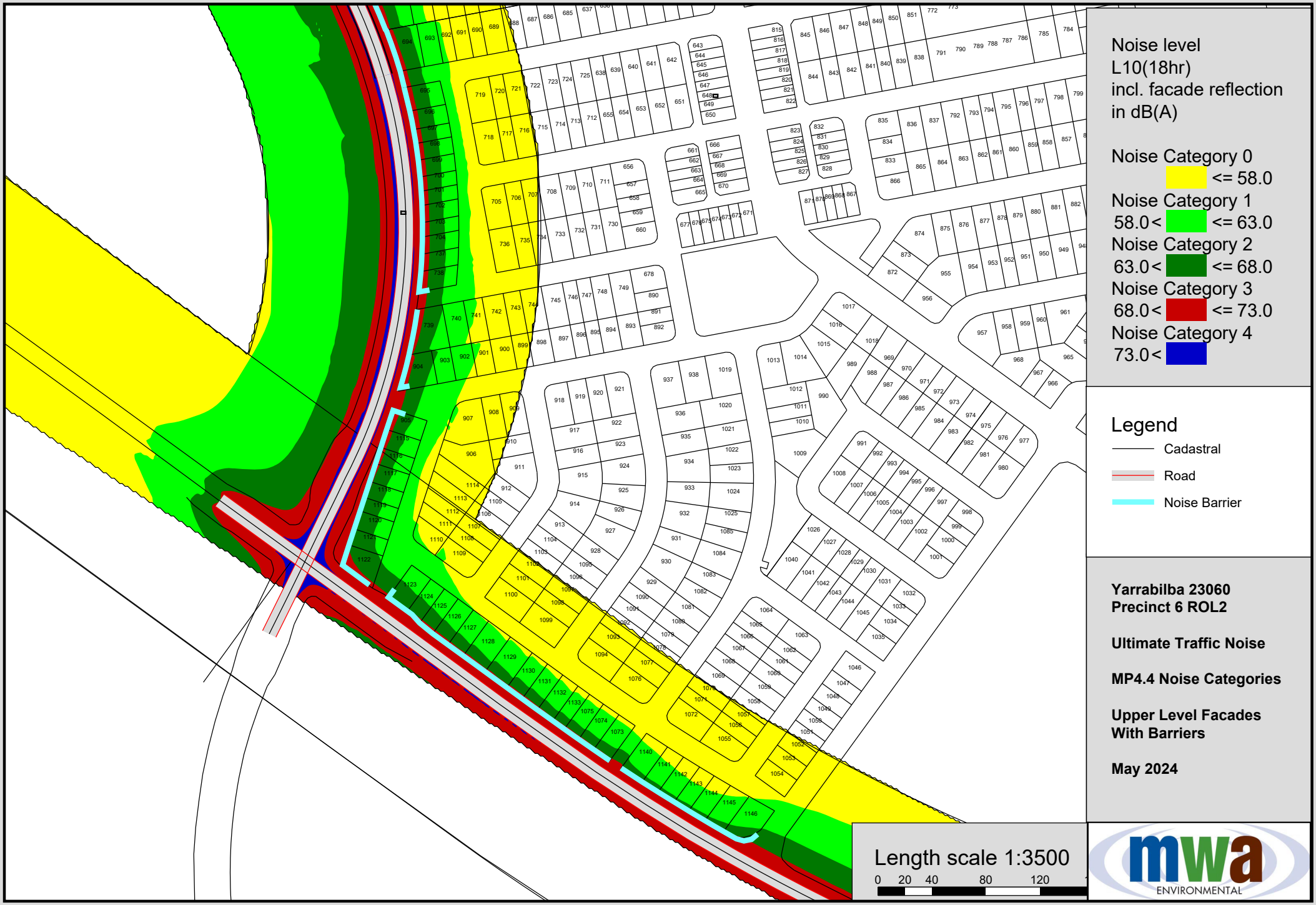
Component of building's *external envelope*	Minimum R_w	Acceptable forms of construction
	35	Concrete or terracotta tile or metal sheet roof with sarking, plasterboard ceiling at least 10mm thick fixed to ceiling cavity.
Floors	51	Concrete slab at least 150mm thick.
	45	Concrete slab at least 100mm thick 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 *acoustically rated seals*.
	33	Fixed so as to overlap the frame or rebate of the frame by not less than 10mm, fitted with full perimeter *acoustically rated seals* 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/m^2; or (iv) Solid core timber door not less than 35mm thick fitted with full perimeter *acoustically rated seals*.

Attachment 4

SoundPLAN 8.2 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
Noise Barrier
Yarrabilba 23060
Precinct 6 ROL2
Ultimate Traffic Noise
MP4.4 Noise Categories
Ground Level Facades
With Barriers
May 2024
Length scale 1:3500
0 20 40 80 120
mwa
ENVIRONMENTAL


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
Noise Barrier
Yarrabilba 23060
Precinct 6 ROL2
Ultimate Traffic Noise
MP4.4 Noise Categories
Upper Level Facades
With Barriers
May 2024
Length scale 1:3500
0 20 40 80 120
mwa
ENVIRONMENTAL