PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2012/403/171

Date: 11 October 2024

Queensland Government

SLR

Flagstone Development, Stage 4

Road Traffic Noise Intrusion Assessment

Peet Flagstone City Pty Ltd

Level 2, 167 Eagle Street
Brisbane QLD 4000

Prepared by:

SLR Consulting Australia

Level 16, 175 Eagle Street, Brisbane QLD 4000,
Australia

SLR Project No.: 620.v10512.02006

Client Reference No.: NA

16 September 2024

Revision: 2.0

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
2.0	16 September 2024	Rodrigo Olavarria	Steve Henry	Steve Henry
1.0	22 July 2024	Rodrigo Olavarria	Steve Henry	Steve Henry

Basis of Report

This report has been prepared by SLR Consulting Australia (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Peet Flagstone City Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

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1.0 Introduction

SLR Consulting Australia Pty Ltd (SLR) was commissioned by Peet Flagstone City Pty Ltd to conduct a road traffic noise intrusion assessment for the Flagstone Stage 4 development. This report addresses the road traffic noise intrusion onto residential sub-stage 4A, 4B, 4C, 4D, 4D, 4F, 4G, 4H, 4I, 4J, 4K and 4L.

The purpose of this assessment is to present a set of noise prediction results and applicable Queensland Development Code Mandatory Part 4.4 (QDC MP4.4) Noise Categories for the lots, following detailed noise modelling of road traffic noise intrusion, which was based on the latest plan of subdivision (reproduced in **Appendix A**).

Results of noise intrusion predictions are presented in this report with and without the implementation of noise barriers in front of the lots most exposed to the transportation noise sources.

Applicable Noise Categories (NC) as per the QDC MP4.4 were derived from the noise predictions for each lot with and without noise barriers.

The noise predictions are based on the latest digital elevation model and transportation volumes available on the date of issue of this report, including road traffic volume forecasts for the period coinciding 10 years after the project completion date, conservatively estimated to 2041.

The outcomes presented in this report are potentially subject to change as the project progresses; therefore, the objective of this report is to support the application for Reconfiguration of Lot (ROL) by informing the effectiveness of the implementation of noise barriers and the QDC MP4.4 Noise Categories applicable to the construction of the dwellings, after the implementation of these.

The following Codes are relevant to this assessment:

- Department of Transport and Main Roads (TMR) Transport Management Code of Practice Volume 1: Road traffic noise (CoP Vol 1).
- QDC MP4.4.

Supporting material:

- UK Department of Transport Welsh Office Calculation of Road Traffic Noise 1988 (CoRTN)

A glossary of terms used in this report are detailed in **Appendix E**.

The design life of the acoustic barrier is to be 40 years unless otherwise agreed upon in writing by MEDQ.

AMENDED IN RED
By: Nicole Tobias
Date: 10 October 2024
Queensland Government

2.0 Noise Assessment Criteria

Flagstone Stage 4 will be part of the Greater Flagstone Urban Development Area (UDA) and therefore, is to meet the requirements of the Flagstone Development Scheme (FDS). The FDS Community Safety and Community Constraints indicates that residents and other sensitive uses are to be protected from the impacts of noise from regional transport corridors. However, the document does not provide a set of objective criteria for the assessment of these.

The current acoustic requirements applied by Economic Development Queensland (EDQ) for a number of lots within the Flagstone UDA are contained in the EDQ PDA development Condition 35 of 4 April 2014, EDQ reference DEV2012/403/128.

Condition 35 of the abovementioned Decision Notice is relevant to Acoustic Compliance and is reproduced in **Table 1**. This report assumes that the same conditions are to be applied for consistency in the assessment of other Stage 4 roads carrying relevant volumes of traffic, as Stage 4 pertains the same PDA.

Table 1 PDA Development Condition 35

Condition	Timing
a) Except where identified in Condition 35A[1], submit to EDQ Development Assessment DSDI for compliance assessment a Noise Mitigation Report, certified by a RPEQ, for all lots within 100m from Flagstonian Drive Extension (excluding Lot 50021), the future North-South Arterial road and 200m from the railway corridor achieving a ≤ 35dBA for 1 hour max, over a 24 hour period for all habitable rooms. Where a ≤ 35dBA for 1 hour max, over a 24 hour period for all habitable rooms cannot be achieved, the Noise Mitigation Report is to provide the proposed noise mitigation measures generally in accordance with QDC MP4.4 – Buildings in a Noise Transport Corridor. If any noise barriers are proposed, the detailed design/construction plans certified by a RPEQ are to be provided including how passive surveillance of the streetscape can be maintained. Note: For lots fronting Flagstonian Drive (excluding Lot 50021), the acoustic fence must be no higher than that specified in the approved plan of development. Note: an acoustic report may address the acoustic needs of multiple stages/sub-stages in one report.	a) Prior to the commencement of site works for the relevant sub-stage.
b) Construct barrier(s) works generally in accordance with the certified plans submitted under part a) of this condition.	b) Prior to survey plan endorsement for each relevant sub-stage.
c) Submit to EDQ IS 'as constructed' plans, certified by a RPEQ, an asset register in a format acceptable to Council and 'Issued For Construction' plans for noise barriers within the relevant sub-stage.	c) Prior to survey plan endorsement for each relevant sub-stage.
Note 1: Condition 35A is in relation to the certification of noise walls specific to sub-stages 3G, 3Fi, 3H, 5Ai, 5Aii, 5Bi, 5Bii, 5C, 5D, 5Ei, 5Eii, 5Eiii, 5F, 5G, 5H, 5Ki, 5Kii, 5L, 5M, 5Qii, 5R and 5S. Therefore, it is not considered further.	

From the above, it is understood that EDQ considers the application of QDC MP4.4 at residential lots to achieve the acoustic requirements of Condition 35. Whilst QDC MP4.4 does not provide internal noise limits or targets, the minimum building constructions in QDC MP4.4 would typically achieve an internal transport noise level close to 35 dBA within habitable rooms.

QDC MP4.4 applies to residential buildings that are constructed within designated Transport Noise Corridors. It is then assumed that, for the purpose of assessing transport noise, the roads assessed in this report are to be treated as a "Transport Noise Corridor".

Under QDC MP4.4, when building in a Transport Noise Corridor, a residential building needs to achieve certain levels of noise reduction which can be achieved through incorporating appropriate building materials to the building envelope to achieve the required noise reduction in habitable rooms.

Reproduced from QDC MP4.4, the Noise Categories and associated minimum noise reduction requirements and minimum Sound Reduction Index (Rw) for external building elements are shown in **Table 2**. The Rw is a measure of the sound insulation properties of a specific building material element.

QDC MP4.4 provides acceptable forms of construction for the external elements of the building to assist in achieving a building design and construction which meets the required noise reduction for each Noise Category. The acceptable forms of construction in MP4.4 are reproduced in **Appendix C**, noting that other forms of construction <u>are acceptable</u> where they achieve the required Rw rating.

Table 2 QDC MP4.4 Noise Categories and Minimum Noise Reduction for Road Transport Noise

Noise Category	Transport Noise Level, Facade Corrected	Minimum Transport Noise Reduction for Habitable Rooms	Building External Envelope Component	Minimum Rw Required for Each Component	
4	Road traffic noise ≥73 dBA $L_{A10(18hour)}$	40 dBA	Glazing	43	
			External Walls	52	
			Roof	45	
			Floors	51	
			Entry doors	35	
3	Road traffic noise 68 – 72 dBA $L_{A10(18hour)}$	35 dBA	Glazing	38	where total area of glazing for a habitable room is greater than 1.8 m^2
				35	where total area of glazing for a habitable room is less than or equal to than 1.8 m^2
			External walls	47	
			Roof	41	
			Floors	45	
			Entry doors	33	

Noise Category	Transport Noise Level, Facade Corrected	Minimum Transport Noise Reduction for Habitable Rooms	Building External Envelope Component	Minimum Rw Required for Each Component	
2	Road traffic noise 63 – 67 dBA $L_{A10(18hour)}$	30 dBA	Glazing	35	where total area of glazing for a habitable room is greater than 1.8 m^2
				32	where total area of glazing for a habitable room is less than or equal to than 1.8 m^2
			External walls	41	
			Roof	38	
			Floors	45	
			Entry doors	33	
1	Road traffic noise 58 – 62 dBA $L_{A10(18hour)}$	25 dBA	Glazing	27	where total area of glazing for a habitable room is greater than 1.8 m^2
				24	where total area of glazing for a habitable room is less than or equal to than 1.8 m^2
			External walls	35	
			Roof	35	
			Entry doors	28	
0	Road traffic noise ≤57 dBA $L_{A10(18hour)}$	No additional acoustic treatment required – standard building assessment provisions apply.			

3.0 Noise Assessment Methodology

A three-dimensional noise model for Flagstone was developed to incorporate the Stage 4 site and surrounding roads. The model was developed within SoundPLAN v8.1 acoustic software to predict transportation noise intrusion.

The computer model was created as a representation of the future noise intrusion, which incorporates the following inputs:

- Calculation algorithms. SoundPLAN implementation of the following accepted standards and methodologies:
  - UK Department of Transport Welsh Office Calculation of Road Traffic Noise 1988 (CoRTN). CoRTN is widely accepted in Australia for the calculation of road traffic noise and its use is recommended in the CoP Vol 1.
- Terrain elevation. Digital Elevation Model (DEM) built from:
  - Elevation model supplied by the Project civil consultant in files:
    - Flag Stage 4ABC - Full Site Model in GDA 2020.dwg
  - 3D LiDAR file representing existing contours outside the study area.
  - Elevation models supplied for the assessment of other Flagstone and New Beith stages.
- Noise barriers. Where implemented, these have been digitised at the top of a retaining wall, and or on the lot boundary. 2.0m high noise barriers have been considered to reduce the QDC MP4.4 Noise Category, where practicable.
- Road traffic volumes. Provided by the traffic consultant for the 10-year after Project construction estimated date of 2041.
- Ground surface corrections – areas of soft (absorptive) and hard (reflective) ground.
- Sensitive receptors – locations where the transportation noise levels are to be assessed.

3.1 Road Traffic Noise Modelling

Road traffic noise was modelled following general guidance from the TMR CoP Vol 1.

Road traffic volumes have been provided by the Project traffic consultant and are presented in **Table 3** and **Figure 1.** The traffic forecasts for the Year 2041 have been used, which are adopted as a 10-year after construction scenario.

The 18 hour traffic volume has further been estimated from the Vehicles Per Day (VPD) traffic volume provided by the project consultant assuming 94% of traffic occurs between 6am and 12am (midnight).

All road surfaces were assumed to be Dense Graded Asphalt (DGA). On this basis, a road surface correction factor of 0 dBA was applied for all road traffic noise predictions, in accordance with CoP Vol 1.

A -0.7 dBA (free field) or -1.7 dBA (1m from façade) road traffic calibration factor was applied, where applicable, in accordance with the CoP Vol 1 with a further +2.5 dB facade correction factor in accordance with the CoRTN.

The QDC MP4.4 Noise Categories were determined from the noise contour maps calculated at 1.8 m and 4.6 m above ground level as per the DEM, for the ground floor and first floor of

two storey dwellings assumed for the development, respectively. The highest Noise Category predicted onto the lot at ground floor and first floor is conservatively reported.

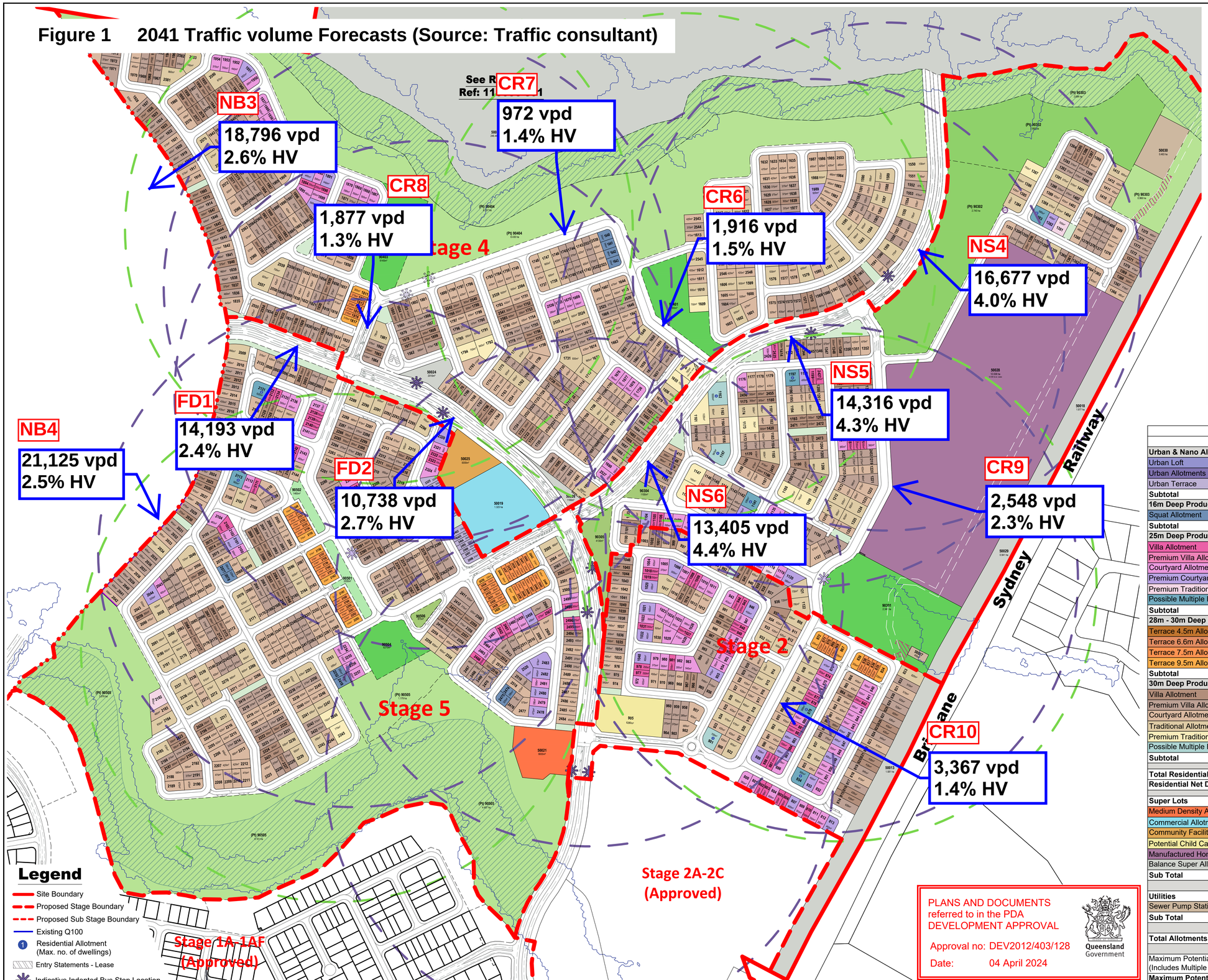
Road traffic noise contours were generated from noise predictions using a grid spacing of 0.5 m.

Table 3 2041 Road Traffic Forecasts

Road	Segment	Vehicles per day	18hr traffic volume estimate	% Heavy Vehicles	Posted Speed, Km/h
Flagstonian Drive	FD1	14,193	13,341	2.4	60
	FD2	10,738	10,094	2.7	60
New Beith Road	NB3	18796	17,665	2.6	70
	NB4	21125	19858	2.5	70
North South Trunk Connector	NS4	16,700	15,698	4.0	70
North South Trunk Connector	NS5	14,316	13,457	4.3	70
North South Trunk Connector	NS6	13,405	12,601	4.4	70
Collector Road	CR6	1,916	1,801	1.5	50
Collector Road	CR7	972	914	1.4	50
Collector Road	CR8	1,877	1,764	1.3	50

Notes:
The segment naming convention is used in the SLR reports for identification purposes only. NS1-NS3 and CR1-CR5 pertain the New Beith Precincts A-B and have no influence on Flagstone Stage 4. Therefore, the traffic volumes are not presented.

Figure 1 2041 Traffic volume Forecasts (Source: Traffic consultant)



Land Budget Stages 2 – 5

Land Use	Stage 2	Stage 3	Stage 4	Stage 5	Overall	
	Area	Area	Area	Area	Area	%
Area of Subject Site	**16.883 ha**	**45.912 ha**	**301.998 ha**	**52.172 ha**	**416.965 ha**	**100.0%**
Saleable Area						
Residential Allotments	9.636 ha	10.219 ha	22.160 ha	19.984 ha	61.999 ha	14.9%
Medium Density Allotment	—	—	—	0.666 ha	0.666 ha	0.2%
Commercial Allotment	—	—	1.324 ha	—	1.324 ha	0.3%
Community Facility Allotment	—	—	0.500 ha	—	0.500 ha	0.1%
Potential Child Care Allotment	0.628 ha	—	—	—	0.628 ha	0.2%
Manufactured Home Estate Allotment	—	12.038 ha	—	—	12.038 ha	2.9%
Balance Super Allotments	1.581 ha	2.919 ha	246.810 ha	—	251.310 ha	60.3%
Total Area of Allotments	**11.845 ha**	**25.176 ha**	**270.794 ha**	**20.650 ha**	**328.465 ha**	**78.8%**
Utilities						
Sewer Pump Station	—	0.508 ha	—	—	0.508 ha	0.1%
Total Area of Utilities	**—**	**0.508 ha**	**—**	**—**	**0.508 ha**	**0.1%**
Road						
Collector Road	1.502 ha	3.065 ha	4.559 ha	3.529 ha	12.655 ha	3.0%
Local Road	3.465 ha	4.511 ha	9.665 ha	8.671 ha	26.312 ha	6.3%
Linear Connections	0.071 ha	0.412 ha	0.390 ha	0.429 ha	1.302 ha	0.3%
Existing Road	—	0.063 ha	—	—	0.063 ha	0.0%
Entry Statements	—	—	—	—	—	0.0%
Total Area of New Road	**5.038 ha**	**8.051 ha**	**14.614 ha**	**12.629 ha**	**40.332 ha**	**9.7%**
Open Space						
Corridor Park	—	3.660 ha	14.787 ha	17.812 ha	36.259 ha	8.7%
Conservation Park (Within Corridor Park)	—	*2.650 ha*	*6.357 ha*	—	*9.007 ha*	
District Recreation Park	—	5.648 ha	—	—	5.648 ha	1.4%
Neighbourhood Recreation Park	—	2.346 ha	1.803 ha	0.627 ha	4.776 ha	1.1%
Local Recreation Park	—	0.523 ha	—	0.088 ha	0.611 ha	0.1%
Local Linear Recreation Park	—	—	—	0.366 ha	0.366 ha	0.1%
Stormwater Detention	—	—	—	—	—	0.0%
Total Open Space	**—**	**12.177 ha**	**16.590 ha**	**18.893 ha**	**47.660 ha**	**11.4%**

Yield Breakdown Stages 2 – 5

Residential Allotments	Typical Size	Typical Area	Stage 2	Stage 3	Stage 4	Stage 5	Overall	
Urban & Nano Allotments Product								
Urban Loft	4.7 x 11.5m	50m²	—	—	—	—	—	0%
Urban Allotments	7.5 x 16m	120m²	—	—	—	—	—	0%
Urban Terrace	7.5 x 27.5m	170m²	—	—	—	16	16	1%
Subtotal			**—**	**—**	**—**	**16**	**16**	**1%**
16m Deep Product								
Squat Allotment	14 x 16m	220m²	—	4	4	10	18	1%
Subtotal			**—**	**4**	**4**	**10**	**18**	**1%**
25m Deep Product								
Villa Allotment	10 x 25m	250m²	29	10	3	21	63	4%
Premium Villa Allotment	12.5 x 25m	313m²	—	—	—	3	3	0%
Courtyard Allotment	14 x 25m	350m²	41	16	27	25	109	7%
Premium Courtyard Allotment	16 x 25m	400m²	17	6	6	10	39	3%
Premium Traditional Allotment	20 x 25m	500m²	—	4	—	1	5	0%
Possible Multiple Residential Allotment	—	—	2	3	—	3	8	1%
Subtotal			**89**	**39**	**36**	**63**	**227**	**15%**
28m - 30m Deep Product								
Terrace 4.5m Allotment	4.5 x 28m	126m²	—	—	—	—	—	0%
Terrace 6.6m Allotment	6.6 x 28m	185m²	—	—	—	—	—	0%
Terrace 7.5m Allotment	7.5 x 28m	210m²	8	—	5	33	46	3%
Terrace 9.5m Allotment	9.5 x 28m	265m²	4	—	2	12	18	1%
Subtotal			**12**	**—**	**7**	**45**	**64**	**4%**
30m Deep Product								
Villa Allotment	10 x 30m	300m²	32	35	91	72	230	16%
Premium Villa Allotment	12.5 x 30m	375m²	33	66	155	123	377	26%
Courtyard Allotment	14 x 30m	420m²	51	53	156	124	384	26%
Traditional Allotment	20 x 30m	600m²	19	27	55	43	144	10%
Premium Traditional Allotment	25 x 30m	720m²	—	7	5	2	14	1%
Possible Multiple Residential Allotment	—	—	1	2	—	—	3	0%
Subtotal			**136**	**190**	**462**	**364**	**1152**	**78%**
Total Residential Allotments			**237**	**233**	**509**	**498**	**1477**	**100%**
Residential Net Density			**18.0 dw/ha**	**12.9 dw/ha**	**15.0 dw/ha**	**16.5 dw/ha**	**15.5 dw/ha**	
Super Lots			**Lots**	**Lots**	**Lots**	**Lots**	**Lots**	
Medium Density Allotment			—	—	—	1	1	
Commercial Allotment			—	—	1	—	1	
Community Facility Allotment			—	—	1	—	1	
Potential Child Care Allotment			1	—	—	—	1	
Manufactured Home Estate Allotment			—	1	—	—	1	
Balance Super Allotments			1	2	4	—	7	
Sub Total			**2**	**3**	**6**	**1**	**12**	
Utilities								
Sewer Pump Station			—	2	—	—	**2**	
Sub Total			**—**	**2**	**—**	**—**	**2**	
Total Allotments			**239**	**238**	**515**	**499**	**1491**	
Maximum Potential Residential Dwellings (Includes Multiple Residential Allotments)			**240**	**242**	**509**	**501**	**1492**	
Maximum Potential Net Residential Density			**18.2 dw/ha**	**13.4 dw/ha**	**15.0 dw/ha**	**16.6 dw/ha**	**15.6 dw/ha**	

PLANS AND DOCUMENTS referred to in the PDA DEVELOPMENT APPROVAL

Approval no: DEV2012/403/128

Date: 04 April 2024

Queensland Government

Legend

- Site Boundary
- Proposed Stage Boundary
- Proposed Sub Stage Boundary
- Existing Q100
- Residential Allotment (Max. no. of dwellings)
- Entry Statements - Lease
- Indicative Indented Bus Stop Location
- Indicative In-Line Bus Stop Location
- Indicative Temporary In-Line Bus Stop Location
- Bus Stop Catchment (400m)
- Neighbourhood Park Catchment (400m)
- 10m Wide Existing Sewer Easement
- SPS Access EMT
- Temporary Sewage Tankering Facility

Note:

All 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.

Scale 1 : 3000 @ A1

0 15 30 60 90 120 150 180

Road linemarkings and turn slots are indicative only and subject to detailed design.

Source Information:
Site boundaries: Registered Survey Plans / Veris.
Adjoining information: DCDB.
Contours: Bradlees.

REVISION
Y: 12/05/2022 Stage 5 Layout Change
Z: 08/06/2022 Entry Statement Lease Areas
AA: 16/06/2022 Temporary STF Notation
AB: 20/09/2022 Stage 3 & 5 Layout Changes
AC: 14/11/2022 Stage 5 Boundary Changes
AD: 10/01/2023 Stage 3 & 4 Layout Changes
AE: 24/02/2023 Stage 3 & 5 Layout Changes
AF: 20/03/2023 Stage 3 & 5 Layout Changes
AG: 13/04/2023 Stage 3 & 5 Layout Changes
AH: 25/07/2023 Stage 4 Layout Changes
AI: 08/08/2023 Stage 5 Basin Change
AJ: 12/02/2024 Stage 5R Layout Change

PROJECT	**Flagstone Precinct 1**		
Job Ref.	110056	Date.	12 February 2024
Comp By.	NF	DWG Name.	Precinct 1 Stages 2-5
Chk'd By.	MD	Locality.	Flagstone
Local Authority.	Economic Development Queensland		

CLIENT **PEET**

Plan of Subdivision
Stages 2 – 5
Overall Allotment Layout

URBAN DESIGN
Level 4 HQ South
520 Wickham Street
PO Box 1559
Fortitude Valley QLD 4006
T +61 7 3539 9500
W rpsgroup.com

Scale	Sheet	Plan Ref	Rev
1 : 3000	A1	**110056 – 374**	**AJ**

3.1.1 Road Traffic Noise Model Verification

It is acknowledged that, according to the CoP Vol 1, a road traffic noise model is deemed to be verified if the average difference between the measured and calculated values of the noise descriptors is no more than ±2.0 dBA.

A road traffic model verification for new roads to be built as part of the Project is not possible at this stage as the roads are non-existing. However, past experience has shown that predictions using CoRTN typically result in conservative predictions of road traffic noise levels at receptors.

4.0 Noise Assessment Results

4.1 QDC MP4.4 Noise Categories

The QDC MP4.4 Categories applicable to all lots of Stage 4 related to road traffic noise are presented in **Appendix C (Table C-1).** The results present the lot number, stage, modelled ground elevation at the (approximate) centre of the lot and the QDC MP4.4 Noise Category for Ground Floor and First Floor noise levels (read from the noise maps as the highest Noise Category within the lot), with and without noise mitigation.

The QDC MP4.4 noise category recommended to be applied to the design of the dwelling inside the lots is derived for the residual noise level after the implementation of the recommended noise barriers shown in the noise maps.

Table 4 presents the QDC MP4.4 Categories applicable to first row lots of Stage 4 where a noise barrier is recommended in front of the lot**.** The results present the lot number and the QDC MP4.4 Noise Category for Ground Floor and First Floor noise levels with and without noise mitigation, i.e. noise barriers.

The modelled ground elevation at the approximate centre of the lot, as well as the approximate mid span elevation of the barrier on the lot as well as the approximate elevation of the road section immediately in front are also presented for information.

Noise contours are provided in **Figure 2** to **Figure 5** to depict the noise levels with and without the introduction of 2.0 m high noise barriers. The contours show the predicted $L_{A10(18hour)}$ noise level descriptor and the applicable QDC MP4.4 Categories.

A table presenting results for all noise lots is provided in **Appendix C**.

Lots predicted to achieve Noise Category “0” do not require further noise treatment to the dwelling facades.

Table 4 Road Traffic Noise Predictions on Lots with a Noise Barrier

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category		Elevation at Base of Barrier (mid span), m	Approximate Elevation of Closest Road in Front of Lot, m	Lot in Cut /Fill
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier			
1550	GF	495230.93	6926030.98	48.4	3	2	48.2	46.5	Fill
1550	FF	495230.93	6926030.98	48.4	3	3	-	-	-
1551	GF	495230.91	6926012.45	48.7	3	2	48.5	46.7	Fill
1551	FF	495230.91	6926012.45	48.7	3	3	-	-	-
1552	GF	495229.8	6925998.56	48.8	3	2	48.6	46.8	Fill
1552	FF	495229.8	6925998.56	48.8	3	3	-	-	-
1553	GF	495227.59	6925985.49	48.9	3	2	48.6	46.9	Fill
1553	FF	495227.59	6925985.49	48.9	3	3	-	-	-
1554	GF	495223.29	6925972.24	48.9	3	2	48.7	47.1	Fill
1554	FF	495223.29	6925972.24	48.9	3	3	-	-	-
1555	GF	495218.71	6925954.82	49.0	3	2	48.8	47.2	Fill
1555	FF	495218.71	6925954.82	49.0	3	3	-	-	-

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category		Elevation at Base of Barrier (mid span), m	Approximate Elevation of Closest Road in Front of Lot, m	Lot in Cut /Fill
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier			
1556	GF	495212.93	6925938.85	49.1	3	2	48.9	47.4	Fill
1556	FF	495212.93	6925938.85	49.1	3	3	-	-	-
1557	GF	495207.19	6925926.12	49.1	3	2	48.9	47.5	Fill
1557	FF	495207.19	6925926.12	49.1	3	3	-	-	-
1558	GF	495200.75	6925914.32	49.2	3	2	49.0	47.6	Fill
1558	FF	495200.75	6925914.32	49.2	3	3	-	-	-
1559	GF	495191.01	6925900.28	49.3	3	2	49.1	47.7	Fill
1559	FF	495191.01	6925900.28	49.3	3	3	-	-	-
1560	GF	495180.67	6925886.95	49.3	3	1	49.2	47.9	Fill
1560	FF	495180.67	6925886.95	49.3	3	3	-	-	-
1561	GF	495171.45	6925875.52	49.4	3	1	49.2	48.0	Fill
1561	FF	495171.45	6925875.52	49.4	3	3	-	-	-
1562	GF	494440.84	6925713.18	59.8	1	0	62.5	62.5	Cut
1562	FF	494440.84	6925713.18	59.8	3	2	-	-	-
1563	GF	495146.54	6925856.14	49.7	3	2	49.5	48.2	Fill
1563	FF	495146.54	6925856.14	49.7	3	3	-	-	-
1564	GF	495138.54	6925848.38	49.7	3	1	49.5	48.3	Fill
1564	FF	495138.54	6925848.38	49.7	3	3	-	-	-
1565	GF	495129.65	6925842.84	49.7	3	1	49.5	48.4	Fill
1565	FF	495129.65	6925842.84	49.7	3	3	-	-	-
1566	GF	495118.22	6925836.98	49.8	3	1	49.6	48.5	Fill
1566	FF	495118.22	6925836.98	49.8	3	3	-	-	-
1567	GF	495105.87	6925830.76	49.9	3	1	49.7	48.6	Fill
1567	FF	495105.87	6925830.76	49.9	3	3	-	-	-
1568	GF	495093.02	6925825.41	49.9	3	1	49.8	48.7	Fill
1568	FF	495093.02	6925825.41	49.9	3	3	-	-	-
1569	GF	495081.25	6925821.23	50.0	3	1	49.8	48.9	Fill
1569	FF	495081.25	6925821.23	50.0	3	3	-	-	-
1570	GF	495069.54	6925817.29	51.3	3	2	51.5	49.1	Fill
1570	FF	495069.54	6925817.29	51.3	3	3	-	-	-
1571	GF	495059.32	6925814.72	51.3	3	1	51.5	49.2	Fill
1571	FF	495059.32	6925814.72	51.3	3	3	-	-	-
1572	GF	495046.82	6925813.03	51.3	3	1	51.4	49.4	Fill

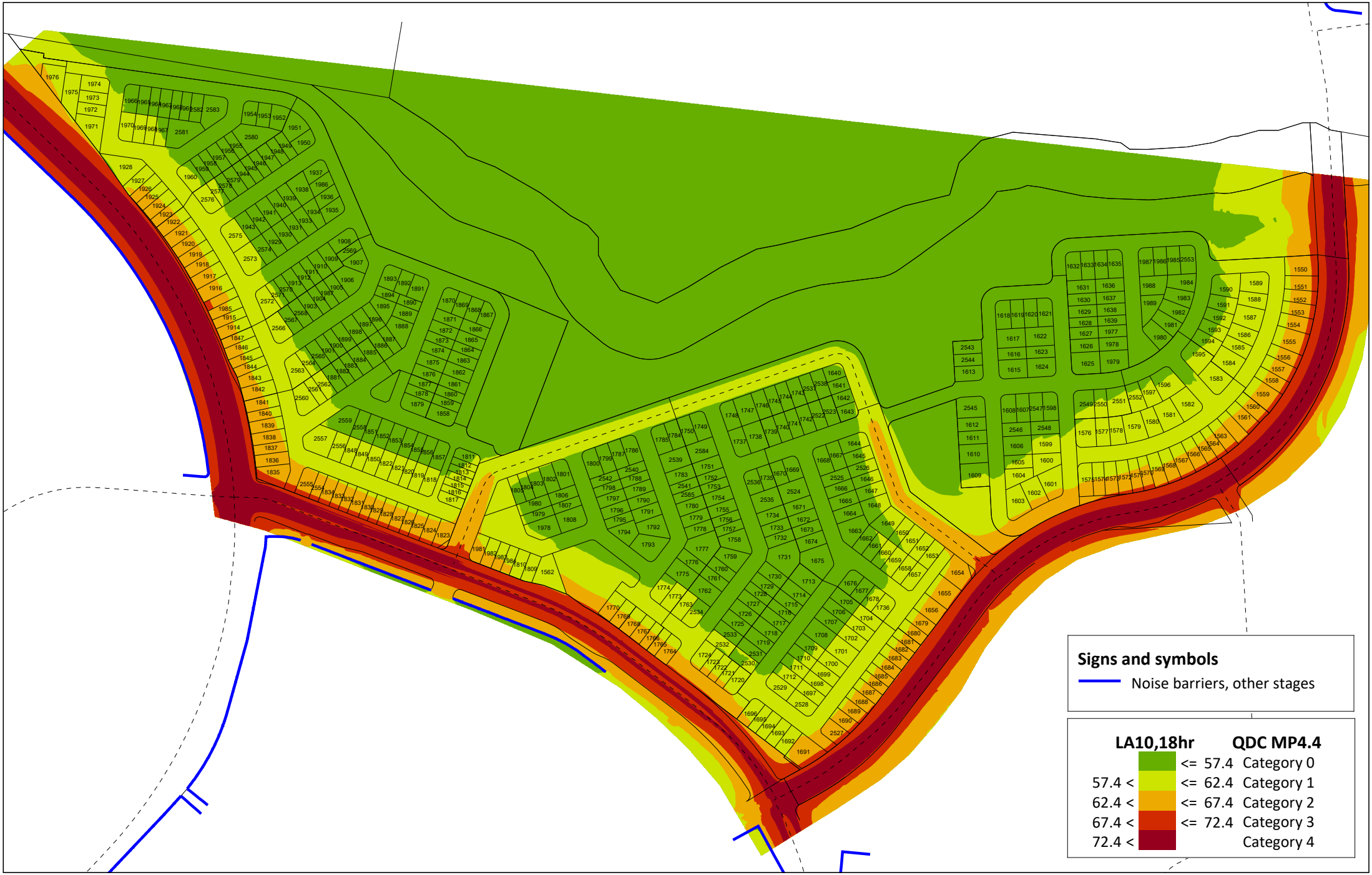
Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category		Elevation at Base of Barrier (mid span), m	Approximate Elevation of Closest Road in Front of Lot, m	Lot in Cut /Fill
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier			
1572	FF	495046.82	6925813.03	51.3	3	3	-	-	-
1573	GF	495033.99	6925811.76	51.2	3	1	51.3	49.5	Fill
1573	FF	495033.99	6925811.76	51.2	3	3	-	-	-
1574	GF	495021.52	6925810.93	51.1	2	1	51.3	49.6	Fill
1574	FF	495021.52	6925810.93	51.1	3	3	-	-	-
1575	GF	495007.7	6925810.12	50.9	2	1	50.6	49.7	Fill
1575	FF	495007.7	6925810.12	50.9	3	2	-	-	-
1654	GF	494871	6925712.41	51.9	3	2	52.1	51.3	Fill
1654	FF	494871	6925712.41	51.9	3	3	-	-	-
1655	GF	494857.21	6925691.08	52.3	3	1	52.4	51.8	Fill
1655	FF	494857.21	6925691.08	52.3	3	3	-	-	-
1656	GF	494843.58	6925673.2	52.5	2	1	52.7	52.2	Fill
1656	FF	494843.58	6925673.2	52.5	3	3	-	-	-
1679	GF	494833.27	6925659.69	52.8	2	1	53.0	52.7	Fill
1679	FF	494833.27	6925659.69	52.8	3	3	-	-	-
1680	GF	494825.24	6925649.15	53.1	2	2	53.2	53.2	Cut
1680	FF	494825.24	6925649.15	53.1	3	3	-	-	-
1681	GF	494818.42	6925640.21	53.4	2	1	53.5	53.5	Cut
1681	FF	494818.42	6925640.21	53.4	3	3	-	-	-
1682	GF	494812.36	6925632.26	53.8	2	2	53.9	53.9	Cut
1682	FF	494812.36	6925632.26	53.8	3	3	-	-	-
1683	GF	494805.29	6925623.01	54.2	2	2	54.3	54.2	Cut
1683	FF	494805.29	6925623.01	54.2	3	3	-	-	-
1684	GF	494797.72	6925613.07	54.8	2	2	54.9	54.8	Cut
1684	FF	494797.72	6925613.07	54.8	3	3	-	-	-
1685	GF	494790.9	6925604.13	55.4	2	2	55.5	55.2	Fill
1685	FF	494790.9	6925604.13	55.4	3	3	-	-	-
1686	GF	494784.83	6925596.18	55.8	2	2	56.0	55.6	Fill
1686	FF	494784.83	6925596.18	55.8	3	3	-	-	-
1687	GF	494777.77	6925586.92	56.4	2	2	56.4	56.0	Fill
1687	FF	494777.77	6925586.92	56.4	3	3	-	-	-
1688	GF	494770.19	6925577.12	57.1	3	2	57.2	56.4	Fill
1688	FF	494770.19	6925577.12	57.1	3	3	-	-	-

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category		Elevation at Base of Barrier (mid span), m	Approximate Elevation of Closest Road in Front of Lot, m	Lot in Cut /Fill
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier			
1689	GF	494762.41	6925567.6	57.6	3	2	57.7	57.1	Fill
1689	FF	494762.41	6925567.6	57.6	3	3	-	-	-
1690	GF	494753.13	6925557.55	58.0	3	2	58.2	57.5	Fill
1690	FF	494753.13	6925557.55	58.0	3	3	-	-	-
1691	GF	494709.21	6925524.91	59.2	3	2	59.6	59.5	Cut
1691	FF	494709.21	6925524.91	59.2	3	3	-	-	-
1692	GF	494693.23	6925536.19	59.2	1	1	61.7	60.3	Cut
1692	FF	494693.23	6925536.19	59.2	2	2	-	-	-
1693	GF	494682.7	6925544.22	59.1	1	1	61.6	60.4	Cut
1693	FF	494682.7	6925544.22	59.1	2	2	-	-	-
1694	GF	494672.76	6925551.8	59.1	1	1	61.5	60.4	Cut
1694	FF	494672.76	6925551.8	59.1	2	2	-	-	-
1695	GF	494663.66	6925558.74	59.2	1	1	61.4	60.5	Cut
1695	FF	494663.66	6925558.74	59.2	2	2	-	-	-
1696	GF	494653.93	6925564.96	59.5	2	1	61.4	60.6	Cut
1696	FF	494653.93	6925564.96	59.5	2	2	-	-	-
1764	GF	494569.44	6925630.34	60.5	2	1	61.7	61.6	Cut
1764	FF	494569.44	6925630.34	60.5	3	3	-	-	-
1765	GF	494559.38	6925637.71	60.5	2	1	61.8	61.7	Cut
1765	FF	494559.38	6925637.71	60.5	3	3	-	-	-
1766	GF	494551.46	6925643.82	60.6	2	1	61.8	61.8	Cut
1766	FF	494551.46	6925643.82	60.6	3	3	-	-	-
1767	GF	494541.89	6925651.12	60.9	2	1	61.9	61.8	Cut
1767	FF	494541.89	6925651.12	60.9	3	3	-	-	-
1768	GF	494531.36	6925659.15	61.0	2	1	62.0	61.9	Cut
1768	FF	494531.36	6925659.15	61.0	3	3	-	-	-
1769	GF	494520.83	6925667.19	61.2	2	1	62.1	62.0	Cut
1769	FF	494520.83	6925667.19	61.2	3	3	-	-	-
1770	GF	494509.58	6925675.82	61.5	2	1	62.2	62.1	Cut
1770	FF	494509.58	6925675.82	61.5	3	3	-	-	-
1809	GF	494423.29	6925716.65	60.0	1	0	62.7	62.6	Cut
1809	FF	494423.29	6925716.65	60.0	3	2	-	-	-
1810	GF	494411.97	6925721.06	60.3	1	0	62.8	62.7	Cut

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category		Elevation at Base of Barrier (mid span), m	Approximate Elevation of Closest Road in Front of Lot, m	Lot in Cut /Fill
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier			
1810	FF	494411.97	6925721.06	60.3	3	2	-	-	-
1823	GF	494331.63	6925751.8	62.5	3	2	63.4	63.4	Cut
1823	FF	494331.63	6925751.8	62.5	3	3	-	-	-
1824	GF	494317.46	6925757.15	62.5	3	1	63.5	63.6	Cut
1824	FF	494317.46	6925757.15	62.5	3	3	-	-	-
1825	GF	494304.8	6925761.82	62.7	3	1	63.6	63.7	Cut
1825	FF	494304.8	6925761.82	62.7	3	3	-	-	-
1826	GF	494294.6	6925765.42	62.8	3	1	63.6	63.7	Cut
1826	FF	494294.6	6925765.42	62.8	3	3	-	-	-
1827	GF	494283.91	6925769.83	63.0	3	1	63.7	63.8	Cut
1827	FF	494283.91	6925769.83	63.0	3	3	-	-	-
1828	GF	494272.15	6925774.44	63.1	3	1	63.8	63.9	Cut
1828	FF	494272.15	6925774.44	63.1	3	3	-	-	-
1829	GF	494261.75	6925778.03	63.3	3	1	63.9	64.0	Cut
1829	FF	494261.75	6925778.03	63.3	3	3	-	-	-
1830	GF	494252.23	6925781.68	63.4	3	1	64.1	64.1	Cut
1830	FF	494252.23	6925781.68	63.4	3	3	-	-	-
1831	GF	494242.12	6925785.89	63.5	3	1	64.1	64.1	Cut
1831	FF	494242.12	6925785.89	63.5	3	3	-	-	-
1832	GF	494231.05	6925789.82	63.7	3	1	64.2	64.1	Cut
1832	FF	494231.05	6925789.82	63.7	3	3	-	-	-
1833	GF	494221.53	6925793.47	63.8	3	1	64.3	64.2	Cut
1833	FF	494221.53	6925793.47	63.8	3	3	-	-	-
1834	GF	494210.89	6925797.25	63.9	3	1	64.4	64.4	Cut
1834	FF	494210.89	6925797.25	63.9	3	3	-	-	-
1835	GF	494153.28	6925818.2	64.8	3	1	65.6	64.7	Fill
1835	FF	494153.28	6925818.2	64.8	3	3	-	-	-
1836	GF	494152.32	6925830.85	64.5	2	1	66.8	66.1	Cut
1836	FF	494152.32	6925830.85	64.5	3	3	-	-	-
1837	GF	494151.17	6925843.41	64.5	2	1	66.8	66.1	Cut
1837	FF	494151.17	6925843.41	64.5	3	3	-	-	-
1838	GF	494149.27	6925854.66	64.6	2	1	66.8	66.2	Cut
1838	FF	494149.27	6925854.66	64.6	3	3	-	-	-

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category		Elevation at Base of Barrier (mid span), m	Approximate Elevation of Closest Road in Front of Lot, m	Lot in Cut /Fill
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier			
1839	GF	494147.84	6925867.47	64.6	2	1	66.8	66.1	Cut
1839	FF	494147.84	6925867.47	64.6	3	3	-	-	-
1840	GF	494144.9	6925879.75	64.6	2	1	66.7	66.1	Cut
1840	FF	494144.9	6925879.75	64.6	3	3	-	-	-
1841	GF	494142.01	6925891.11	64.5	2	1	66.7	66.0	Cut
1841	FF	494142.01	6925891.11	64.5	3	3	-	-	-
1842	GF	494137.74	6925905.32	64.4	2	0	66.6	65.9	Cut
1842	FF	494137.74	6925905.32	64.4	3	3	-	-	-
1843	GF	494133.99	6925916.98	64.2	2	0	66.5	65.8	Cut
1843	FF	494133.99	6925916.98	64.2	3	3	-	-	-
1844	GF	494129.28	6925928.96	64.1	2	0	66.4	65.7	Cut
1844	FF	494129.28	6925928.96	64.1	3	3	-	-	-
1845	GF	494124.92	6925937.97	64.0	2	0	66.3	65.6	Cut
1845	FF	494124.92	6925937.97	64.0	3	3	-	-	-
1846	GF	494120.15	6925948.97	63.8	2	0	66.2	65.4	Cut
1846	FF	494120.15	6925948.97	63.8	3	3	-	-	-
1847	GF	494115.83	6925959.12	63.7	2	0	66.0	65.3	Cut
1847	FF	494115.83	6925959.12	63.7	3	3	-	-	-
1914	GF	494111.71	6925970.13	63.6	2	0	65.8	65.1	Cut
1914	FF	494111.71	6925970.13	63.6	3	3	-	-	-
1915	GF	494107.39	6925980.27	63.5	2	0	65.7	64.9	Cut
1915	FF	494107.39	6925980.27	63.5	3	3	-	-	-
1916	GF	494092.8	6926011.31	63.1	2	1	65.2	64.5	Cut
1916	FF	494092.8	6926011.31	63.1	3	3	-	-	-
1917	GF	494086.49	6926023.75	62.9	2	1	65.0	64.2	Cut
1917	FF	494086.49	6926023.75	62.9	3	3	-	-	-
1918	GF	494078.98	6926036	62.7	2	1	64.8	64.0	Cut
1918	FF	494078.98	6926036	62.7	3	3	-	-	-
1919	GF	494071.94	6926046.88	62.6	2	1	64.6	63.9	Cut
1919	FF	494071.94	6926046.88	62.6	3	3	-	-	-
1920	GF	494064.12	6926057.69	62.4	2	1	64.4	63.7	Cut
1920	FF	494064.12	6926057.69	62.4	3	3	-	-	-
1921	GF	494057.22	6926069.19	62.3	2	1	64.2	63.5	Cut

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category		Elevation at Base of Barrier (mid span), m	Approximate Elevation of Closest Road in Front of Lot, m	Lot in Cut /Fill
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier			
1921	FF	494057.22	6926069.19	62.3	3	3	-	-	-
1922	GF	494048.7	6926080.76	62.1	2	1	64.1	63.3	Cut
1922	FF	494048.7	6926080.76	62.1	3	3	-	-	-
1923	GF	494040.86	6926088.49	62.0	2	1	63.9	63.2	Cut
1923	FF	494040.86	6926088.49	62.0	3	3	-	-	-
1924	GF	494033.65	6926097.5	61.6	2	1	63.7	63.0	Cut
1924	FF	494033.65	6926097.5	61.6	3	3	-	-	-
1925	GF	494026.13	6926106.9	61.3	2	0	63.5	62.8	Cut
1925	FF	494026.13	6926106.9	61.3	3	3	-	-	-
1926	GF	494019	6926114.89	61.3	2	0	63.4	62.7	Cut
1926	FF	494019	6926114.89	61.3	3	3	-	-	-
1927	GF	494011.47	6926123.73	60.7	2	0	63.2	62.5	Cut
1927	FF	494011.47	6926123.73	60.7	3	2	-	-	-
1928	GF	493998.84	6926138.25	60.6	0	0	64.1	62.1	Cut
1928	FF	493998.84	6926138.25	60.6	3	2	-	-	-
1981	GF	494369.06	6925737.59	61.3	2	1	63.1	63.0	Cut
1981	FF	494369.06	6925737.59	61.3	3	3	-	-	-
1982	GF	494380.97	6925732.82	60.9	2	1	63.0	62.9	Cut
1982	FF	494380.97	6925732.82	60.9	3	2	-	-	-
1983	GF	494392.07	6925728.77	60.9	2	0	63.0	62.9	Cut
1983	FF	494392.07	6925728.77	60.9	3	2	-	-	-
1984	GF	494401.59	6925725.23	60.7	2	0	62.9	62.7	Cut
1984	FF	494401.59	6925725.23	60.7	3	2	-	-	-
1985	GF	494102.93	6925989.37	63.4	2	1	65.5	64.8	Cut
1985	FF	494102.93	6925989.37	63.4	3	3	-	-	-
2527	GF	494744.46	6925544.48	58.5	3	2	58.6	57.9	Fill
2527	FF	494744.46	6925544.48	58.5	3	3	-	-	-
2554	GF	494200.34	6925801.6	64.1	3	1	64.6	64.6	Cut
2554	FF	494200.34	6925801.6	64.1	3	3	-	-	-
2555	GF	494188.41	6925805.78	64.2	3	1	64.9	64.9	Cut
2555	FF	494188.41	6925805.78	64.2	3	3	-	-	-



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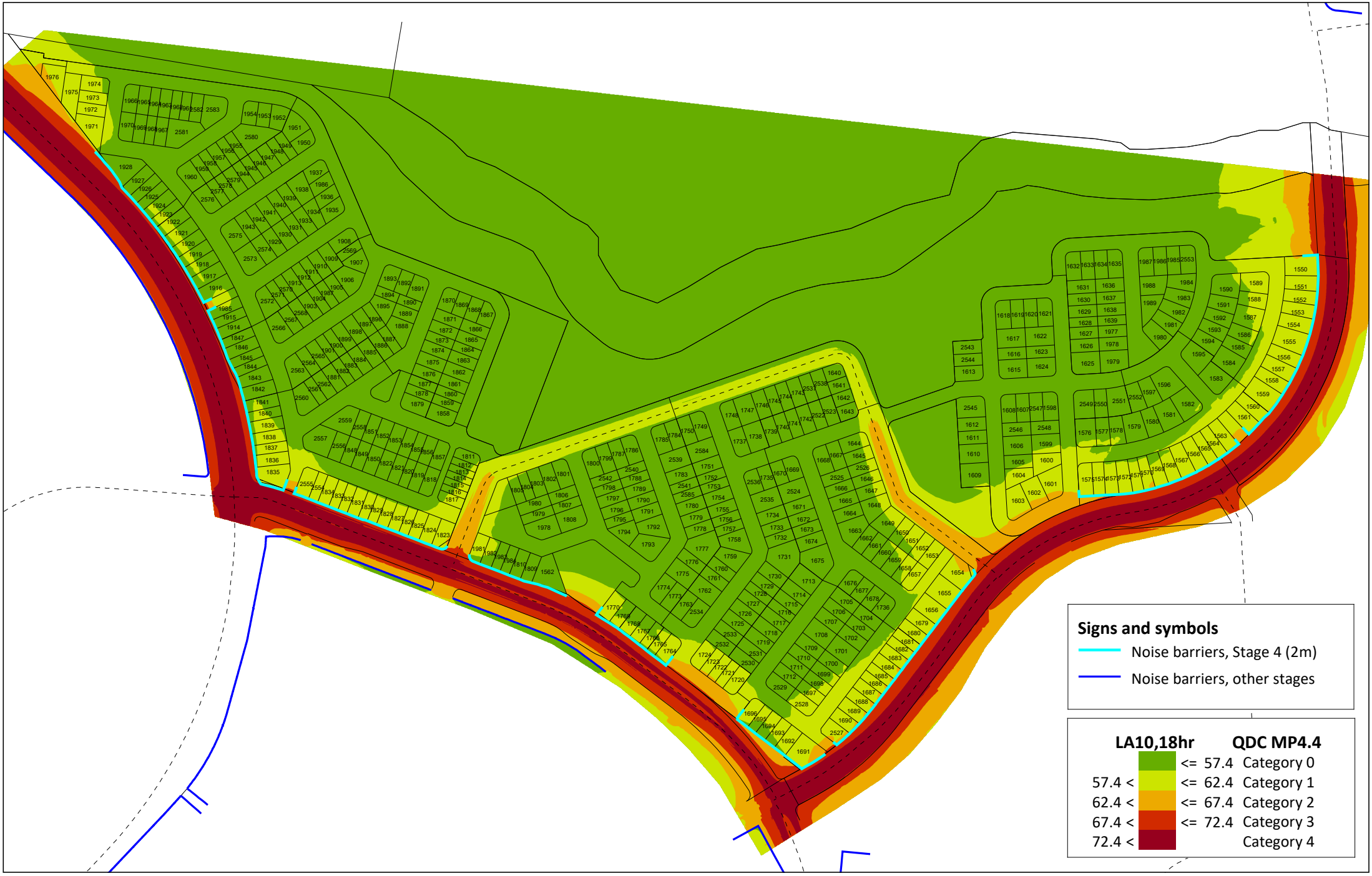
SCALE :3500

0 15 30 60 90 120 150 180 210 240 270 300 m

PROJECT	Flagstone Stage 4
CLIENT	Peet Flagstone City Pty Ltd
DESCRIPTION	Ground Floor Facade Corrected LA10,18hr at 1.8m Above the Ground Without Noise Mitigation

Date:	13/09/2024
Project No.:	620.10512.00206
Report No.:	620.10512.00206-R13-v2.0
Prediction Method:	CoRTN
Prepared By:	RO
Prediction Height:	1.8 m

Figure 2



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SCALE :3500

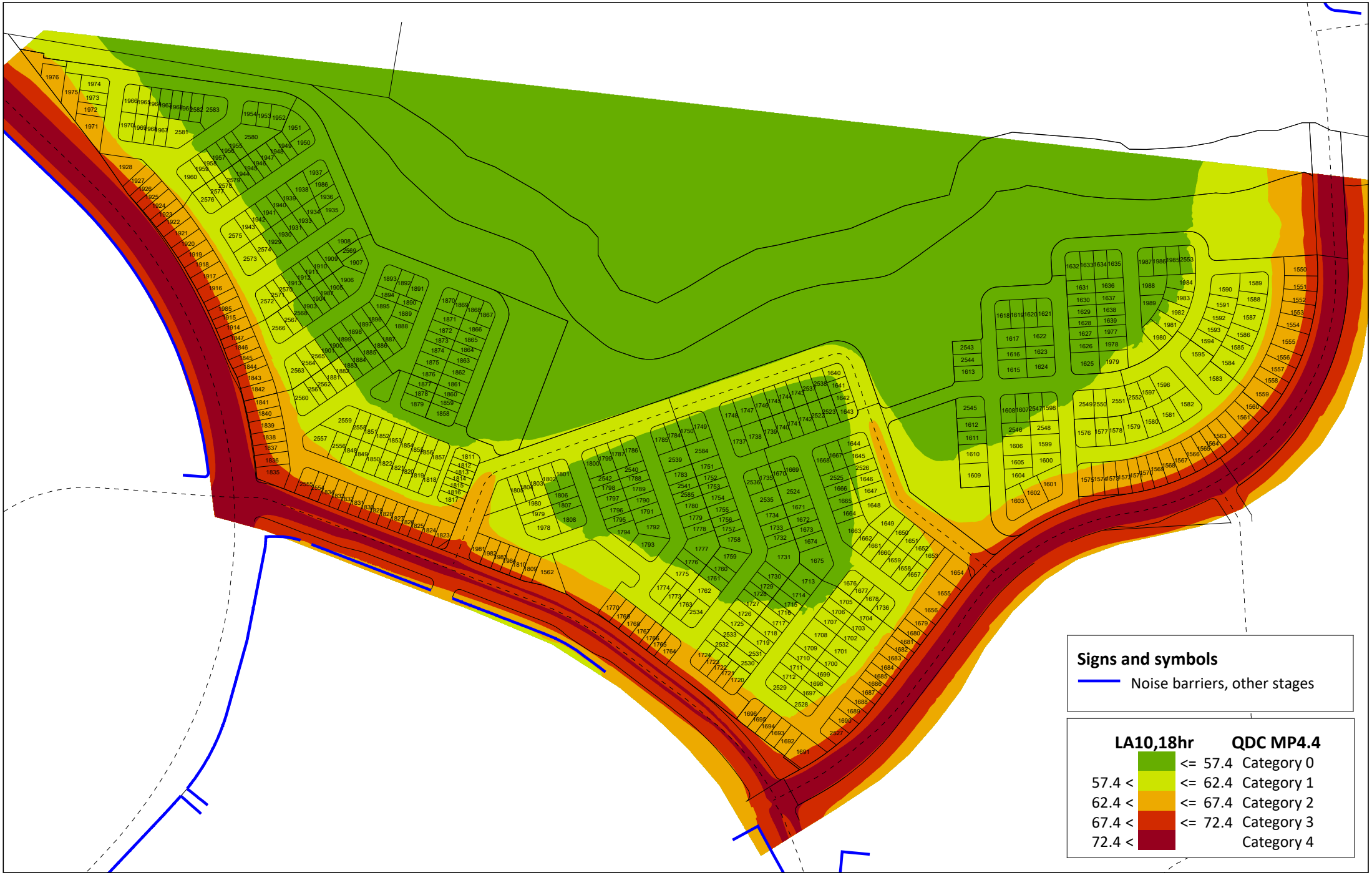
0 15 30 60 90 120 150 180 210 240 270 300 m

BOS: Back of Site

PROJECT	Flagstone Stage 4
CLIENT	Peet Flagstone City Pty Ltd
DESCRIPTION	Ground Floor Facade Corrected LA10,18hr at 1.8m Above the Ground With Noise Barriers

Date:	13/09/2024
Project No.:	620.10512.00206
Report No.:	620.10512.00206-R13-v2.0
Prediction Method:	CoRTN
Prepared By:	RO
Prediction Height:	1.8 m

Figure 3



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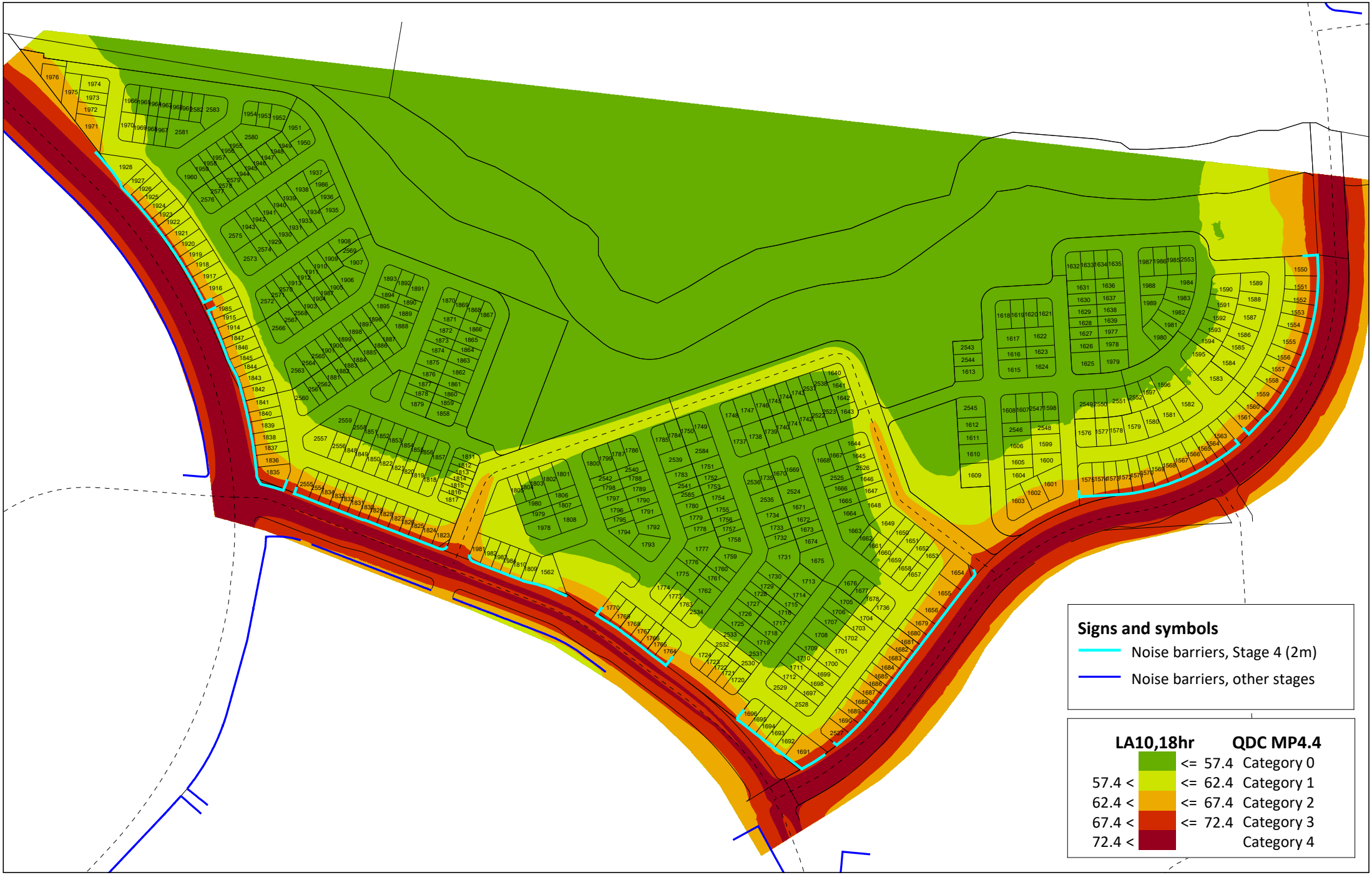
SCALE :3500

0 15 30 60 90 120 150 180 210 240 270 300 m

PROJECT	Flagstone Stage 4
CLIENT	Peet Flagstone City Pty Ltd
DESCRIPTION	Ground Floor Facade Corrected LA10,18hr at 4.6m Above the Ground Without Noise Mitigation

Date:	13/09/2024
Project No.:	620.10512.00206
Report No.:	620.10512.00206-R13-v2.0
Prediction Method:	CoRTN
Prepared By:	RO
Prediction Height:	4.6 m

Figure 4



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SCALE :3500

0 15 30 60 90 120 150 180 210 240 270 300 m

BOS: Back of Site

PROJECT	Flagstone Stage 4
CLIENT	Peet Flagstone City Pty Ltd
DESCRIPTION	Ground Floor Facade Corrected LA10,18hr at 4.6m Above the Ground With Noise Barriers

Date:	16/09/2024
Project No.:	620.10512.00206
Report No.:	620.10512.00206-R13-v2.0
Prediction Method:	CoRTN
Prepared By:	RO
Prediction Height:	4.6 m

Figure 5

5.0 Recommendations

5.1 Noise Barriers

For the external noise levels to meet the predicted QDC MP4.4 noise categories detailed in **Section 4.0**, noise barriers are recommended to be built as follows:

- The location of the modelled 2.0 m high noise barriers is shown in **Figure 6**.

  The noise barriers can be made of an earth mound, acoustic fence or a combination thereof. **Table 4** shows the approximate ground elevation at the base of the barrier at mid span of the respective lot, the ground elevation at the approximate centre of the lot and the approximate elevation of the closest road lane.

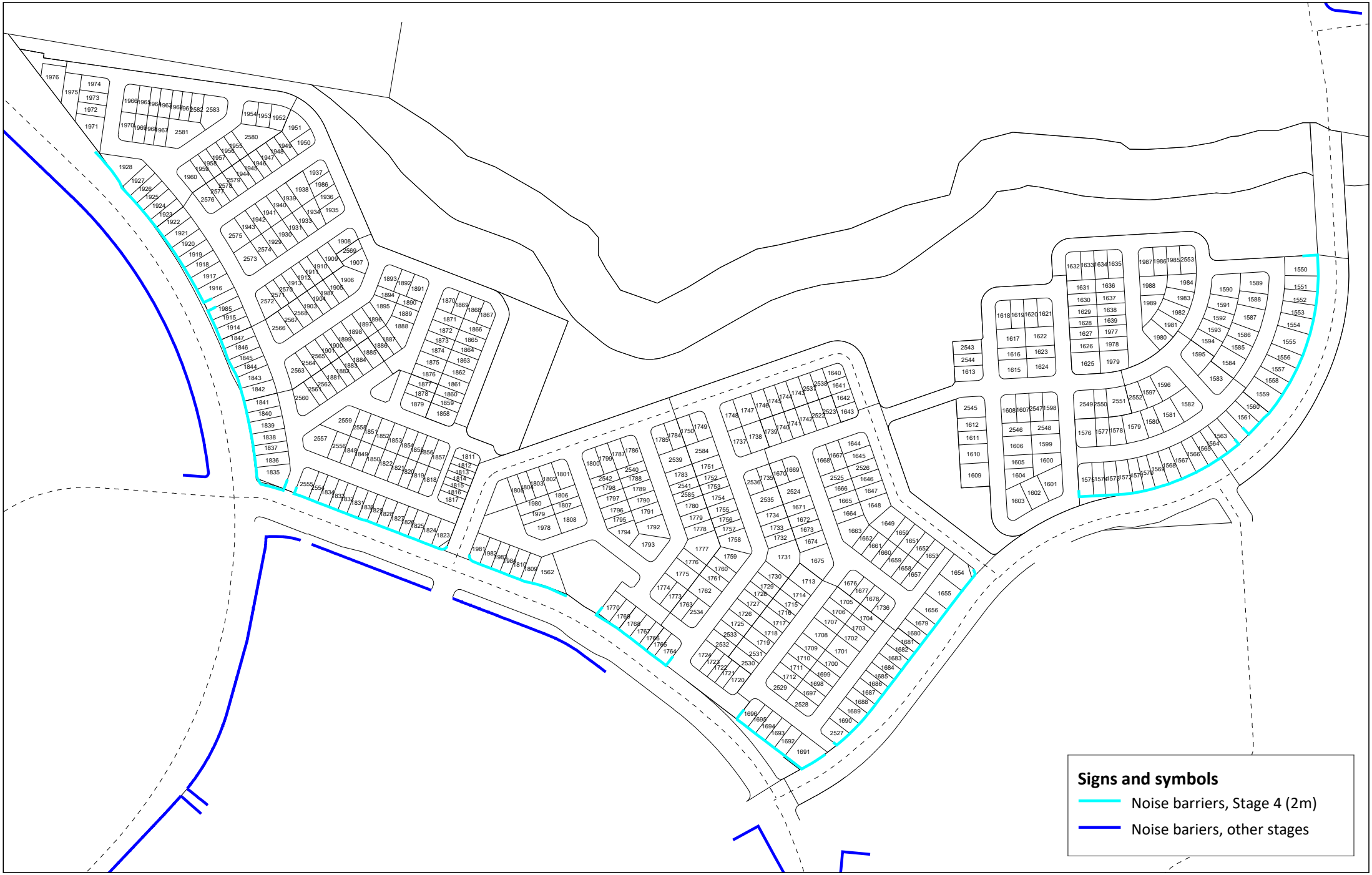
- The noise barriers modelled elevation is detailed in **Table 4**, which are to be built on top of retaining walls. This applies regardless of whether the lot is in a cut or in fill (i.e. lot at a lower elevation than the assessed road immediately adjoining, and vice versa).

- The barriers must generally be installed without gaps between panels and posts. Small gaps between the bottom of the panels are permissible if required for drainage. However, these must be minimised.

- The noise barriers must have a minimum surface density of 12.5 kg/m² (excluding structural components):

  - Overlapped timber barriers are suitable. Brisbane City Council drawings BSD-7021 and Moreton Bay Regional Council drawings SF-1520 are provided for reference (also reproduced in **Appendix D**). Note the noise barriers must be built to the minimum height indicated in **Figure 6**.

  - Other construction materials are also suitable where the panels (structural components excluded) meet the minimum surface density.



SLR
L16 / 175 EAGLE STREET
BRISBANE
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SCALE :3500

0 15 30 60 90 120 150 180 210 240 270 300 m

PROJECT	Flagstone Stage 4
CLIENT	Peet Flagstone City Pty Ltd
DESCRIPTION	Stage 4 Noise Barriers

Date:	16/09/2024
Project No.:	620.10512.00206
Report No.:	620.10512.00206-R13-v2.0
Prediction Method:	N.A.
Prepared By:	RO
Prediction Height:	N.A.

Figure 6

5.2 QDC MP4.4 Noise Category requirements

QDC MP4.4 Categories applicable to the relevant lots pertaining the assessed Stage 4 after the implementation of 2.0 m high noise barriers as specified in **Section 5.1** were presented in **Section 4.1**.

A full list of QDC MP4.4 Noise Categories applicable to all lots within Stage 4 is provided in **Table C-1** (**Appendix C**).

The Rw rating applicable to the dwelling facade elements for each of the QDC MP4.4 Categories are presented in **Table 2**. Acceptable forms of construction are reproduced from Schedule 2 of QDC MP4.4 in **Appendix B**, noting that other forms of construction are acceptable where they meet the required Rw rating.

The noise attenuation provided by the dwelling facade will be largely controlled by the window elements; therefore, it is recommended that facade glazing systems (window + frame + seals) required to achieve a minimum Rw performance are supplied with an acoustic test report conducted in Australia by a qualified consultant who is a member of the Australian Acoustical Society (AAS), or an acoustic consultant who works for a member firm of the Association of Australasian Acoustical Consultants (AAAC). The acoustic test report should address the requirements in the following standards:

- AS 1191-2002 *Acoustics – Method for laboratory measurement of airborne sound transmission insulation of building elements*
- ISO 717-1:2013 *Acoustics – Rating of sound insulation in buildings and of building elements – Part 1: Airborne sound insulation*

It should be noted that as stated in QDC MP4.4, *"the part applies to building work for the construction or renovation of a residential building in a designated transport noise corridor"*; therefore, it is only relevant at the Building Application stage of the individual lots being the building owner responsible for obtaining certification.

A lower Noise Category should be acceptable at specific facades of the future dwellings depending on the layout of these within the lots, pending demonstration of the road traffic noise levels onto specific habitable spaces within a dwelling via a lot specific noise assessment based on architectural drawings, presented by the lot owner.

6.0 Conclusion

SLR Consulting Pty Ltd (SLR) have completed a road traffic noise assessment of the proposed Flagstone Stage 4 development. This report addresses the road traffic noise intrusion onto residential sub-stage 4A, 4B, 4C, 4D, 4D, 4F, 4G, 4H, 4I, 4J, 4K and 4L.

The assessment was conducted following guidance from the Queensland Department of Transport and Main Roads (DTMR) – Transport Noise Management: Code of Practice Volume 1 - Road Traffic Noise, dated November 2013 (CoP Vol 1).

A computational noise model was used to predict future road traffic noise levels from roads that will be built as part of the Flagstone development.

For the external noise levels to meet the predicted noise categories detailed in this report, noise barriers are recommended to be built as follows:

- The location of the modelled 2.0 m high noise barriers is shown in **Figure 6**.

  The noise barriers can be made of an earth mound, acoustic fence or a combination thereof. **Table 4** shows the approximate ground elevation at the base of the barrier at mid span of the respective lot, the ground elevation at the approximate centre of the lot and the approximate elevation of the closest road lane.

- The noise barriers modelled elevation is detailed in **Table 4**, which are to be built on top of retaining walls. This applies regardless of whether the lot is in a cut or in fill (i.e. lot at a lower elevation than the assessed road immediately adjoining, and vice versa).

- The barriers must generally be installed without gaps between panels and posts. Small gaps between the bottom of the panels are permissible if required for drainage. However, these must be minimised.

- The noise barriers must have a minimum surface density of 12.5 kg/m² (excluding structural components):

  - Overlapped timber barriers are suitable. Brisbane City Council drawings BSD-7021 and Moreton Bay Regional Council drawings SF-1520 are provided for reference (also reproduced in **Appendix D**). Note the noise barriers must be built to the minimum height indicated in **Figure 6**.

  - Other construction materials are also suitable where the panels (structural components excluded) meet the minimum surface density.

The residual noise levels after the implementation of 2.0 m high noise barriers were assessed against noise criteria derived from the Queensland Development Code Mandatory Part 4.4 (QDC MP4.4).

QDC MP4.4 Categories applicable to all the lots pertaining to the assessed Stage 4 are presented in **Appendix C**.

The Rw rating applicable to the dwelling facade elements are presented in **Table 2**. Acceptable forms of construction are reproduced from Schedule 2 of QDC MP4.4 in **Appendix B**, noting that other forms of construction are acceptable where they meet the required Rw rating.

The predicted QDC MP4.4 Noise Categories presented in this report represent the highest Noise Category for any part of the Lot (rather than on the building envelope). A lower Noise Category may be applicable depending on the position and layout of the building on the Lot. The constructed dwellings and other lot fences will also screen road noise. For these reasons, the Noise Categories are considered a conservative assessment of transport noise.

A lower Noise Category should be acceptable at specific facades of the future dwellings depending on the layout of these within the lots, pending demonstration of the road traffic noise levels onto specific habitable spaces within a dwelling via a lot-specific noise assessment based on architectural drawings, presented by the lot owner.

Appendix A Stage 4 Overall Allotment Layout

Flagstone Development, Stage 4

Road Traffic Noise Intrusion Assessment

Peet Flagstone City Pty Ltd

SLR Project No.: 620.v10512.02006

16 September 2024

REVISION

AB: 20/09/2022 Stage 3 & 5 Layout Changes
AC: 14/11/2022 Stage 5 Boundary Changes
AD: 10/01/2023 Stage 3 & 4 Layout Changes
AE: 24/02/2023 Stage 3 & 5 Layout Changes
AF: 20/03/2023 Stage 3 & 5 Layout Changes
AG: 13/04/2023 Stage 3 & 5 Layout Changes
AH: 25/04/2023 Stage 4 Layout Changes
AI: 08/08/2023 Stage 5 Basin Change
AJ: 12/02/2024 Stage 5R Layout Change
AK: 15/08/2024 Stage 4 Layout Change
AL: 23/08/2024 Stage 4 Layout Change

Note:
All 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.

Road linemarkings and turn slots are indicative only and subject to detailed design.

Source Information:
Site boundaries: Registered Survey Plans / Veris.
Adjoining information: DCDB.
Contours: Bradlees.

Legend

- Site Boundary
- Proposed Stage Boundary
- Proposed Sub Stage Boundary
- Existing Q100
- Possible Multiple Residential Allotment (Max. no. of dwellings)
- Entry Statements - Lease
- Indicative Indented Bus Stop Location
- Indicative Temporary In-Line Bus Stop Location
- Bus Stop Catchment (400m)
- Neighbourhood Park Catchment (400m)

Scale 1 : 2000 @ A1
0 20 40 60 80 100 120

CLIENT
PEET

PROJECT
Flagstone Precinct 1

Plan of Subdivision
Stage 4 Overall
Allotment Layout

Date.	23 August 2024
Comp By.	NF
Checked By.	MD
DWG Name.	Precinct 1 Stage 4
Job Ref.	110056
Local Authority.	Economic Development Queensland
Locality.	Flagstone
Scale	1 : 2000
Sheet	A1
Plan Ref	110056 – 391
Rev	AL

URBAN DESIGN
Level 4 HQ South
520 Wickham Street
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T +61 7 3539 9500
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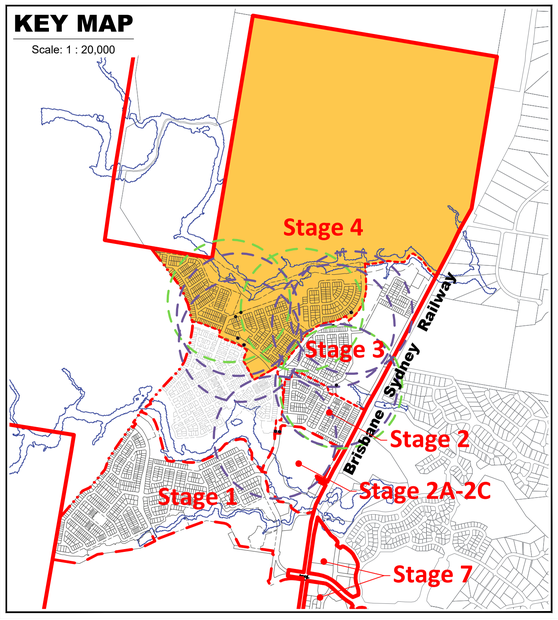
KEY MAP

Scale: 1 : 20,000



TO BE READ IN CONJUNCTION WITH 110056 - 392

Land Budget Stage 4

Land Use	Overall Area	Overall %
Area of Subject Site	**301.998 ha**	**100.0%**
Saleable Area		
Residential Allotments	21.980 ha	7.3%
Commercial Allotment	1.324 ha	0.4%
Balance Super Allotments	247.010 ha	81.8%
Community Facility	0.500 ha	0.2%
Total Area of Allotments	**270.814 ha**	**89.7%**
Road		
Collector Road	4.559 ha	1.5%
Local Road	9.621 ha	3.2%
Linear Connections	0.414 ha	0.1%
Entry Statements	—	0.0%
Total Area of New Road	**14.594 ha**	**4.8%**
Open Space		
Corridor Park	14.787 ha	4.9%
Conservation (Within Corridor Park)	*6.357 ha*	
District Recreation Park	—	0.0%
Neighbourhood Recreation Park	1.803 ha	0.6%
Local Recreation Park	—	0.0%
Local Linear Recreation Park	—	0.0%
Stormwater Detention	—	0.0%
Total Open Space	**16.590 ha**	**5.5%**

Yield Breakdown Stage 4

Residential Allotments	Typical Size	Typical Area	Overall	
Urban & Nano Allotments Product				
Urban Loft	4.7 x 11.5m	50m²	—	0.0%
Urban Allotments	7.5 x 16m	120m²	—	0.0%
Urban Terrace	6.2 x 27.5m	170m²	—	0.0%
Subtotal			**—**	**0.0%**
16m Deep Product				
Squat Allotment	14 x 16m	220m²	**4**	**0.8%**
Subtotal			**4**	**0.8%**
25m Deep Product				
Villa Allotment	10 x 25m	250m²	3	0.6%
Premium Villa Allotment	12.5 x 25m	313m²	—	0.0%
Courtyard Allotment	14 x 25m	350m²	27	5.3%
Premium Courtyard Allotment	16 x 25m	400m²	7	1.4%
Premium Traditional Allotment	20 x 25m	500m²	—	0.0%
Possible Multiple Residential Allotment	—	—	—	0.0%
Subtotal			**37**	**7.3%**
28m Deep Product				
Terrace 7.5m Allotment	7.5 x 28m	210m²	5	1.0%
Terrace 9.5m Allotment	9.5 x 28m	265m²	2	0.4%
Subtotal			**7**	**1.4%**
30m Deep Product				
Villa Allotment	10 x 30m	300m²	89	17.6%
Premium Villa Allotment	12.5 x 30m	375m²	155	30.6%
Courtyard Allotment	14 x 30m	420m²	156	30.8%
Traditional Allotment	20 x 30m	600m²	55	10.9%
Premium Traditional Allotment	25 x 30m	720m²	3	0.6%
Possible Multiple Residential Allotment	—	—	—	0.0%
Subtotal			**458**	**90.5%**
Total Residential Allotments			**506**	**100%**
Super Lots			**Lots**	
Commercial Allotment			1	
Community Facility			1	
Balance Super Allotments			4	
Sub Total			**6**	
Total Allotments			**512**	
Maximum Potential Residential Dwellings (Includes Multiple Residential Allotments)			**506**	
Maximum Potential Net Residential Density			**15.0 dw/ha**	

Appendix B Schedule 2 of QDC MP4.4

Flagstone Development, Stage 4

Road Traffic Noise Intrusion Assessment

Peet Flagstone City Pty Ltd

SLR Project No.: 620.v10512.02006

16 September 2024

Table B-1 Schedule 2 of QDC MP4.4

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
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 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/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.
	41	Two leaves of clay brick masonry at least 110mm thick with cavity not less than 50mm between leaves

Component of Building's External Envelope	Minimum R_w	Acceptable Forms of Construction
		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.
	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.

Component of Building's External Envelope	Minimum R_w	Acceptable Forms of Construction
	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.
	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.

Component of Building's External Envelope	Minimum R_w	Acceptable Forms of Construction
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.
	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*.

Appendix C QDC MP4.4 Noise Predictions

Flagstone Development, Stage 4

Road Traffic Noise Intrusion Assessment

Peet Flagstone City Pty Ltd

SLR Project No.: 620.v10512.02006

16 September 2024

Table C-1 QDC MP4.4 noise predictions

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1550	GF	495230.93	6926030.98	48.4	3	2
1550	FF	495230.93	6926030.98	48.4	3	3
1551	GF	495230.91	6926012.45	48.7	3	2
1551	FF	495230.91	6926012.45	48.7	3	3
1552	GF	495229.8	6925998.56	48.8	3	2
1552	FF	495229.8	6925998.56	48.8	3	3
1553	GF	495227.59	6925985.49	48.9	3	2
1553	FF	495227.59	6925985.49	48.9	3	3
1554	GF	495223.29	6925972.24	48.9	3	2
1554	FF	495223.29	6925972.24	48.9	3	3
1555	GF	495218.71	6925954.82	49.0	3	2
1555	FF	495218.71	6925954.82	49.0	3	3
1556	GF	495212.93	6925938.85	49.1	3	2
1556	FF	495212.93	6925938.85	49.1	3	3
1557	GF	495207.19	6925926.12	49.1	3	2
1557	FF	495207.19	6925926.12	49.1	3	3
1558	GF	495200.75	6925914.32	49.2	3	2
1558	FF	495200.75	6925914.32	49.2	3	3
1559	GF	495191.01	6925900.28	49.3	3	2
1559	FF	495191.01	6925900.28	49.3	3	3
1560	GF	495180.67	6925886.95	49.3	3	1
1560	FF	495180.67	6925886.95	49.3	3	3
1561	GF	495171.45	6925875.52	49.4	3	1
1561	FF	495171.45	6925875.52	49.4	3	3
1562	GF	494440.84	6925713.18	59.8	1	0
1562	FF	494440.84	6925713.18	59.8	3	2
1563	GF	495146.54	6925856.14	49.7	3	2
1563	FF	495146.54	6925856.14	49.7	3	3
1564	GF	495138.54	6925848.38	49.7	3	1
1564	FF	495138.54	6925848.38	49.7	3	3
1565	GF	495129.65	6925842.84	49.7	3	1
1565	FF	495129.65	6925842.84	49.7	3	3

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1566	GF	495118.22	6925836.98	49.8	3	1
1566	FF	495118.22	6925836.98	49.8	3	3
1567	GF	495105.87	6925830.76	49.9	3	1
1567	FF	495105.87	6925830.76	49.9	3	3
1568	GF	495093.02	6925825.41	49.9	3	1
1568	FF	495093.02	6925825.41	49.9	3	3
1569	GF	495081.25	6925821.23	50.0	3	1
1569	FF	495081.25	6925821.23	50.0	3	3
1570	GF	495069.54	6925817.29	51.3	3	2
1570	FF	495069.54	6925817.29	51.3	3	3
1571	GF	495059.32	6925814.72	51.3	3	1
1571	FF	495059.32	6925814.72	51.3	3	3
1572	GF	495046.82	6925813.03	51.3	3	1
1572	FF	495046.82	6925813.03	51.3	3	3
1573	GF	495033.99	6925811.76	51.2	3	1
1573	FF	495033.99	6925811.76	51.2	3	3
1574	GF	495021.52	6925810.93	51.1	2	1
1574	FF	495021.52	6925810.93	51.1	3	3
1575	GF	495007.7	6925810.12	50.9	2	1
1575	FF	495007.7	6925810.12	50.9	3	2
1576	GF	495004.24	6925859.59	51.3	1	1
1576	FF	495004.24	6925859.59	51.3	1	1
1577	GF	495022.18	6925860.65	51.5	1	1
1577	FF	495022.18	6925860.65	51.5	1	1
1578	GF	495037.36	6925861.91	51.6	1	1
1578	FF	495037.36	6925861.91	51.6	1	1
1579	GF	495056.37	6925865.62	51.7	1	0
1579	FF	495056.37	6925865.62	51.7	1	1
1580	GF	495075.11	6925871.01	51.6	1	0
1580	FF	495075.11	6925871.01	51.6	1	1
1581	GF	495092.9	6925878.44	51.5	1	0
1581	FF	495092.9	6925878.44	51.5	1	1
1582	GF	495112.44	6925889.68	51.3	1	1
1582	FF	495112.44	6925889.68	51.3	1	1

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1583	GF	495142.12	6925916.55	50.6	1	0
1583	FF	495142.12	6925916.55	50.6	1	1
1584	GF	495155.35	6925932.73	50.8	1	0
1584	FF	495155.35	6925932.73	50.8	1	1
1585	GF	495164.97	6925949.02	50.9	1	0
1585	FF	495164.97	6925949.02	50.9	1	1
1586	GF	495171.33	6925962.46	50.8	1	1
1586	FF	495171.33	6925962.46	50.8	1	1
1587	GF	495177.59	6925980.46	50.6	1	1
1587	FF	495177.59	6925980.46	50.6	1	1
1588	GF	495182.09	6925999.45	50.4	1	1
1588	FF	495182.09	6925999.45	50.4	1	1
1589	GF	495183.85	6926016.31	49.9	1	1
1589	FF	495183.85	6926016.31	49.9	1	1
1590	GF	495152.56	6926010.03	50.4	1	1
1590	FF	495152.56	6926010.03	50.4	1	1
1591	GF	495149.65	6925993.17	50.9	1	0
1591	FF	495149.65	6925993.17	50.9	1	1
1592	GF	495145.55	6925979.76	51.2	1	0
1592	FF	495145.55	6925979.76	51.2	1	1
1593	GF	495140.34	6925967.71	51.5	1	0
1593	FF	495140.34	6925967.71	51.5	1	1
1594	GF	495133.68	6925955.24	51.7	1	0
1594	FF	495133.68	6925955.24	51.7	1	1
1595	GF	495123.87	6925941.64	52.0	1	0
1595	FF	495123.87	6925941.64	52.0	1	1
1596	GF	495087.45	6925910	52.2	1	0
1596	FF	495087.45	6925910	52.2	1	1
1597	GF	495071.81	6925902.07	53.0	1	0
1597	FF	495071.81	6925902.07	53.0	1	1
1598	GF	494967.59	6925885.29	51.9	0	0
1598	FF	494967.59	6925885.29	51.9	1	0
1599	GF	494963.25	6925847.45	51.5	1	1
1599	FF	494963.25	6925847.45	51.5	1	1

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1600	GF	494964.24	6925830.48	51.2	1	1
1600	FF	494964.24	6925830.48	51.2	1	1
1601	GF	494968.51	6925805.58	50.7	2	2
1601	FF	494968.51	6925805.58	50.7	2	2
1602	GF	494951.3	6925796.79	50.5	2	2
1602	FF	494951.3	6925796.79	50.5	2	2
1603	GF	494934.41	6925788.34	49.7	2	2
1603	FF	494934.41	6925788.34	49.7	2	2
1604	GF	494935.11	6925814.77	50.3	1	1
1604	FF	494935.11	6925814.77	50.3	1	1
1605	GF	494934.29	6925828.75	50.3	1	1
1605	FF	494934.29	6925828.75	50.3	1	1
1606	GF	494932.83	6925845.68	50.2	1	0
1606	FF	494932.83	6925845.68	50.2	1	1
1607	GF	494939.35	6925883.82	50.8	0	0
1607	FF	494939.35	6925883.82	50.8	0	0
1608	GF	494924.83	6925882.92	50.2	0	0
1608	FF	494924.83	6925882.92	50.2	0	0
1609	GF	494888.85	6925814.69	50.0	1	1
1609	FF	494888.85	6925814.69	50.0	1	1
1610	GF	494887.54	6925837.14	49.8	0	0
1610	FF	494887.54	6925837.14	49.8	1	1
1611	GF	494887.01	6925854.13	49.7	0	0
1611	FF	494887.01	6925854.13	49.7	0	0
1612	GF	494886.19	6925868.1	49.6	0	0
1612	FF	494886.19	6925868.1	49.6	0	0
1613	GF	494882.49	6925923.17	49.3	0	0
1613	FF	494882.49	6925923.17	49.3	0	0
1615	GF	494930.09	6925925.73	49.9	0	0
1615	FF	494930.09	6925925.73	49.9	0	0
1616	GF	494929.96	6925941.75	49.8	0	0
1616	FF	494929.96	6925941.75	49.8	0	0
1617	GF	494929.01	6925957.97	50.0	0	0
1617	FF	494929.01	6925957.97	50.0	0	0

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1618	GF	494919.32	6925982.04	49.7	0	0
1618	FF	494919.32	6925982.04	49.7	0	0
1619	GF	494934.11	6925982.91	50.1	0	0
1619	FF	494934.11	6925982.91	50.1	0	0
1620	GF	494948.08	6925983.73	50.6	0	0
1620	FF	494948.08	6925983.73	50.6	0	0
1621	GF	494963.05	6925984.43	50.5	0	0
1621	FF	494963.05	6925984.43	50.5	0	0
1622	GF	494957.63	6925960.77	51.7	0	0
1622	FF	494957.63	6925960.77	51.7	0	0
1623	GF	494958.57	6925944.56	51.9	0	0
1623	FF	494958.57	6925944.56	51.9	0	0
1624	GF	494959.34	6925928.41	51.7	0	0
1624	FF	494959.34	6925928.41	51.7	0	0
1625	GF	495007.16	6925931.91	52.3	0	0
1625	FF	495007.16	6925931.91	52.3	0	0
1626	GF	495006.09	6925950.17	52.2	0	0
1626	FF	495006.09	6925950.17	52.2	0	0
1627	GF	495005.32	6925963.4	52.0	0	0
1627	FF	495005.32	6925963.4	52.0	0	0
1628	GF	495004.65	6925974.82	51.8	0	0
1628	FF	495004.65	6925974.82	51.8	0	0
1629	GF	495004	6925986.05	51.6	0	0
1629	FF	495004	6925986.05	51.6	0	0
1630	GF	495003.27	6925998.52	51.2	0	0
1630	FF	495003.27	6925998.52	51.2	0	0
1631	GF	495002.5	6926011.74	50.7	0	0
1631	FF	495002.5	6926011.74	50.7	0	0
1632	GF	494992.25	6926034.32	50.0	0	0
1632	FF	494992.25	6926034.32	50.0	0	0
1633	GF	495007.04	6926035.19	49.7	0	0
1633	FF	495007.04	6926035.19	49.7	0	0
1634	GF	495021.01	6926036	49.5	0	0
1634	FF	495021.01	6926036	49.5	0	0

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1635	GF	495035.98	6926036.7	49.3	0	0
1635	FF	495035.98	6926036.7	49.3	0	0
1636	GF	495029.37	6926013.74	50.4	0	0
1636	FF	495029.37	6926013.74	50.4	0	0
1637	GF	495030.14	6926000.52	51.4	0	0
1637	FF	495030.14	6926000.52	51.4	0	0
1638	GF	495030.87	6925988.05	52.0	0	0
1638	FF	495030.87	6925988.05	52.0	0	0
1639	GF	495031.52	6925976.82	52.6	0	0
1639	FF	495031.52	6925976.82	52.6	0	0
1640	GF	494741.7	6925922.52	49.0	1	0
1640	FF	494741.7	6925922.52	49.0	1	1
1641	GF	494746.63	6925909.18	49.2	0	0
1641	FF	494746.63	6925909.18	49.2	1	1
1642	GF	494751.22	6925895.96	48.8	0	0
1642	FF	494751.22	6925895.96	48.8	1	1
1643	GF	494755.33	6925881.8	48.7	1	1
1643	FF	494755.33	6925881.8	48.7	1	1
1644	GF	494762.54	6925848.52	49.2	1	1
1644	FF	494762.54	6925848.52	49.2	1	1
1645	GF	494767.46	6925835.18	49.4	1	1
1645	FF	494767.46	6925835.18	49.4	1	1
1646	GF	494775.83	6925811.1	49.7	1	1
1646	FF	494775.83	6925811.1	49.7	1	1
1647	GF	494780.26	6925798.36	49.8	1	1
1647	FF	494780.26	6925798.36	49.8	1	1
1648	GF	494783.67	6925783.33	49.9	1	1
1648	FF	494783.67	6925783.33	49.9	1	1
1649	GF	494798.03	6925764.18	50.0	1	1
1649	FF	494798.03	6925764.18	50.0	1	1
1650	GF	494812.93	6925754.41	50.1	1	1
1650	FF	494812.93	6925754.41	50.1	1	1
1651	GF	494823.46	6925746.38	50.3	1	1
1651	FF	494823.46	6925746.38	50.3	2	1

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1652	GF	494833.99	6925738.35	50.9	1	1
1652	FF	494833.99	6925738.35	50.9	2	2
1653	GF	494844.33	6925730.47	51.3	1	1
1653	FF	494844.33	6925730.47	51.3	2	2
1654	GF	494871	6925712.41	51.9	3	2
1654	FF	494871	6925712.41	51.9	3	3
1655	GF	494857.21	6925691.08	52.3	3	1
1655	FF	494857.21	6925691.08	52.3	3	3
1656	GF	494843.58	6925673.2	52.5	2	1
1656	FF	494843.58	6925673.2	52.5	3	3
1657	GF	494825.85	6925710.61	52.4	1	1
1657	FF	494825.85	6925710.61	52.4	2	1
1658	GF	494815.52	6925717.58	52.3	1	1
1658	FF	494815.52	6925717.58	52.3	1	1
1659	GF	494804.99	6925725.62	52.2	1	1
1659	FF	494804.99	6925725.62	52.2	1	1
1660	GF	494794.46	6925733.65	52.2	1	1
1660	FF	494794.46	6925733.65	52.2	1	1
1661	GF	494784.52	6925741.23	52.1	1	0
1661	FF	494784.52	6925741.23	52.1	1	1
1662	GF	494774.59	6925748.8	52.0	1	0
1662	FF	494774.59	6925748.8	52.0	1	1
1663	GF	494763.43	6925756.68	51.9	0	0
1663	FF	494763.43	6925756.68	51.9	1	0
1664	GF	494757.81	6925775.15	51.8	0	0
1664	FF	494757.81	6925775.15	51.8	1	0
1665	GF	494753.22	6925788.37	51.7	0	0
1665	FF	494753.22	6925788.37	51.7	1	0
1666	GF	494748.79	6925801.12	51.5	0	0
1666	FF	494748.79	6925801.12	51.5	1	0
1667	GF	494743.6	6925835.87	49.9	0	0
1667	FF	494743.6	6925835.87	49.9	0	0
1668	GF	494730.26	6925830.94	50.6	0	0
1668	FF	494730.26	6925830.94	50.6	0	0

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1669	GF	494698.09	6925820.61	51.7	0	0
1669	FF	494698.09	6925820.61	51.7	0	0
1670	GF	494684.56	6925816.94	52.3	0	0
1670	FF	494684.56	6925816.94	52.3	0	0
1671	GF	494704.75	6925781.56	52.0	0	0
1671	FF	494704.75	6925781.56	52.0	0	0
1672	GF	494709.34	6925768.28	52.1	0	0
1672	FF	494709.34	6925768.28	52.1	0	0
1673	GF	494712.98	6925757.79	52.1	0	0
1673	FF	494712.98	6925757.79	52.1	0	0
1674	GF	494717.4	6925745.19	52.2	0	0
1674	FF	494717.4	6925745.19	52.2	0	0
1675	GF	494724.11	6925724.97	52.4	0	0
1675	FF	494724.11	6925724.97	52.4	0	0
1676	GF	494758.54	6925701.64	52.1	0	0
1676	FF	494758.54	6925701.64	52.1	1	0
1677	GF	494770.64	6925693.62	52.2	0	0
1677	FF	494770.64	6925693.62	52.2	1	1
1678	GF	494781.76	6925685.13	52.4	1	0
1678	FF	494781.76	6925685.13	52.4	1	1
1679	GF	494833.27	6925659.69	52.8	2	1
1679	FF	494833.27	6925659.69	52.8	3	3
1680	GF	494825.24	6925649.15	53.1	2	2
1680	FF	494825.24	6925649.15	53.1	3	3
1681	GF	494818.42	6925640.21	53.4	2	1
1681	FF	494818.42	6925640.21	53.4	3	3
1682	GF	494812.36	6925632.26	53.8	2	2
1682	FF	494812.36	6925632.26	53.8	3	3
1683	GF	494805.29	6925623.01	54.2	2	2
1683	FF	494805.29	6925623.01	54.2	3	3
1684	GF	494797.72	6925613.07	54.8	2	2
1684	FF	494797.72	6925613.07	54.8	3	3
1685	GF	494790.9	6925604.13	55.4	2	2
1685	FF	494790.9	6925604.13	55.4	3	3

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1686	GF	494784.83	6925596.18	55.8	2	2
1686	FF	494784.83	6925596.18	55.8	3	3
1687	GF	494777.77	6925586.92	56.4	2	2
1687	FF	494777.77	6925586.92	56.4	3	3
1688	GF	494770.19	6925577.12	57.1	3	2
1688	FF	494770.19	6925577.12	57.1	3	3
1689	GF	494762.41	6925567.6	57.6	3	2
1689	FF	494762.41	6925567.6	57.6	3	3
1690	GF	494753.13	6925557.55	58.0	3	2
1690	FF	494753.13	6925557.55	58.0	3	3
1691	GF	494709.21	6925524.91	59.2	3	2
1691	FF	494709.21	6925524.91	59.2	3	3
1692	GF	494693.23	6925536.19	59.2	1	1
1692	FF	494693.23	6925536.19	59.2	2	2
1693	GF	494682.7	6925544.22	59.1	1	1
1693	FF	494682.7	6925544.22	59.1	2	2
1694	GF	494672.76	6925551.8	59.1	1	1
1694	FF	494672.76	6925551.8	59.1	2	2
1695	GF	494663.66	6925558.74	59.2	1	1
1695	FF	494663.66	6925558.74	59.2	2	2
1696	GF	494653.93	6925564.96	59.5	2	1
1696	FF	494653.93	6925564.96	59.5	2	2
1697	GF	494715.89	6925586.35	58.0	1	1
1697	FF	494715.89	6925586.35	58.0	2	1
1698	GF	494723.47	6925596.28	57.5	1	1
1698	FF	494723.47	6925596.28	57.5	1	1
1699	GF	494730.68	6925606.25	56.9	1	1
1699	FF	494730.68	6925606.25	56.9	1	1
1700	GF	494738.63	6925616.96	56.4	1	1
1700	FF	494738.63	6925616.96	56.4	1	1
1701	GF	494748.99	6925630.45	55.3	1	0
1701	FF	494748.99	6925630.45	55.3	1	1
1702	GF	494759.09	6925644.01	54.7	1	0
1702	FF	494759.09	6925644.01	54.7	1	1

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1703	GF	494767.33	6925654.5	54.1	1	0
1703	FF	494767.33	6925654.5	54.1	1	1
1704	GF	494775.36	6925665.03	53.5	1	0
1704	FF	494775.36	6925665.03	53.5	1	1
1705	GF	494754.42	6925681.74	52.8	0	0
1705	FF	494754.42	6925681.74	52.8	1	0
1706	GF	494746.39	6925671.21	53.4	0	0
1706	FF	494746.39	6925671.21	53.4	1	1
1707	GF	494737.93	6925660.68	54.0	0	0
1707	FF	494737.93	6925660.68	54.0	1	0
1708	GF	494728.05	6925647.17	54.6	0	0
1708	FF	494728.05	6925647.17	54.6	1	0
1709	GF	494717.37	6925633.27	56.0	1	0
1709	FF	494717.37	6925633.27	56.0	1	1
1710	GF	494709.57	6925623.11	56.6	1	0
1710	FF	494709.57	6925623.11	56.6	1	1
1711	GF	494702.15	6925613.41	57.2	1	0
1711	FF	494702.15	6925613.41	57.2	1	1
1712	GF	494694.57	6925603.47	57.7	1	0
1712	FF	494694.57	6925603.47	57.7	1	1
1713	GF	494714.83	6925703.49	52.9	0	0
1713	FF	494714.83	6925703.49	52.9	0	0
1714	GF	494704.81	6925689.37	53.9	0	0
1714	FF	494704.81	6925689.37	53.9	0	0
1715	GF	494696.54	6925679.43	54.8	0	0
1715	FF	494696.54	6925679.43	54.8	1	0
1716	GF	494689.63	6925671.04	55.3	0	0
1716	FF	494689.63	6925671.04	55.3	1	0
1717	GF	494683.85	6925659.67	55.9	0	0
1717	FF	494683.85	6925659.67	55.9	1	0
1718	GF	494675.39	6925649.11	56.4	0	0
1718	FF	494675.39	6925649.11	56.4	1	0
1719	GF	494667.13	6925639.05	57.3	0	0
1719	FF	494667.13	6925639.05	57.3	1	0

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1720	GF	494640.64	6925600.41	60.3	2	1
1720	FF	494640.64	6925600.41	60.3	2	2
1721	GF	494630.46	6925606.97	61.2	2	2
1721	FF	494630.46	6925606.97	61.2	2	2
1722	GF	494622.51	6925613.03	61.5	2	2
1722	FF	494622.51	6925613.03	61.5	2	2
1723	GF	494614.57	6925619.09	61.5	2	2
1723	FF	494614.57	6925619.09	61.5	2	2
1724	GF	494606.07	6925626.49	60.5	2	1
1724	FF	494606.07	6925626.49	60.5	2	2
1725	GF	494640.11	6925658.73	58.0	0	0
1725	FF	494640.11	6925658.73	58.0	1	0
1726	GF	494648.22	6925669.58	57.3	0	0
1726	FF	494648.22	6925669.58	57.3	1	0
1727	GF	494656.66	6925680.15	56.6	0	0
1727	FF	494656.66	6925680.15	56.6	1	0
1728	GF	494664.19	6925690.28	56.1	0	0
1728	FF	494664.19	6925690.28	56.1	1	0
1729	GF	494671.1	6925698.67	55.5	0	0
1729	FF	494671.1	6925698.67	55.5	0	0
1730	GF	494679.37	6925708.6	55.1	0	0
1730	FF	494679.37	6925708.6	55.1	0	0
1731	GF	494689.5	6925728.81	54.5	0	0
1731	FF	494689.5	6925728.81	54.5	0	0
1732	GF	494685.11	6925749.28	54.3	0	0
1732	FF	494685.11	6925749.28	54.3	0	0
1733	GF	494681.47	6925759.76	54.1	0	0
1733	FF	494681.47	6925759.76	54.1	0	0
1734	GF	494676.98	6925773.01	54.0	0	0
1734	FF	494676.98	6925773.01	54.0	0	0
1735	GF	494670.75	6925812.37	52.8	0	0
1735	FF	494670.75	6925812.37	52.8	0	0
1736	GF	494792.63	6925675.92	52.6	1	0
1736	FF	494792.63	6925675.92	52.6	1	1

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1737	GF	494642.51	6925849.92	52.2	0	0
1737	FF	494642.51	6925849.92	52.2	0	0
1738	GF	494659.12	6925855.41	52.4	0	0
1738	FF	494659.12	6925855.41	52.4	0	0
1739	GF	494675.17	6925860.79	52.2	0	0
1739	FF	494675.17	6925860.79	52.2	0	0
1740	GF	494687.82	6925865.17	51.7	0	0
1740	FF	494687.82	6925865.17	51.7	0	0
1741	GF	494700.07	6925869.44	51.2	0	0
1741	FF	494700.07	6925869.44	51.2	0	0
1742	GF	494712.11	6925873.62	50.6	0	0
1742	FF	494712.11	6925873.62	50.6	0	0
1743	GF	494703.9	6925901.56	50.4	0	0
1743	FF	494703.9	6925901.56	50.4	1	0
1744	GF	494690.97	6925897.06	50.7	0	0
1744	FF	494690.97	6925897.06	50.7	1	0
1745	GF	494679.36	6925892.92	51.0	0	0
1745	FF	494679.36	6925892.92	51.0	1	0
1746	GF	494666.15	6925888.25	51.2	0	0
1746	FF	494666.15	6925888.25	51.2	1	0
1747	GF	494650.6	6925883.17	51.5	0	0
1747	FF	494650.6	6925883.17	51.5	1	0
1748	GF	494634.31	6925877.76	51.5	0	0
1748	FF	494634.31	6925877.76	51.5	1	0
1749	GF	494601.63	6925865.65	51.7	0	0
1749	FF	494601.63	6925865.65	51.7	1	0
1750	GF	494587.47	6925861.54	52.2	0	0
1750	FF	494587.47	6925861.54	52.2	1	0
1751	GF	494608.65	6925824.24	53.3	0	0
1751	FF	494608.65	6925824.24	53.3	0	0
1752	GF	494612.3	6925812.37	53.7	0	0
1752	FF	494612.3	6925812.37	53.7	0	0
1753	GF	494615.53	6925803.02	53.9	0	0
1753	FF	494615.53	6925803.02	53.9	0	0

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1754	GF	494620.07	6925791.39	54.1	0	0
1754	FF	494620.07	6925791.39	54.1	0	0
1755	GF	494624.42	6925778.88	54.3	0	0
1755	FF	494624.42	6925778.88	54.3	0	0
1756	GF	494628.11	6925768.25	54.4	0	0
1756	FF	494628.11	6925768.25	54.4	0	0
1757	GF	494631.39	6925758.81	54.4	0	0
1757	FF	494631.39	6925758.81	54.4	0	0
1758	GF	494636.76	6925747.32	54.6	0	0
1758	FF	494636.76	6925747.32	54.6	0	0
1759	GF	494632.56	6925729.79	55.2	0	0
1759	FF	494632.56	6925729.79	55.2	0	0
1760	GF	494623.16	6925716.86	56.2	0	0
1760	FF	494623.16	6925716.86	56.2	0	0
1761	GF	494615.59	6925706.92	56.8	0	0
1761	FF	494615.59	6925706.92	56.8	0	0
1762	GF	494605.74	6925694.01	57.8	0	0
1762	FF	494605.74	6925694.01	57.8	1	0
1763	GF	494586.34	6925679.36	60.3	1	0
1763	FF	494586.34	6925679.36	60.3	1	1
1764	GF	494569.44	6925630.34	60.5	2	1
1764	FF	494569.44	6925630.34	60.5	3	3
1765	GF	494559.38	6925637.71	60.5	2	1
1765	FF	494559.38	6925637.71	60.5	3	3
1766	GF	494551.46	6925643.82	60.6	2	1
1766	FF	494551.46	6925643.82	60.6	3	3
1767	GF	494541.89	6925651.12	60.9	2	1
1767	FF	494541.89	6925651.12	60.9	3	3
1768	GF	494531.36	6925659.15	61.0	2	1
1768	FF	494531.36	6925659.15	61.0	3	3
1769	GF	494520.83	6925667.19	61.2	2	1
1769	FF	494520.83	6925667.19	61.2	3	3
1770	GF	494509.58	6925675.82	61.5	2	1
1770	FF	494509.58	6925675.82	61.5	3	3

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1773	GF	494574.71	6925688.02	60.4	1	0
1773	FF	494574.71	6925688.02	60.4	1	1
1774	GF	494562.66	6925697.16	60.2	1	0
1774	FF	494562.66	6925697.16	60.2	1	1
1775	GF	494582.46	6925711.11	58.2	0	0
1775	FF	494582.46	6925711.11	58.2	1	0
1776	GF	494592.31	6925724.03	57.2	0	0
1776	FF	494592.31	6925724.03	57.2	0	0
1777	GF	494603.04	6925737.45	57.0	0	0
1777	FF	494603.04	6925737.45	57.0	0	0
1778	GF	494600.81	6925758.64	56.5	0	0
1778	FF	494600.81	6925758.64	56.5	0	0
1779	GF	494596.71	6925770.45	56.0	0	0
1779	FF	494596.71	6925770.45	56.0	0	0
1780	GF	494592.36	6925782.96	55.5	0	0
1780	FF	494592.36	6925782.96	55.5	0	0
1783	GF	494581.07	6925815.44	54.2	0	0
1783	FF	494581.07	6925815.44	54.2	0	0
1784	GF	494574.25	6925856.95	52.6	0	0
1784	FF	494574.25	6925856.95	52.6	1	0
1785	GF	494560.91	6925852.02	52.9	0	0
1785	FF	494560.91	6925852.02	52.9	1	0
1786	GF	494529.34	6925841.04	53.2	0	0
1786	FF	494529.34	6925841.04	53.2	1	0
1787	GF	494515.18	6925836.93	53.8	0	0
1787	FF	494515.18	6925836.93	53.8	1	0
1788	GF	494532.78	6925811.31	54.3	0	0
1788	FF	494532.78	6925811.31	54.3	0	0
1789	GF	494537.16	6925800.28	54.8	0	0
1789	FF	494537.16	6925800.28	54.8	0	0
1790	GF	494541.16	6925788.71	55.3	0	0
1790	FF	494541.16	6925788.71	55.3	0	0
1791	GF	494545.6	6925776.59	55.9	0	0
1791	FF	494545.6	6925776.59	55.9	0	0

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1792	GF	494551.84	6925760.34	56.4	0	0
1792	FF	494551.84	6925760.34	56.4	0	0
1793	GF	494546.46	6925742.4	58.0	0	0
1793	FF	494546.46	6925742.4	58.0	1	0
1794	GF	494521.28	6925755.13	58.0	0	0
1794	FF	494521.28	6925755.13	58.0	1	0
1795	GF	494516.61	6925768.42	57.5	0	0
1795	FF	494516.61	6925768.42	57.5	0	0
1796	GF	494513.56	6925778.46	56.6	0	0
1796	FF	494513.56	6925778.46	56.6	0	0
1797	GF	494509.35	6925790.6	56.1	0	0
1797	FF	494509.35	6925790.6	56.1	0	0
1798	GF	494505.13	6925801.65	55.5	0	0
1798	FF	494505.13	6925801.65	55.5	0	0
1799	GF	494501.96	6925832.34	54.1	0	0
1799	FF	494501.96	6925832.34	54.1	1	0
1800	GF	494488.62	6925827.41	54.3	0	0
1800	FF	494488.62	6925827.41	54.3	1	0
1801	GF	494457.41	6925815.87	55.1	1	0
1801	FF	494457.41	6925815.87	55.1	1	1
1802	GF	494443.24	6925810.95	55.6	1	0
1802	FF	494443.24	6925810.95	55.6	1	1
1803	GF	494429.85	6925806.22	56.7	1	0
1803	FF	494429.85	6925806.22	56.7	1	1
1804	GF	494419.46	6925802.61	57.3	1	1
1804	FF	494419.46	6925802.61	57.3	1	1
1805	GF	494409.35	6925799.1	57.8	1	1
1805	FF	494409.35	6925799.1	57.8	1	1
1806	GF	494455.71	6925794.18	55.8	0	0
1806	FF	494455.71	6925794.18	55.8	0	0
1807	GF	494459.4	6925783.64	56.2	0	0
1807	FF	494459.4	6925783.64	56.2	0	0
1808	GF	494464.32	6925768.58	56.5	0	0
1808	FF	494464.32	6925768.58	56.5	1	0

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1809	GF	494423.29	6925716.65	60.0	1	0
1809	FF	494423.29	6925716.65	60.0	3	2
1810	GF	494411.97	6925721.06	60.3	1	0
1810	FF	494411.97	6925721.06	60.3	3	2
1811	GF	494358.04	6925834.43	59.4	1	1
1811	FF	494358.04	6925834.43	59.4	1	1
1812	GF	494354.19	6925825.38	59.8	1	1
1812	FF	494354.19	6925825.38	59.8	1	1
1813	GF	494351.5	6925818.38	60.0	1	1
1813	FF	494351.5	6925818.38	60.0	1	1
1814	GF	494348.82	6925811.38	60.4	1	1
1814	FF	494348.82	6925811.38	60.4	1	1
1815	GF	494346.13	6925804.38	60.9	1	1
1815	FF	494346.13	6925804.38	60.9	1	1
1816	GF	494343.44	6925797.38	61.4	1	1
1816	FF	494343.44	6925797.38	61.4	2	1
1817	GF	494340.67	6925789.46	61.8	1	1
1817	FF	494340.67	6925789.46	61.8	2	1
1818	GF	494317.75	6925810.46	61.6	1	0
1818	FF	494317.75	6925810.46	61.6	1	1
1819	GF	494304.69	6925814.93	62.8	1	0
1819	FF	494304.69	6925814.93	62.8	1	1
1820	GF	494294.39	6925818.56	63.0	1	0
1820	FF	494294.39	6925818.56	63.0	1	1
1821	GF	494284.24	6925822.64	63.1	1	0
1821	FF	494284.24	6925822.64	63.1	1	1
1822	GF	494271.57	6925827.41	63.2	1	0
1822	FF	494271.57	6925827.41	63.2	1	1
1823	GF	494331.63	6925751.8	62.5	3	2
1823	FF	494331.63	6925751.8	62.5	3	3
1824	GF	494317.46	6925757.15	62.5	3	1
1824	FF	494317.46	6925757.15	62.5	3	3
1825	GF	494304.8	6925761.82	62.7	3	1
1825	FF	494304.8	6925761.82	62.7	3	3

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1826	GF	494294.6	6925765.42	62.8	3	1
1826	FF	494294.6	6925765.42	62.8	3	3
1827	GF	494283.91	6925769.83	63.0	3	1
1827	FF	494283.91	6925769.83	63.0	3	3
1828	GF	494272.15	6925774.44	63.1	3	1
1828	FF	494272.15	6925774.44	63.1	3	3
1829	GF	494261.75	6925778.03	63.3	3	1
1829	FF	494261.75	6925778.03	63.3	3	3
1830	GF	494252.23	6925781.68	63.4	3	1
1830	FF	494252.23	6925781.68	63.4	3	3
1831	GF	494242.12	6925785.89	63.5	3	1
1831	FF	494242.12	6925785.89	63.5	3	3
1832	GF	494231.05	6925789.82	63.7	3	1
1832	FF	494231.05	6925789.82	63.7	3	3
1833	GF	494221.53	6925793.47	63.8	3	1
1833	FF	494221.53	6925793.47	63.8	3	3
1834	GF	494210.89	6925797.25	63.9	3	1
1834	FF	494210.89	6925797.25	63.9	3	3
1835	GF	494153.28	6925818.2	64.8	3	1
1835	FF	494153.28	6925818.2	64.8	3	3
1836	GF	494152.32	6925830.85	64.5	2	1
1836	FF	494152.32	6925830.85	64.5	3	3
1837	GF	494151.17	6925843.41	64.5	2	1
1837	FF	494151.17	6925843.41	64.5	3	3
1838	GF	494149.27	6925854.66	64.6	2	1
1838	FF	494149.27	6925854.66	64.6	3	3
1839	GF	494147.84	6925867.47	64.6	2	1
1839	FF	494147.84	6925867.47	64.6	3	3
1840	GF	494144.9	6925879.75	64.6	2	1
1840	FF	494144.9	6925879.75	64.6	3	3
1841	GF	494142.01	6925891.11	64.5	2	1
1841	FF	494142.01	6925891.11	64.5	3	3
1842	GF	494137.74	6925905.32	64.4	2	0
1842	FF	494137.74	6925905.32	64.4	3	3

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1843	GF	494133.99	6925916.98	64.2	2	0
1843	FF	494133.99	6925916.98	64.2	3	3
1844	GF	494129.28	6925928.96	64.1	2	0
1844	FF	494129.28	6925928.96	64.1	3	3
1845	GF	494124.92	6925937.97	64.0	2	0
1845	FF	494124.92	6925937.97	64.0	3	3
1846	GF	494120.15	6925948.97	63.8	2	0
1846	FF	494120.15	6925948.97	63.8	3	3
1847	GF	494115.83	6925959.12	63.7	2	0
1847	FF	494115.83	6925959.12	63.7	3	3
1848	GF	494234.44	6925841.1	63.7	1	0
1848	FF	494234.44	6925841.1	63.7	1	1
1849	GF	494245.78	6925836.94	63.6	1	0
1849	FF	494245.78	6925836.94	63.6	1	1
1850	GF	494258.55	6925832.19	63.4	1	0
1850	FF	494258.55	6925832.19	63.4	1	1
1851	GF	494255.85	6925860.57	61.2	0	0
1851	FF	494255.85	6925860.57	61.2	1	0
1852	GF	494268.47	6925855.84	61.3	0	0
1852	FF	494268.47	6925855.84	61.3	1	0
1853	GF	494281.46	6925851.38	61.3	0	0
1853	FF	494281.46	6925851.38	61.3	1	0
1854	GF	494294.03	6925846.64	61.2	0	0
1854	FF	494294.03	6925846.64	61.2	1	0
1855	GF	494304.38	6925841.94	61.0	0	0
1855	FF	494304.38	6925841.94	61.0	1	0
1856	GF	494314.35	6925838.81	60.4	0	0
1856	FF	494314.35	6925838.81	60.4	1	0
1857	GF	494326.87	6925833.8	59.8	0	0
1857	FF	494326.87	6925833.8	59.8	1	0
1858	GF	494331.42	6925879.42	58.6	0	0
1858	FF	494331.42	6925879.42	58.6	0	0
1859	GF	494335.74	6925890.68	58.1	0	0
1859	FF	494335.74	6925890.68	58.1	0	0

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1860	GF	494339.4	6925900.2	57.5	0	0
1860	FF	494339.4	6925900.2	57.5	0	0
1861	GF	494343.43	6925910.69	56.8	0	0
1861	FF	494343.43	6925910.69	56.8	0	0
1862	GF	494348.17	6925923.06	56.1	0	0
1862	FF	494348.17	6925923.06	56.1	0	0
1863	GF	494352.92	6925935.42	55.4	0	0
1863	FF	494352.92	6925935.42	55.4	0	0
1864	GF	494357.02	6925946.11	54.8	0	0
1864	FF	494357.02	6925946.11	54.8	0	0
1865	GF	494361.05	6925956.61	54.0	0	0
1865	FF	494361.05	6925956.61	54.0	0	0
1866	GF	494365.53	6925968.27	53.3	0	0
1866	FF	494365.53	6925968.27	53.3	0	0
1867	GF	494377.11	6925983.14	51.8	0	0
1867	FF	494377.11	6925983.14	51.8	0	0
1868	GF	494364.38	6925988.52	51.6	0	0
1868	FF	494364.38	6925988.52	51.6	0	0
1869	GF	494351.31	6925993.53	51.2	0	0
1869	FF	494351.31	6925993.53	51.2	0	0
1870	GF	494337.31	6925998.03	50.5	0	0
1870	FF	494337.31	6925998.03	50.5	0	0
1871	GF	494338.68	6925978.53	51.4	0	0
1871	FF	494338.68	6925978.53	51.4	0	0
1872	GF	494334.2	6925966.86	52.2	0	0
1872	FF	494334.2	6925966.86	52.2	0	0
1873	GF	494330.17	6925956.36	53.1	0	0
1873	FF	494330.17	6925956.36	53.1	0	0
1874	GF	494326.07	6925945.68	53.7	0	0
1874	FF	494326.07	6925945.68	53.7	0	0
1875	GF	494320.69	6925933.31	54.6	0	0
1875	FF	494320.69	6925933.31	54.6	0	0
1876	GF	494316.58	6925920.95	56.0	0	0
1876	FF	494316.58	6925920.95	56.0	0	0

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1877	GF	494312.55	6925910.45	56.7	0	0
1877	FF	494312.55	6925910.45	56.7	0	0
1878	GF	494308.9	6925900.93	58.0	0	0
1878	FF	494308.9	6925900.93	58.0	0	0
1879	GF	494304.58	6925889.68	59.4	0	0
1879	FF	494304.58	6925889.68	59.4	0	0
1881	GF	494216.6	6925917.67	61.5	0	0
1881	FF	494216.6	6925917.67	61.5	0	0
1882	GF	494226.31	6925924.11	60.7	0	0
1882	FF	494226.31	6925924.11	60.7	1	0
1883	GF	494234.72	6925929.69	59.8	0	0
1883	FF	494234.72	6925929.69	59.8	0	0
1884	GF	494243.86	6925935.88	58.6	0	0
1884	FF	494243.86	6925935.88	58.6	0	0
1885	GF	494254.7	6925943.65	57.2	0	0
1885	FF	494254.7	6925943.65	57.2	0	0
1886	GF	494266.13	6925951.01	55.8	0	0
1886	FF	494266.13	6925951.01	55.8	0	0
1887	GF	494274.7	6925957.73	55.0	0	0
1887	FF	494274.7	6925957.73	55.0	0	0
1888	GF	494288.02	6925971.19	53.2	0	0
1888	FF	494288.02	6925971.19	53.2	0	0
1889	GF	494291.9	6925984.42	52.1	0	0
1889	FF	494291.9	6925984.42	52.1	0	0
1890	GF	494296.42	6925996.19	51.1	0	0
1890	FF	494296.42	6925996.19	51.1	0	0
1891	GF	494304.97	6926010.49	50.2	0	0
1891	FF	494304.97	6926010.49	50.2	0	0
1892	GF	494290.91	6926016.22	50.2	0	0
1892	FF	494290.91	6926016.22	50.2	0	0
1893	GF	494275.98	6926021.08	50.2	0	0
1893	FF	494275.98	6926021.08	50.2	0	0
1894	GF	494273.61	6926003.66	51.2	0	0
1894	FF	494273.61	6926003.66	51.2	0	0

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1895	GF	494268.72	6925992	51.8	0	0
1895	FF	494268.72	6925992	51.8	0	0
1896	GF	494260.24	6925978.53	52.7	0	0
1896	FF	494260.24	6925978.53	52.7	0	0
1897	GF	494250.12	6925973.08	53.4	0	0
1897	FF	494250.12	6925973.08	53.4	0	0
1898	GF	494239.56	6925965.59	54.7	0	0
1898	FF	494239.56	6925965.59	54.7	0	0
1899	GF	494228.42	6925957.79	56.5	0	0
1899	FF	494228.42	6925957.79	56.5	0	0
1900	GF	494219.42	6925950.94	58.1	0	0
1900	FF	494219.42	6925950.94	58.1	0	0
1901	GF	494210.95	6925945.72	59.4	0	0
1901	FF	494210.95	6925945.72	59.4	0	0
1903	GF	494192.18	6925992.28	57.4	0	0
1903	FF	494192.18	6925992.28	57.4	0	0
1904	GF	494201.64	6926000.27	56.1	0	0
1904	FF	494201.64	6926000.27	56.1	0	0
1905	GF	494219.89	6926011.59	53.3	0	0
1905	FF	494219.89	6926011.59	53.3	0	0
1906	GF	494231.14	6926019.79	51.6	0	0
1906	FF	494231.14	6926019.79	51.6	0	0
1907	GF	494240.67	6926038.35	50.6	0	0
1907	FF	494240.67	6926038.35	50.6	0	0
1908	GF	494227.8	6926060.34	51.0	0	0
1908	FF	494227.8	6926060.34	51.0	0	0
1909	GF	494214.19	6926041.91	53.4	0	0
1909	FF	494214.19	6926041.91	53.4	0	0
1910	GF	494202.96	6926034.24	55.0	0	0
1910	FF	494202.96	6926034.24	55.0	0	0
1911	GF	494194.15	6926028.36	56.5	0	0
1911	FF	494194.15	6926028.36	56.5	0	0
1912	GF	494185.7	6926022.64	57.7	0	0
1912	FF	494185.7	6926022.64	57.7	0	0

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1913	GF	494176.01	6926016.36	59.0	0	0
1913	FF	494176.01	6926016.36	59.0	0	0
1914	GF	494111.71	6925970.13	63.6	2	0
1914	FF	494111.71	6925970.13	63.6	3	3
1915	GF	494107.39	6925980.27	63.5	2	0
1915	FF	494107.39	6925980.27	63.5	3	3
1916	GF	494092.8	6926011.31	63.1	2	1
1916	FF	494092.8	6926011.31	63.1	3	3
1917	GF	494086.49	6926023.75	62.9	2	1
1917	FF	494086.49	6926023.75	62.9	3	3
1918	GF	494078.98	6926036	62.7	2	1
1918	FF	494078.98	6926036	62.7	3	3
1919	GF	494071.94	6926046.88	62.6	2	1
1919	FF	494071.94	6926046.88	62.6	3	3
1920	GF	494064.12	6926057.69	62.4	2	1
1920	FF	494064.12	6926057.69	62.4	3	3
1921	GF	494057.22	6926069.19	62.3	2	1
1921	FF	494057.22	6926069.19	62.3	3	3
1922	GF	494048.7	6926080.76	62.1	2	1
1922	FF	494048.7	6926080.76	62.1	3	3
1923	GF	494040.86	6926088.49	62.0	2	1
1923	FF	494040.86	6926088.49	62.0	3	3
1924	GF	494033.65	6926097.5	61.6	2	1
1924	FF	494033.65	6926097.5	61.6	3	3
1925	GF	494026.13	6926106.9	61.3	2	0
1925	FF	494026.13	6926106.9	61.3	3	3
1926	GF	494019	6926114.89	61.3	2	0
1926	FF	494019	6926114.89	61.3	3	3
1927	GF	494011.47	6926123.73	60.7	2	0
1927	FF	494011.47	6926123.73	60.7	3	2
1928	GF	493998.84	6926138.25	60.6	0	0
1928	FF	493998.84	6926138.25	60.6	3	2
1929	GF	494155.17	6926059.4	58.1	0	0
1929	FF	494155.17	6926059.4	58.1	0	0

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1930	GF	494165.81	6926067.27	56.5	0	0
1930	FF	494165.81	6926067.27	56.5	0	0
1931	GF	494176.57	6926074.71	54.9	0	0
1931	FF	494176.57	6926074.71	54.9	0	0
1933	GF	494186.9	6926082.16	53.4	0	0
1933	FF	494186.9	6926082.16	53.4	0	0
1934	GF	494195.84	6926090.89	52.2	0	0
1934	FF	494195.84	6926090.89	52.2	0	0
1935	GF	494214.99	6926092.74	50.9	0	0
1935	FF	494214.99	6926092.74	50.9	0	0
1936	GF	494209.67	6926106.78	51.2	0	0
1936	FF	494209.67	6926106.78	51.2	0	0
1937	GF	494197.97	6926132.37	51.7	0	0
1937	FF	494197.97	6926132.37	51.7	0	0
1938	GF	494183.64	6926114.4	53.2	0	0
1938	FF	494183.64	6926114.4	53.2	0	0
1939	GF	494170.31	6926105.28	54.8	0	0
1939	FF	494170.31	6926105.28	54.8	0	0
1940	GF	494160.11	6926097.98	56.4	0	0
1940	FF	494160.11	6926097.98	56.4	0	0
1941	GF	494149.42	6926090.47	57.5	0	0
1941	FF	494149.42	6926090.47	57.5	0	0
1942	GF	494138.32	6926082.97	58.8	0	0
1942	FF	494138.32	6926082.97	58.8	1	0
1943	GF	494127.41	6926075.13	60.0	0	0
1943	FF	494127.41	6926075.13	60.0	1	0
1944	GF	494121.55	6926131.03	57.7	0	0
1944	FF	494121.55	6926131.03	57.7	0	0
1945	GF	494129.95	6926136.81	56.7	0	0
1945	FF	494129.95	6926136.81	56.7	0	0
1946	GF	494139.04	6926142.22	55.8	0	0
1946	FF	494139.04	6926142.22	55.8	0	0
1947	GF	494147.63	6926148.2	54.5	0	0
1947	FF	494147.63	6926148.2	54.5	0	0

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1948	GF	494157.38	6926154.76	53.5	0	0
1948	FF	494157.38	6926154.76	53.5	0	0
1949	GF	494165.78	6926160.53	52.6	0	0
1949	FF	494165.78	6926160.53	52.6	0	0
1950	GF	494185.37	6926164.01	51.9	0	0
1950	FF	494185.37	6926164.01	51.9	0	0
1951	GF	494176.1	6926179.68	52.4	0	0
1951	FF	494176.1	6926179.68	52.4	0	0
1952	GF	494159.58	6926189.68	53.0	0	0
1952	FF	494159.58	6926189.68	53.0	0	0
1953	GF	494144.19	6926192.14	53.3	0	0
1953	FF	494144.19	6926192.14	53.3	0	0
1954	GF	494129.35	6926193.86	53.8	0	0
1954	FF	494129.35	6926193.86	53.8	0	0
1955	GF	494114.33	6926160.73	55.9	0	0
1955	FF	494114.33	6926160.73	55.9	0	0
1956	GF	494105.93	6926154.96	56.5	0	0
1956	FF	494105.93	6926154.96	56.5	0	0
1957	GF	494096.37	6926148.39	57.5	0	0
1957	FF	494096.37	6926148.39	57.5	0	0
1958	GF	494087.23	6926142.1	58.3	0	0
1958	FF	494087.23	6926142.1	58.3	1	0
1959	GF	494078.82	6926136.33	59.0	0	0
1959	FF	494078.82	6926136.33	59.0	1	0
1960	GF	494066.64	6926128.03	59.8	1	0
1960	FF	494066.64	6926128.03	59.8	1	0
1961	GF	494061.84	6926199.94	56.2	0	0
1961	FF	494061.84	6926199.94	56.2	0	0
1962	GF	494051.74	6926201.37	56.8	0	0
1962	FF	494051.74	6926201.37	56.8	0	0
1963	GF	494040.51	6926202.96	57.5	0	0
1963	FF	494040.51	6926202.96	57.5	1	0
1964	GF	494029.28	6926204.55	58.1	0	0
1964	FF	494029.28	6926204.55	58.1	1	0

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1965	GF	494018.04	6926206.14	58.5	0	0
1965	FF	494018.04	6926206.14	58.5	1	0
1966	GF	494004.19	6926207.71	59.5	0	0
1966	FF	494004.19	6926207.71	59.5	1	1
1967	GF	494036.37	6926176.63	60.0	1	0
1967	FF	494036.37	6926176.63	60.0	1	0
1968	GF	494025.13	6926178.22	60.3	1	0
1968	FF	494025.13	6926178.22	60.3	1	1
1969	GF	494013.9	6926179.81	60.5	1	0
1969	FF	494013.9	6926179.81	60.5	1	1
1970	GF	494000.44	6926181.77	60.6	1	0
1970	FF	494000.44	6926181.77	60.6	1	1
1971	GF	493962.94	6926180.76	61.0	1	1
1971	FF	493962.94	6926180.76	61.0	2	2
1972	GF	493962.18	6926198.47	60.8	1	1
1972	FF	493962.18	6926198.47	60.8	2	2
1973	GF	493963.93	6926210.84	60.3	1	1
1973	FF	493963.93	6926210.84	60.3	2	2
1974	GF	493965.72	6926224.94	59.9	1	1
1974	FF	493965.72	6926224.94	59.9	1	1
1975	GF	493941.78	6926216.93	60.1	1	1
1975	FF	493941.78	6926216.93	60.1	2	2
1976	GF	493921.62	6926232.83	60.2	2	2
1976	FF	493921.62	6926232.83	60.2	2	2
1977	GF	495032.19	6925965.39	52.9	0	0
1977	FF	495032.19	6925965.39	52.9	0	0
1978	GF	495032.96	6925952.17	53.1	0	0
1978	FF	495032.96	6925952.17	53.1	1	0
1978	GF	494437.32	6925759.89	58.6	1	0
1978	FF	494437.32	6925759.89	58.6	1	0
1979	GF	494431.45	6925774.44	58.6	1	0
1979	FF	494431.45	6925774.44	58.6	1	0
1979	GF	495033.91	6925933.73	53.3	0	0
1979	FF	495033.91	6925933.73	53.3	1	0

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1980	GF	494427.6	6925785.16	58.7	1	0
1980	FF	494427.6	6925785.16	58.7	1	0
1980	GF	495083.32	6925959.25	52.4	0	0
1980	FF	495083.32	6925959.25	52.4	1	0
1981	GF	495094.56	6925972.52	51.9	0	0
1981	FF	495094.56	6925972.52	51.9	1	0
1981	GF	494369.06	6925737.59	61.3	2	1
1981	FF	494369.06	6925737.59	61.3	3	3
1982	GF	495102.52	6925985.75	51.5	0	0
1982	FF	495102.52	6925985.75	51.5	1	0
1982	GF	494380.97	6925732.82	60.9	2	1
1982	FF	494380.97	6925732.82	60.9	3	2
1983	GF	494392.07	6925728.77	60.9	2	0
1983	FF	494392.07	6925728.77	60.9	3	2
1983	GF	495108.02	6926000.89	50.9	0	0
1983	FF	495108.02	6926000.89	50.9	1	0
1984	GF	494401.59	6925725.23	60.7	2	0
1984	FF	494401.59	6925725.23	60.7	3	2
1984	GF	495111.24	6926017.36	50.3	0	0
1984	FF	495111.24	6926017.36	50.3	1	0
1985	GF	494102.93	6925989.37	63.4	2	1
1985	FF	494102.93	6925989.37	63.4	3	3
1985	GF	495097.06	6926040.43	49.1	0	0
1985	FF	495097.06	6926040.43	49.1	0	0
1986	GF	494204.02	6926119.88	51.6	0	0
1986	FF	494204.02	6926119.88	51.6	0	0
1986	GF	495083.09	6926039.62	49.2	0	0
1986	FF	495083.09	6926039.62	49.2	0	0
1987	GF	494209.98	6926006.2	54.8	0	0
1987	FF	494209.98	6926006.2	54.8	0	0
1987	GF	495068.3	6926038.75	48.9	0	0
1987	FF	495068.3	6926038.75	48.9	0	0
1988	GF	495071.6	6926013.77	50.4	0	0
1988	FF	495071.6	6926013.77	50.4	0	0

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
1989	GF	495072.57	6925995.73	51.8	0	0
1989	FF	495072.57	6925995.73	51.8	0	0
2522	GF	494725.18	6925877.85	50.0	0	0
2522	FF	494725.18	6925877.85	50.0	0	0
2523	GF	494736.59	6925881.64	49.4	0	0
2523	FF	494736.59	6925881.64	49.4	0	0
2524	GF	494699.18	6925797.61	51.9	0	0
2524	FF	494699.18	6925797.61	51.9	0	0
2525	GF	494744.7	6925812.43	51.5	0	0
2525	FF	494744.7	6925812.43	51.5	1	0
2526	GF	494771.74	6925822.41	49.6	1	1
2526	FF	494771.74	6925822.41	49.6	1	1
2527	GF	494744.46	6925544.48	58.5	3	2
2527	FF	494744.46	6925544.48	58.5	3	3
2528	GF	494707.53	6925574.32	58.4	1	1
2528	FF	494707.53	6925574.32	58.4	2	1
2529	GF	494685	6925592.36	58.4	1	0
2529	FF	494685	6925592.36	58.4	1	1
2530	GF	494651.45	6925617.71	58.9	1	0
2530	FF	494651.45	6925617.71	58.9	1	1
2531	GF	494659.71	6925627.76	57.9	0	0
2531	FF	494659.71	6925627.76	57.9	1	1
2532	GF	494624.43	6925637.39	59.5	1	0
2532	FF	494624.43	6925637.39	59.5	1	1
2533	GF	494632.54	6925648.23	58.8	0	0
2533	FF	494632.54	6925648.23	58.8	1	1
2534	GF	494597.48	6925671.26	59.2	1	0
2534	FF	494597.48	6925671.26	59.2	1	1
2535	GF	494671.4	6925789.06	53.9	0	0
2535	FF	494671.4	6925789.06	53.9	0	0
2536	GF	494657.45	6925807.82	53.0	0	0
2536	FF	494657.45	6925807.82	53.0	0	0
2537	GF	494715.95	6925905.85	50.2	0	0
2537	FF	494715.95	6925905.85	50.2	1	0

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
2538	GF	494727.6	6925910.81	49.7	0	0
2538	FF	494727.6	6925910.81	49.7	1	1
2539	GF	494575.5	6925831.49	53.4	0	0
2539	FF	494575.5	6925831.49	53.4	0	0
2540	GF	494529.44	6925820.94	53.8	0	0
2540	FF	494529.44	6925820.94	53.8	0	0
2541	GF	494584.85	6925804.08	54.7	0	0
2541	FF	494584.85	6925804.08	54.7	0	0
2542	GF	494501.79	6925811.28	55.1	0	0
2542	FF	494501.79	6925811.28	55.1	0	0
2543	GF	494881.49	6925948.86	49.6	0	0
2543	FF	494881.49	6925948.86	49.6	0	0
2544	GF	494882.26	6925935.64	49.5	0	0
2544	FF	494882.26	6925935.64	49.5	0	0
2545	GF	494884.74	6925885.28	49.5	0	0
2545	FF	494884.74	6925885.28	49.5	0	0
2546	GF	494932.32	6925862.67	50.0	0	0
2546	FF	494932.32	6925862.67	50.0	1	0
2547	GF	494953.32	6925884.63	51.4	0	0
2547	FF	494953.32	6925884.63	51.4	1	0
2548	GF	494962.26	6925864.41	51.7	0	0
2548	FF	494962.26	6925864.41	51.7	1	1
2549	GF	495006.06	6925889.33	52.7	1	0
2549	FF	495006.06	6925889.33	52.7	1	1
2550	GF	495020.9	6925889.7	53.2	1	0
2550	FF	495020.9	6925889.7	53.2	1	1
2551	GF	495040.53	6925892.45	53.3	1	0
2551	FF	495040.53	6925892.45	53.3	1	1
2552	GF	495057.85	6925896.65	53.1	1	0
2552	FF	495057.85	6925896.65	53.1	1	1
2553	GF	495112.03	6926041.13	49.0	0	0
2553	FF	495112.03	6926041.13	49.0	1	0
2554	GF	494200.34	6925801.6	64.1	3	1
2554	FF	494200.34	6925801.6	64.1	3	3

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
2555	GF	494188.41	6925805.78	64.2	3	1
2555	FF	494188.41	6925805.78	64.2	3	3
2556	GF	494222.54	6925845.78	63.9	1	0
2556	FF	494222.54	6925845.78	63.9	2	1
2557	GF	494203.08	6925853.27	63.6	1	0
2557	FF	494203.08	6925853.27	63.6	2	1
2558	GF	494244.31	6925865.12	61.1	0	0
2558	FF	494244.31	6925865.12	61.1	1	0
2559	GF	494228.84	6925872.63	61.4	0	0
2559	FF	494228.84	6925872.63	61.4	1	0
2560	GF	494183.56	6925895.88	63.6	1	0
2560	FF	494183.56	6925895.88	63.6	1	1
2561	GF	494197.28	6925905.33	63.0	1	0
2561	FF	494197.28	6925905.33	63.0	1	0
2562	GF	494207.02	6925910.65	62.4	1	0
2562	FF	494207.02	6925910.65	62.4	1	0
2563	GF	494179.21	6925925.13	63.2	1	0
2563	FF	494179.21	6925925.13	63.2	1	0
2564	GF	494190.68	6925933	62.1	1	0
2564	FF	494190.68	6925933	62.1	1	0
2565	GF	494200.84	6925940.03	60.4	0	0
2565	FF	494200.84	6925940.03	60.4	1	0
2566	GF	494159.27	6925969.38	62.0	1	0
2566	FF	494159.27	6925969.38	62.0	1	0
2567	GF	494172.3	6925978.05	60.5	0	0
2567	FF	494172.3	6925978.05	60.5	1	0
2568	GF	494182.28	6925985.19	59.0	0	0
2568	FF	494182.28	6925985.19	59.0	1	0
2569	GF	494233.65	6926050.36	50.8	0	0
2569	FF	494233.65	6926050.36	50.8	0	0
2570	GF	494166.75	6926009.79	60.4	0	0
2570	FF	494166.75	6926009.79	60.4	1	0
2571	GF	494158.73	6926004.33	61.5	1	0
2571	FF	494158.73	6926004.33	61.5	1	0

Lot	Floor	Coordinates and ground elevation at centre of lot, m			QDC MP4.4 Road Traffic Noise Category (Worst-case on lot)	
		Easting	Northing	Ground elevation, m	No Mitigation	Noise Barrier
2572	GF	494147.42	6925997.58	62.3	1	0
2572	FF	494147.42	6925997.58	62.3	1	0
2573	GF	494129.3	6926042.01	61.3	1	0
2573	FF	494129.3	6926042.01	61.3	1	0
2574	GF	494144.41	6926051.86	59.7	0	0
2574	FF	494144.41	6926051.86	59.7	1	0
2575	GF	494113.83	6926066.11	61.2	1	0
2575	FF	494113.83	6926066.11	61.2	1	0
2576	GF	494084.71	6926104.44	61.4	1	0
2576	FF	494084.71	6926104.44	61.4	1	0
2577	GF	494095.03	6926112.96	60.7	1	0
2577	FF	494095.03	6926112.96	60.7	1	0
2578	GF	494103.43	6926118.73	59.8	0	0
2578	FF	494103.43	6926118.73	59.8	1	0
2579	GF	494112.02	6926124.66	58.6	0	0
2579	FF	494112.02	6926124.66	58.6	1	0
2580	GF	494130.55	6926169.77	54.9	0	0
2580	FF	494130.55	6926169.77	54.9	0	0
2581	GF	494057.61	6926175.13	58.5	0	0
2581	FF	494057.61	6926175.13	58.5	1	0
2582	GF	494073.07	6926198.35	55.6	0	0
2582	FF	494073.07	6926198.35	55.6	0	0
2583	GF	494090.18	6926198.64	55.5	0	0
2583	FF	494090.18	6926198.64	55.5	0	0
2584	GF	494603.07	6925840.3	52.4	0	0
2584	FF	494603.07	6925840.3	52.4	0	0
2585	GF	494588.19	6925794.44	55.1	0	0
2585	FF	494588.19	6925794.44	55.1	0	0

Appendix D Reference Noise Barrier Designs

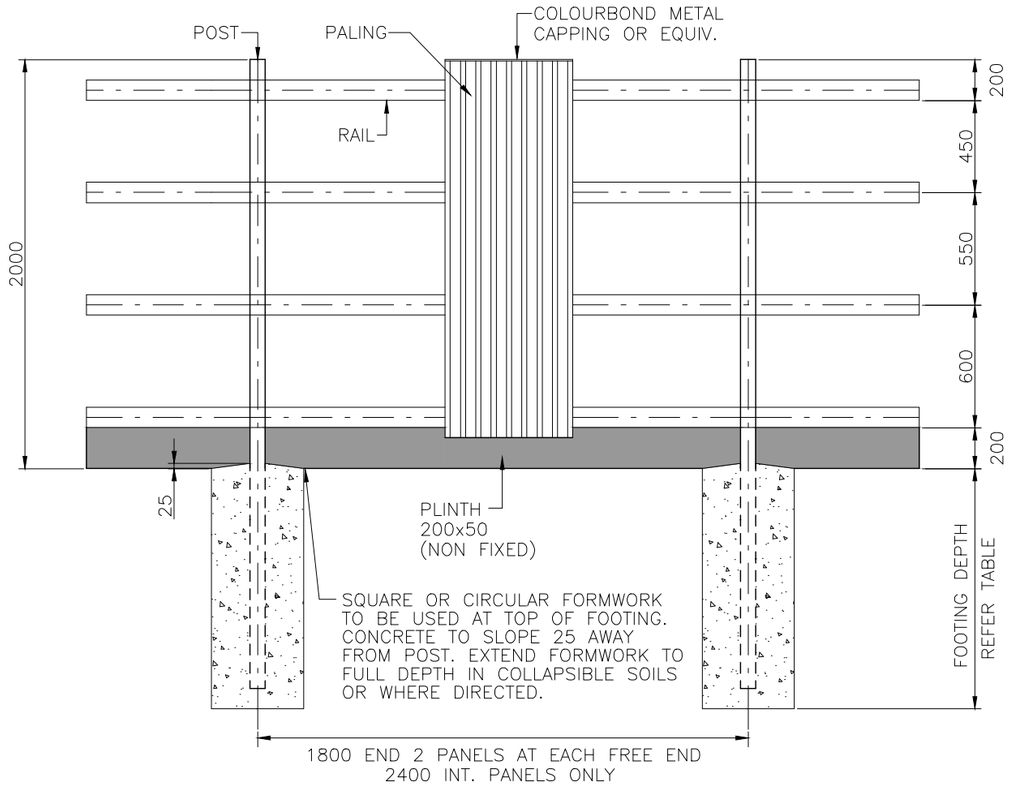
Flagstone Development, Stage 4

Road Traffic Noise Intrusion Assessment

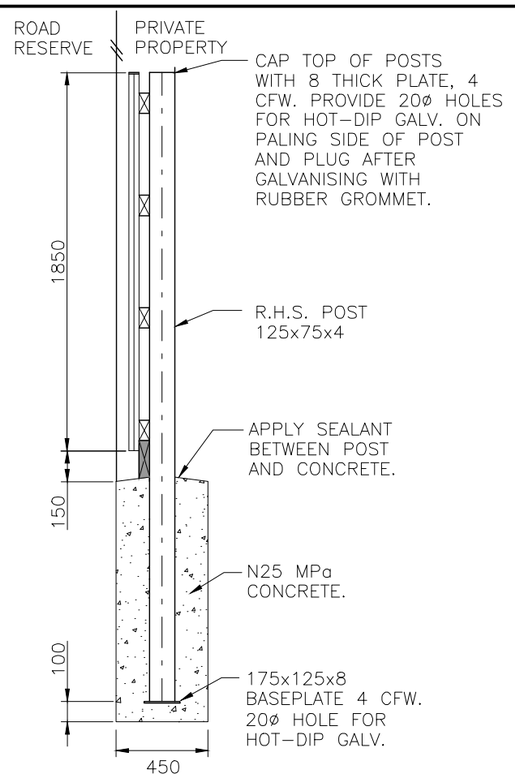
Peet Flagstone City Pty Ltd

SLR Project No.: 620.v10512.02006

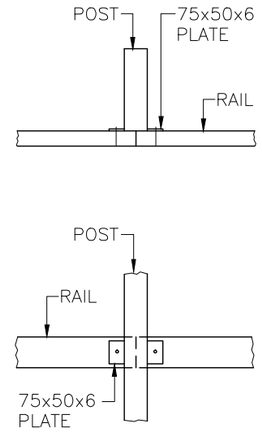
16 September 2024



ELEVATION



SECTION

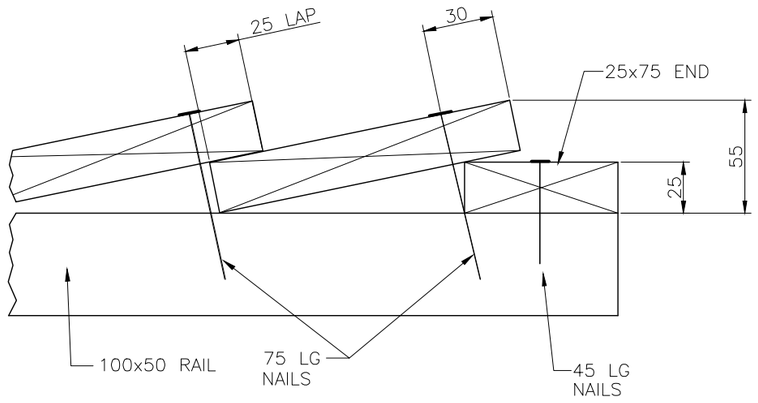


POST & RAIL CONNECTION

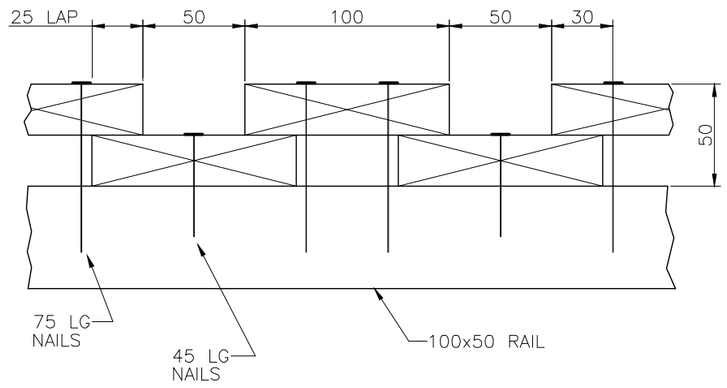
FOOTING DEPTH	
SOIL TYPE	FOOTING DEPTH
SOFT CLAY (Cu = 25 kPa)	1600
FIRM CLAY (Cu = 50 kPa)	1300
STIFF CLAY (Cu = 100 kPa)	1100
MEDIUM DENSE NON-COHESIVE SOIL	1200

NOTES:

1. THIS DRAWING DEPICTS A TYPICAL 2000 HIGH ACOUSTIC BARRIER AND DOES NOT NECESSARILY REPRESENT A NOISE ATTENUATION SOLUTION FOR ALL DEVELOPMENTS. NOISE ATTENUATION SOLUTION FOR EACH DEVELOPMENT IS SITE SPECIFIC AND SHALL BE ADDRESSED IN ACCORDANCE WITH THE "NOISE IMPACT ASSESSMENT PLANNING SCHEME POLICY" OF THE BRISBANE CITY PLAN.
2. MAXIMUM PERMISSIBLE STRESS DESIGN WIND VELOCITY IS 33m/s (W33) WHICH CORRESPONDS TO A SUBURBAN ENVIRONMENT WITH NO EXPOSURE TO OPEN AREAS AND NOT LOCATED IN CLOSE PROXIMITY TO HILLS, RIDGES OR ESCARPMENTS, AS THE NATURAL SURFACE 2m EITHER SIDE OF THE FENCE IS ASSUMED FLAT FOR DESIGN OF FOOTING. IF THESE CONDITIONS ARE NOT MET AN ALTERNATIVE CERTIFIED ENGINEERING DESIGN MUST BE SUBMITTED FOR APPROVAL.
3. FOR NEW SUBDIVISIONS/DEVELOPMENTS, THE ENTIRE FENCE SHALL BE CONTAINED WITHIN THE PRIVATE PROPERTY AND MAINTAINED BY THE PROPERTY OWNER.
4. ALL PALINGS, RAILS AND PLINTH SHALL BE C.C.A TREATED PINE TO H5 LEVEL IN ACCORDANCE WITH AS 1604.
5. ALL FIXINGS SHALL BE HOT-DIP GALVANISED OR EQUIVALENT.
6. CAPPING: COLOURBOND METAL, 30 DEEP WITH OVERFOLDED EDGES FIX WITH No.10 x 12 LONG GALV. TYPE 17 SCREWS AT 300 CRS AND STAGGERED EACH SIDE. CAPPING TO FIT SNUGLY OVER PALINGS.
7. PALINGS: F5 TREATED PINE. REFER PALING DETAILS FOR SIZES. NAILS SHALL BE 2.8ø HOT-DIP GALVANISED FLAT HEAD CLOUTS (OR SIMILAR GUN-DRIVEN NAILS). STAGGER NAIL PATTERN ALONG LENGTH OF PALING TO AVOID SPLITTING AND DRIVE NAILS SQUARE TO FACE OF BOARD. RING SHANK NAILS TO BE USED.
8. RAILS: 100 x 50 F5 TREATED PINE. FIX WITH No.14-10 x 50 GALVANISED HEX HD TYPE 17 SCREW.
9. POSTS: 125 x 75 x 4 R.H.S. HOT-DIP GALVANISED AFTER FABRICATION.
10. PLINTH: 200 x 50 F5 TREATED PINE (NON FIXED).
11. DIMENSIONS IN MILLIMETRES (UNO).



SYSTEM 1 (150x25)



SYSTEM 2 (100x25)

TREATED PINE PALING

ISSUE	AMENDMENT	DRAWN DATE	CHK'D DATE	APPR'D DATE
B	Drawing Title Amended	FEB'16	JUL '16	JUL '16
A	Drawing Converted from UMS Series April 2014	APR '14	APR '14	APR '14

DRAWING AUTHORISED FOR PUBLICATION
B.BALL SIGNATURE ON ORIGINAL
DATED 29/06/01 R.P.E.Q 3852
ASSET ENGINEERING MANAGER
STRATEGIC ASSET MANAGEMENT

DESIGN APPROVED
B.HANSEN SIGNATURE ON ORIGINAL
DATED 27/06/01
PRINCIPAL ASSET OFFICER
ROADS & DRAINAGE

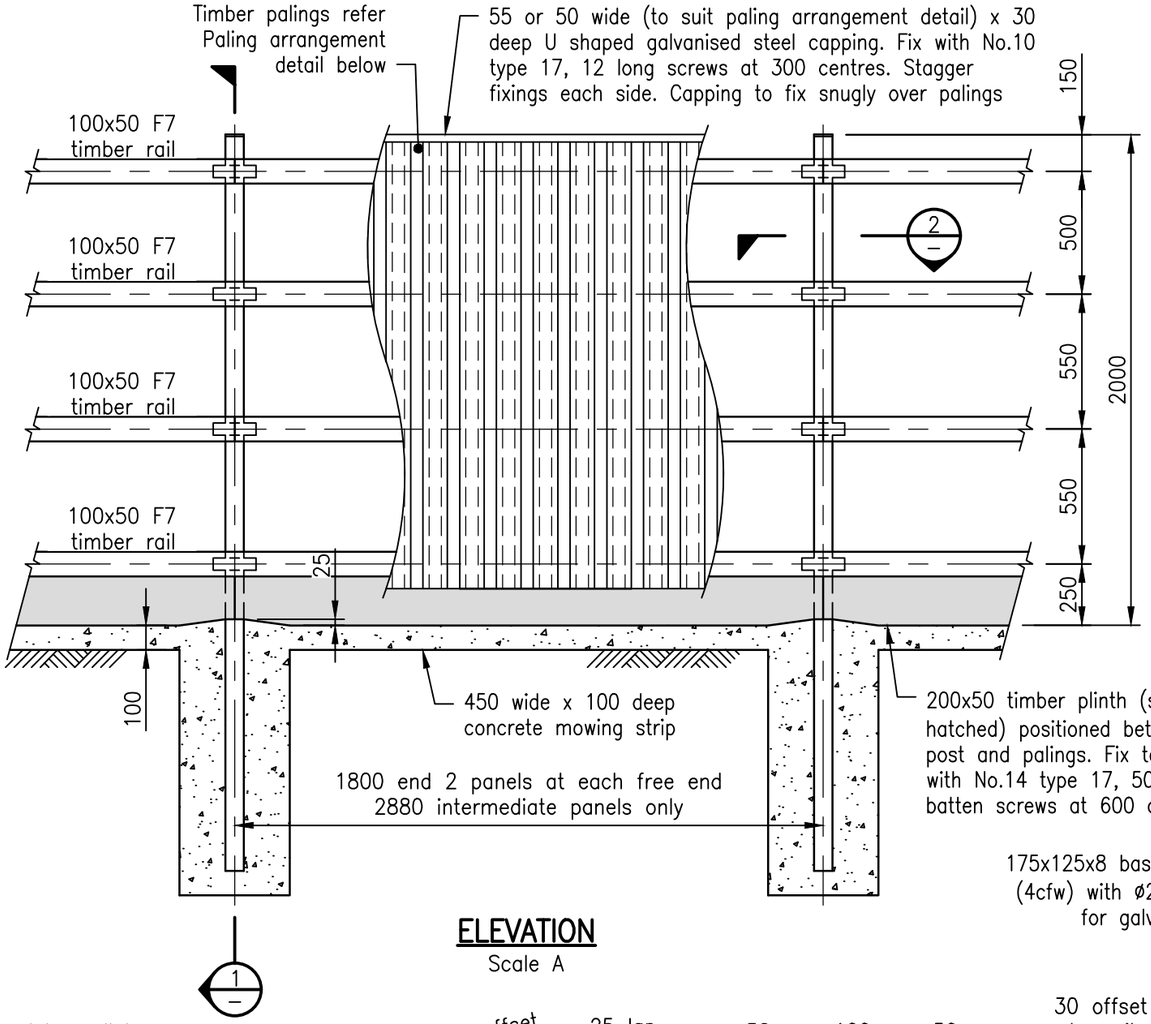
DESIGN	Std Dwgs Group	DATE	APRIL '01
DRAWN	CITY DESIGN	DATE	APRIL '01
CHECKED	M. STEER	DATE	MAY '01
DRAWING FILENAME	BSD-7021 (B) Noise barrier fence 2.0m high - Post and paling.dwg		
ASSOCIATED PLANS	SUPERSEDES UMS-245		

BRISBANE CITY

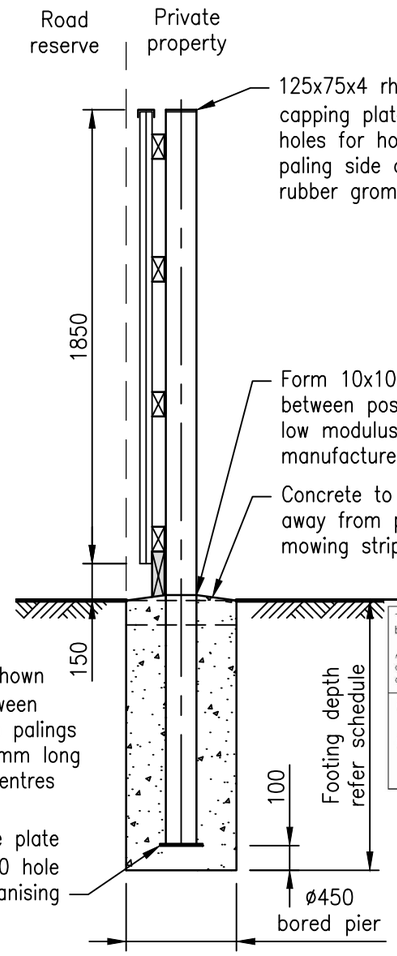
BRISBANE CITY COUNCIL STANDARD DRAWING

NOISE BARRIER FENCE 2.0m HIGH POST AND PALING

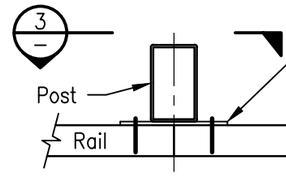
SCALE: NOT TO SCALE
DWG No.: BSD-7021
ORIGINAL SIZE: A3
REVISION: B



ELEVATION
Scale A

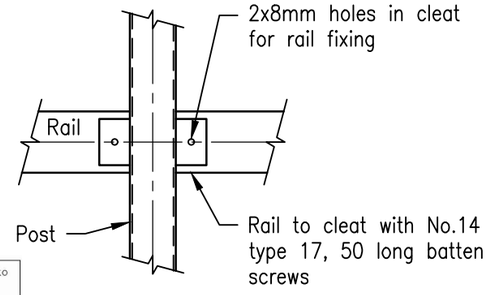


SECTION
Scale A



SECTION
Scale B

THIS DRAWING IS FOR COUNCIL CONSTRUCTION WORKS WITHIN THE ROAD RESERVE ONLY



SECTION
Scale B

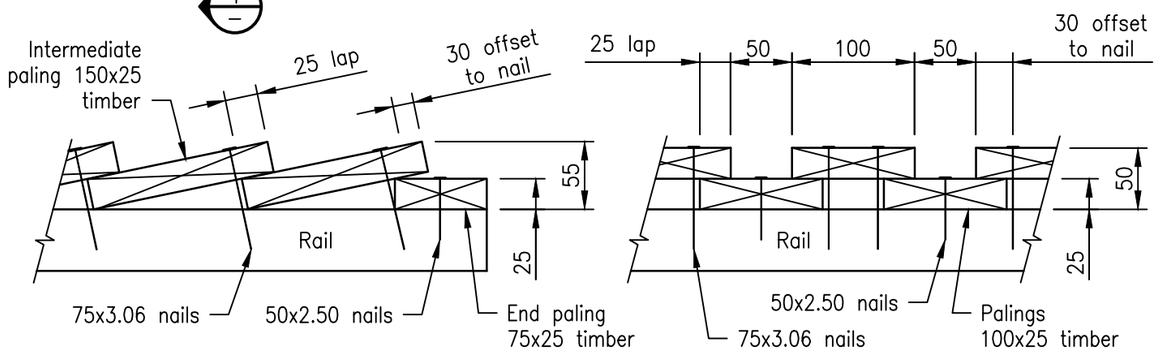
The structural work shown on this drawing is considered to be structurally sound, and suitable for the design loads.

All construction to be as per current Australian Standards and Building Codes, in accordance with MBRC requirements, and in a professional and tradesmanlike manner

IAN BARNES & ASSOCIATES P/Ltd
CONSULTING ENGINEERS
P.O. Box 1378
CABOOLTURE 4510
ABN 70 057802490
Office : 07 5495 8444
Mobile : 0418 873 320
RPEQ 3333 Date : 13/09/2017

NOTES:

1. This drawing depicts a typical 2000 high acoustic barrier and does not necessarily represent a noise attenuation solution for all developments. Noise attenuation solution for each development is site specific and shall be addressed by a qualified acoustic engineer.
2. Maximum permissible stress design wind velocity is 33m/s (w33) which corresponds to a suburban environment with no exposure to open areas and not located in close proximity to hills, ridges or escarpments, as the natural surface 2m either side of the fence Is assumed flat for design of footing. If these conditions are not met an alternative certified engineering design must be submitted for approval.
3. For new subdivisions/developments, the entire fence shall be contained within the private property and maintained by the property owner.
4. All palings, rails and plinths shall be ACQ or CCA treated pine to H5 level in accordance with AS 1604. Rails min. F7 Stress Grade.
5. All fixings (apart from nails) shall be 'Zenith-Tufcote' or 'Buildex-Climacoat' or approved equivalent (unless noted otherwise).
6. All nails shall be ring shank type and hot dipped galvanised.
7. Stagger nail pattern along length of paling to avoid splitting and drive nails square to face of board.
8. Posts shall be hot-dip galvanised after fabrication.
9. Noise barrier fence shall be screened with vegetation.
10. Dimensions are in millimetres unless stated otherwise.



TYPE 1 TYPE 2

PALING ARRANGEMENT DETAILS
Scale C

FOOTING DEPTH SCHEDULE

SOIL TYPE	FOOTING DEPTH
Soft clay (Cu = 25kPa)	1600
Firm clay (Cu = 50kPa)	1300
Stiff clay (Cu = 100kPa)	1100
Medium dense non-cohesive soil medium	1200

	REVISIONS	INIT	DATE
E			
D			
C	Approved by Structural Engineer	TC	7/17
B	Structural Design Note Changed	RH	12/16
A	Add note - For council construction works only, change landscape note	BW	08/16
X	ORIGINAL ISSUE	BW	07/16

SCALES
A 0mm 100 200 300 400 500 1:25
B 0mm 50 100 150 200 1:10
C 0mm 25 50 75 100 1:5

Drawn	BW	Date	07/16
Coordinator	PP	Date	07/16

AUTHORISED
SYD JERRAM
07/07/16
Manager Integrated Transport Planning & Design
RPEQ 6872

NOISE BARRIER FENCE
2.0m HIGH POST AND PALING

Moreton Bay Regional Council

DRG No. SF-1520

ORIGINAL SIZE A3

REVISION C

File name: I:\User_Group\Design_Services\Projects\MBRC Standard Drawings\AutoCAD Files\04 - Street Furniture Including Fences\SF-1520C - Noise Barrier Fence 2.0m high - Post and Paling.dwg Date: Sep 28, 2017 - 12:02pm

Appendix E Glossary of Terms

Flagstone Development, Stage 4

Road Traffic Noise Intrusion Assessment

Peet Flagstone City Pty Ltd

SLR Project No.: 620.v10512.02006

16 September 2024

Sound Level (or Noise Level)

The terms sound and noise are almost interchangeable, except that in common usage noise is often used to refer to unwanted sound.

Sound (or noise) consists of minute fluctuations in atmospheric pressure capable of evoking the sense of hearing. The human ear (and those of other species) responds to changes in sound pressure over a very wide range. The loudest sound pressure to which the human ear responds is ten million times greater than the softest. The decibel (dB or dBL) scale reduces this ratio to a more manageable size by the use of logarithms.

A-weighted Sound Pressure Level

The overall level of a sound is usually expressed in terms of dBA, which is measured using a sound level meter with an 'A-weighting' filter. This is an electronic filter having a frequency response corresponding approximately to human hearing.

Change in Sound Pressure Levels

For human perception, a change of 1 dBA or 2 dBA in the level of a sound is considered to be indiscernible, while a 3 dBA to 5 dBA change corresponds to a small but noticeable change in loudness. A 10 dBA change corresponds to an approximate doubling or halving in loudness. As noted in Section 2.4 of the TMR CoP Vol 1, while the above noted changes in sound pressure level are *not precisely verifiable for road traffic noise, it is useful in understanding the significance of change in environmental noise exposure*.

Additional facts about road traffic noise as stated in Section 2.4 of the TMR CoP Vol 1:

- A 3 dBA change in noise level is equivalent to halving or doubling the traffic volumes.
- A 10 dBA change in noise level is equivalent to halving or doubling the subjective or perceived loudness or a tenfold increase or decrease in traffic volume.
- A 10 km/h increase in speed will increase the noise level by approximately 1 dBA.
- A 3.5% compound annual growth rate in traffic will increase the noise level by approximately 1.5 dBA over a 10-year horizon.
- An 8% compound annual growth rate in traffic will increase the noise level by approximately 3.0 dBA over a 10-year horizon.

Typical Sound Pressure Levels

The table below lists examples of typical sound pressure levels.

Table D-1 Examples of Perceived Sound Pressure Levels

Sound pressure level (dBA)	Typical Example
130	Threshold of pain
120	Metal hammering
110	Grinding on steel
100	Loud car horn at 3 metres (m)
90	Dog bark at 1 m
80	Cicadas at 1 m
70	Noise level directly adjacent to a busy main road
60	Ambient noise level in urban area close to main roads

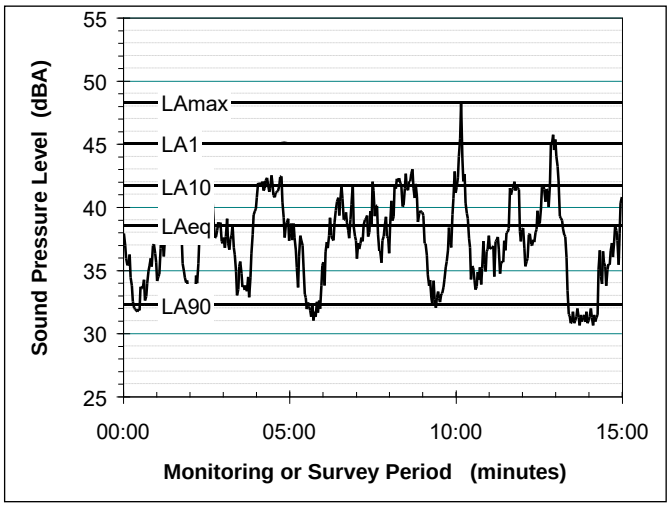
Sound pressure level (dBA)	Typical Example
50	Day time in a quiet suburban environment with background or distant road traffic noise
40	Night-time in a quiet suburban environment with background or distant road traffic noise Ambient noise level in rural to semi-rural environments with light breezes and some noise from insects, birds and distant traffic
30	Ambient noise level in a typical rural noise environment in the absence of insect noise and wind. Inside bedroom
20	Ambient noise level in remote rural environment away from main roads with no wind and no insect noise

Statistical Noise Levels

Sounds that vary in level over time, such as road traffic noise and most community noise, are commonly described in terms of the statistical exceedance levels (LAN), where LAN is the A-weighted sound pressure level exceeded for N% of a given measurement period. For example, the LA1 is the noise level exceeded for 1% of the time and LA10 the noise exceeded for 10% of the time.

Figure D-1 below presents a hypothetical 15-minute noise measurement, illustrating various common statistical indices of interest.

Figure D-1 Hypothetical 15-minute Noise Measurement



Of particular relevance to this study, are:

- L_{A10}: The A-weighted noise level exceeded for 10% during any given measurement period. This is commonly referred to as the average maximum noise level.

Additionally;

- $L_{A10(18hour)}$ Road Traffic Noise Level: the level exceeded for 10% of any measurement period; the usual period of measurement is 1 hour. The hourly L_{A10} level, therefore, is the traffic noise level exceeded for 6 minutes in the hour. The 18-hour L_{A10} level

($L_{A10(18hour)}$) is the arithmetic average of 18, hourly L_{A10} traffic noise levels measured in consecutive hours between 6:00 am and 12:00 midnight.

- $L_{A10(12hour)}$ Road Traffic Noise Level – is the arithmetic average of 12 hourly L_{A10} traffic noise levels measured in consecutive hours between 6:00 am and 6:00 pm.
- $L_{A1(1hour)}$ Road Traffic Noise Level – the level exceeded for n% of a 1-hour period.

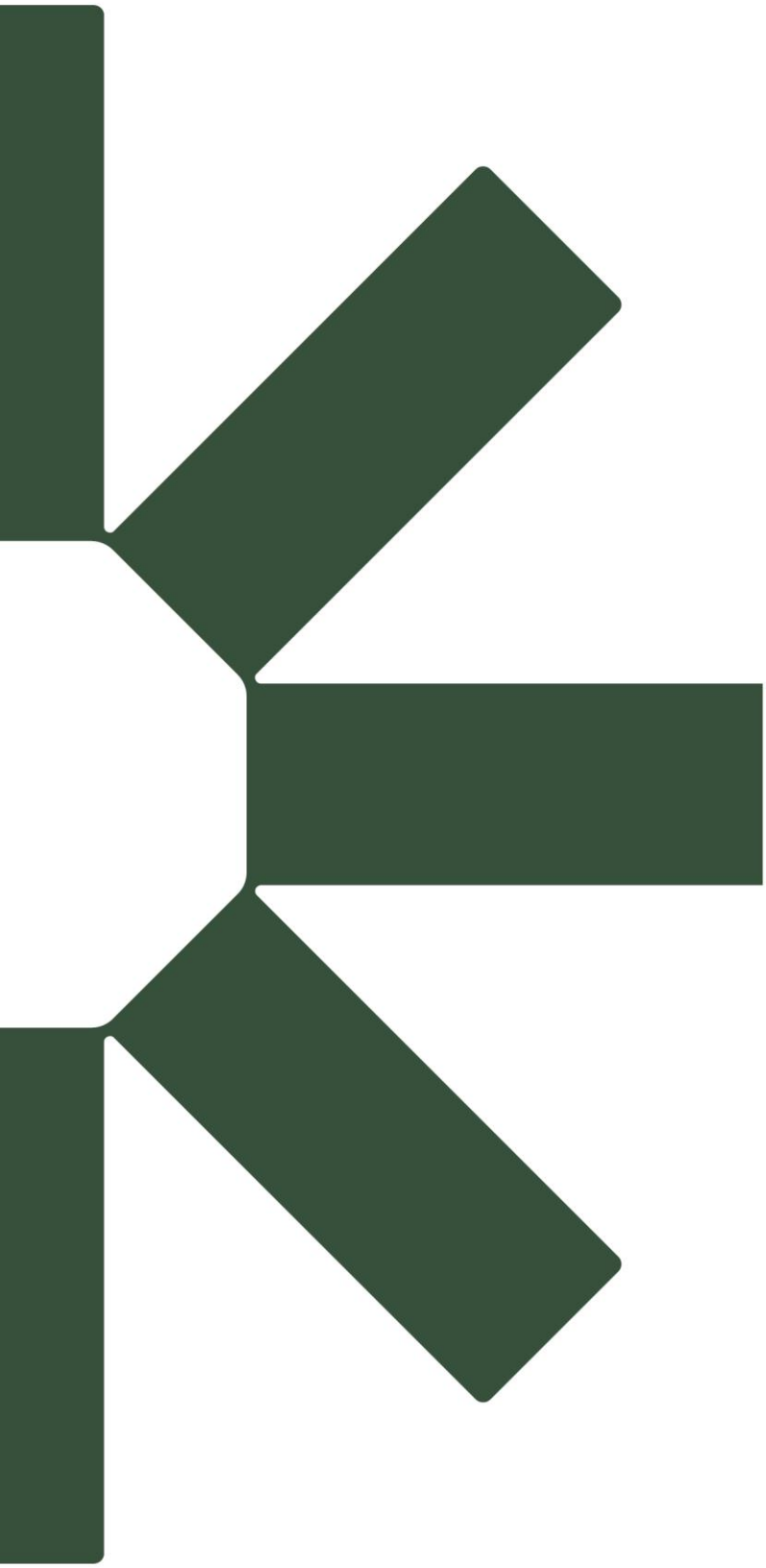
Noise Propagation

Provided the receptor is in the far-field of the noise source, noise levels will reduce as a receptor moves further away from the source. This is due to spreading of the noise source energy over distance. For a simple point source (for example, a motor) the theoretical reduction in noise levels is 6 dBA per doubling of distance. For a line source (for example, a busy road) the theoretical reduction is 3 dBA per doubling of distance. In reality however other factors affect noise propagation. These include ground absorption, air absorption, acoustic screening, and meteorological effects.

Facade Corrected versus Free field

A ‘facade corrected’ measurement/monitoring location is a location which is influenced by facade reflections. Measurements at facades are typically taken at a distance of 1 m away and the measured noise level generally regarded as being +2.5 dB higher than in the ‘free field’.

A ‘free field’ measurement/monitoring location is a location where the microphone is positioned sufficiently far from nearby surfaces for the measured data to not be influenced by reflected noise. This is typically regarded as a position 3.5 m or greater from a reflective surface.



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