Appendix B – External Building Fabric Acoustic Specification

1.0 Window Sound Insulation Performance

Glazed units (inclusive of glazing, louvres, timber panels, spandrel panels, infill panels, framing, opening lights, balcony/terrace doors, seals, etc. as appropriate) should achieve the following minimum sound reduction indices as tested in general accordance with BS EN ISO 10140-2:2010:

Type	Minimum Recommended Sound Reduction Index (dB) at Octave Band Centre Frequency (Hz)								R_w (dB)
	63	125	250	500	1k	2k	4k	8k	
G1	31	28	30	39	44	49	56	56	42
G2	19	23	22	27	38	40	41	41	33
G3	27	29	35	42	44	47	55	55	45

Note: R_W is the "overall weighted sound reduction index" tested in a laboratory.

N.B. as the internal noise criteria are expressed in dBA terms, other frequency specific performance levels may ultimately prove acoustically acceptable. Test data for representative samples of all glazing systems shall be submitted to RBA Acoustics for approval to demonstrate compliance with the above performance specifications.

2.0 Acoustic Flanking Specification

Extent

There is potential for any curtain walling or continuous system to transmit sound across the separating floors and walls, and to thus result in future sound insulation problems.

The following specification should therefore be introduced within the tender documentation in order to ensure the system components are adequately designed.

The following specifications apply to all curtain walling or continuous elements between residential units and, if applicable, between residential units and commercial areas. Between non-residential areas (e.g. commercial to commercial, etc.) it is standard practice to relax the specification to a value of 50dB $D_{n,f,w}$.

With regard to potential flanking through the panels, the specification is commensurate with relatively high sound insulation levels. Achievement of this specification will require careful consideration of the panel design, in particular the insulation type and construction make-up of the panel skin. In addition it is likely to be necessary to design the cladding such that double/twin insulated mullions and transoms are included.

Horizontal Flanking at Separating Wall Lines

The curtain walling/continuous system shall achieve a horizontal weighted normalised flanking level difference of 62dB $D_{n,f,w}$ when tested in general accordance with BS EN ISO 10848-2:2006 [previously BS EN 20140-9:1994] (the methodology amended accordingly).

The supplier shall demonstrate by the provision of previous test reports (and comparative calculations if required) that the specification can be achieved. The Client, however, reserve the right to insist on laboratory acoustic testing if any doubts remain in relation to the flanking performance of the system.

The curtain walling system shall provide suitable surfaces against which a good acoustic seal can be made with future separating walls.

Vertical Flanking at Separating Floor Lines

The curtain walling system shall achieve a vertical weighted normalised flanking level difference of 62dB $D_{n,f,w}$ when tested in general accordance with BS EN ISO 10848-2:2006 [previously BS EN 20140-9:1994] (the methodology amended accordingly).

The supplier shall demonstrate by the provision of previous test reports (and comparative calculations if required) that the specification can be achieved. The Client, however, reserve the right to insist on laboratory acoustic testing if any doubts remain in relation to the flanking performance of the system.

The curtain walling system shall provide suitable surfaces against which a good acoustic seal can be made with future separating floors.

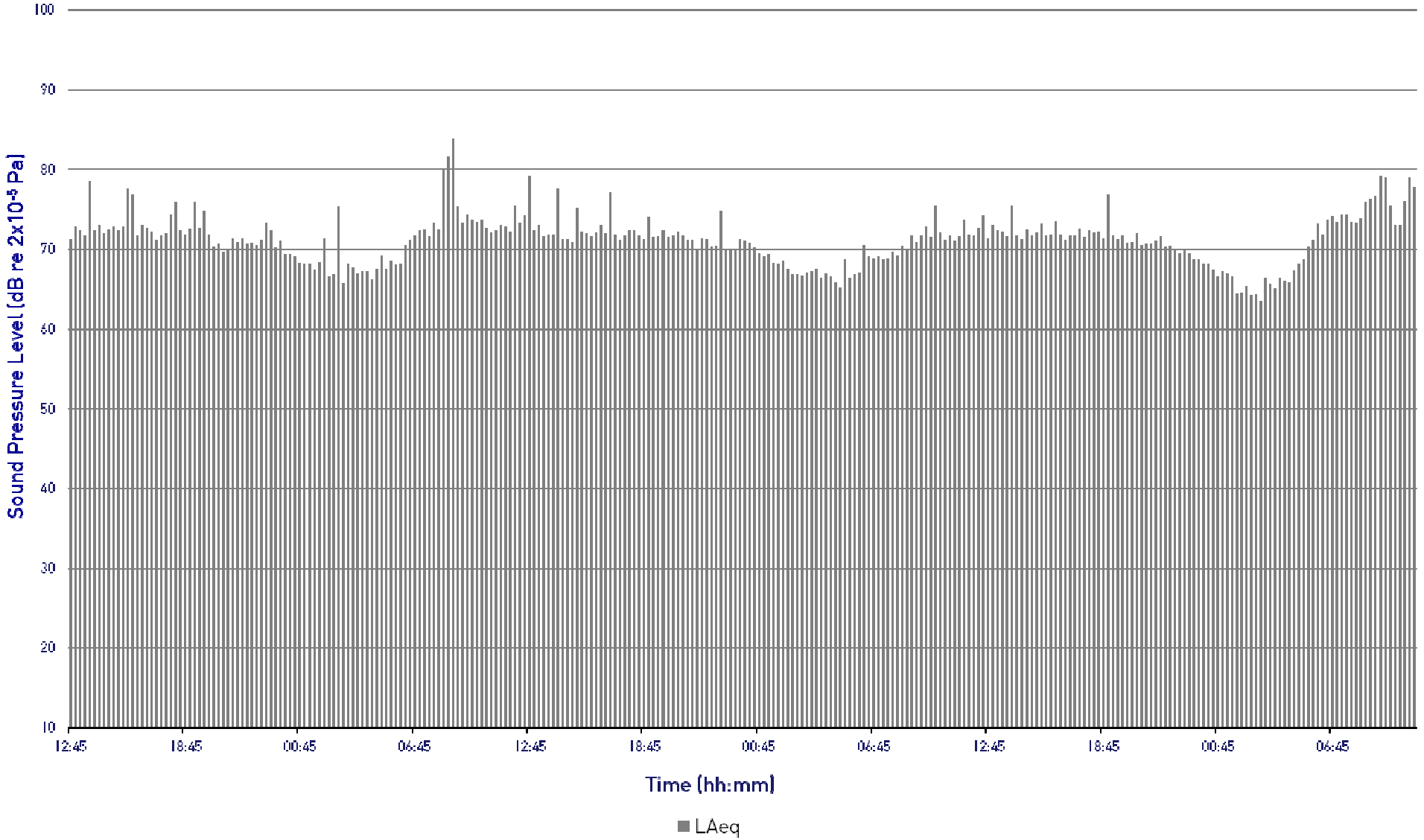
Phase 2, Kidderpore Avenue

L_{Aeq} Time History

Measurement Position 1 - Finchley Road, Friday 17th to Monday 20th April 2015

RBA ACOUSTICS

Graph 6573/G1



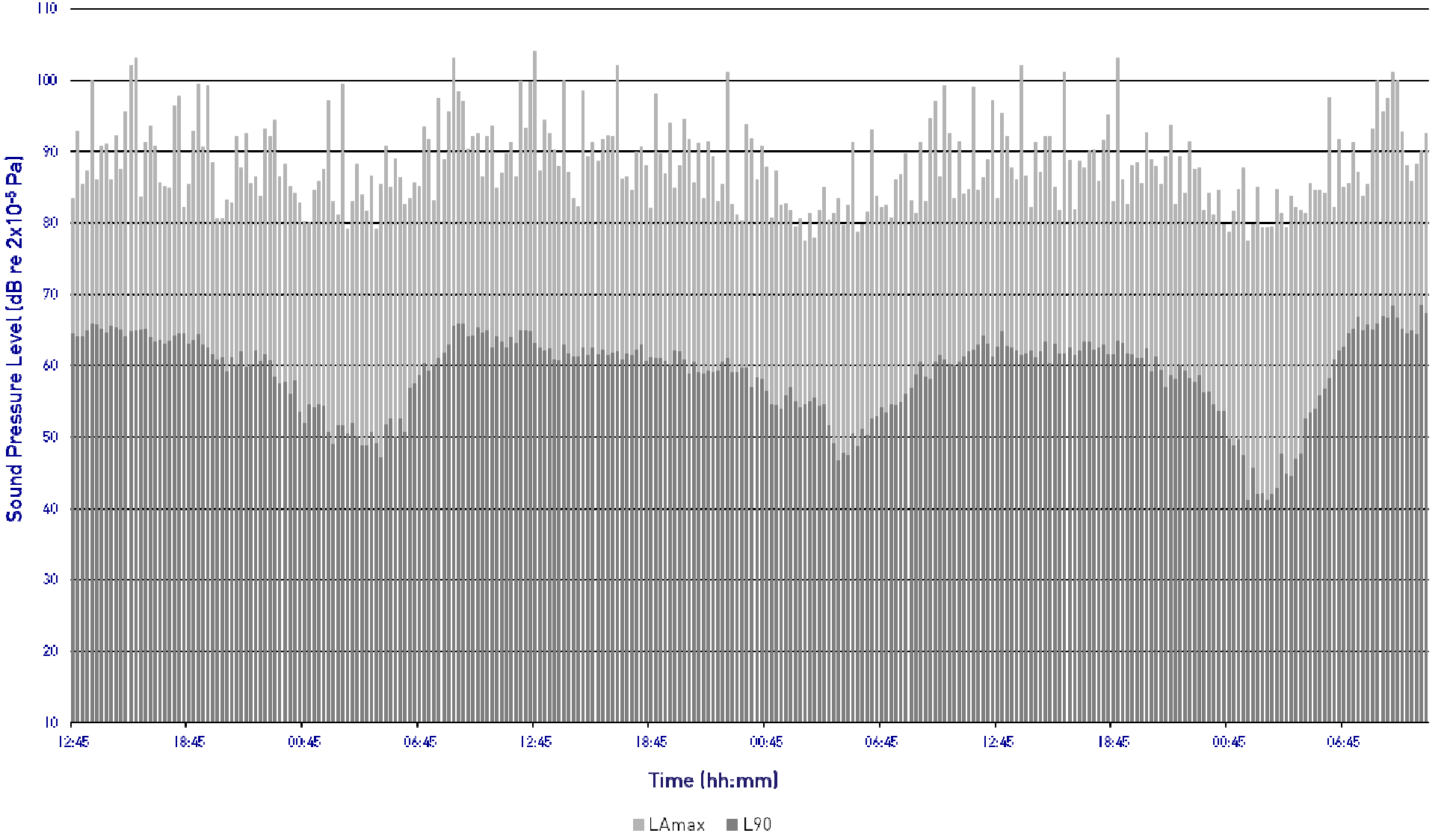
Phase 2, Kidderpore Avenue

L_{Amax} and L_{A90} Time History

Measurement Position 1 - Finchley Road, Friday 17th to Monday 20th April 2015

RBA ACOUSTICS

Graph 6573/G2



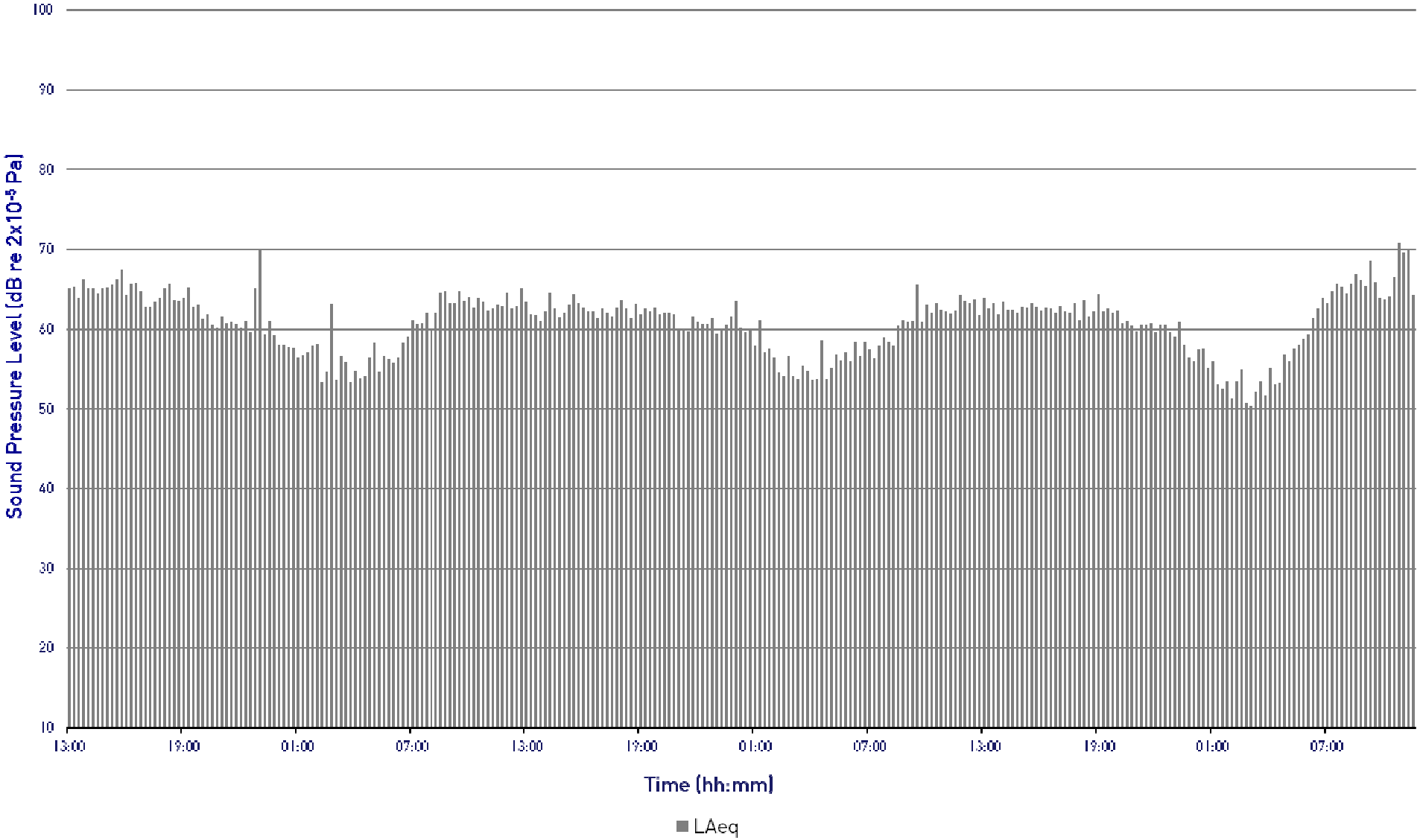
Phase 2, Kidderpore Avenue

L_{Aeq} Time History

Measurement Position 2 - Platts Lane, Friday 17th to Monday 20th April 2015

RBA ACOUSTICS

Graph 6573/G3



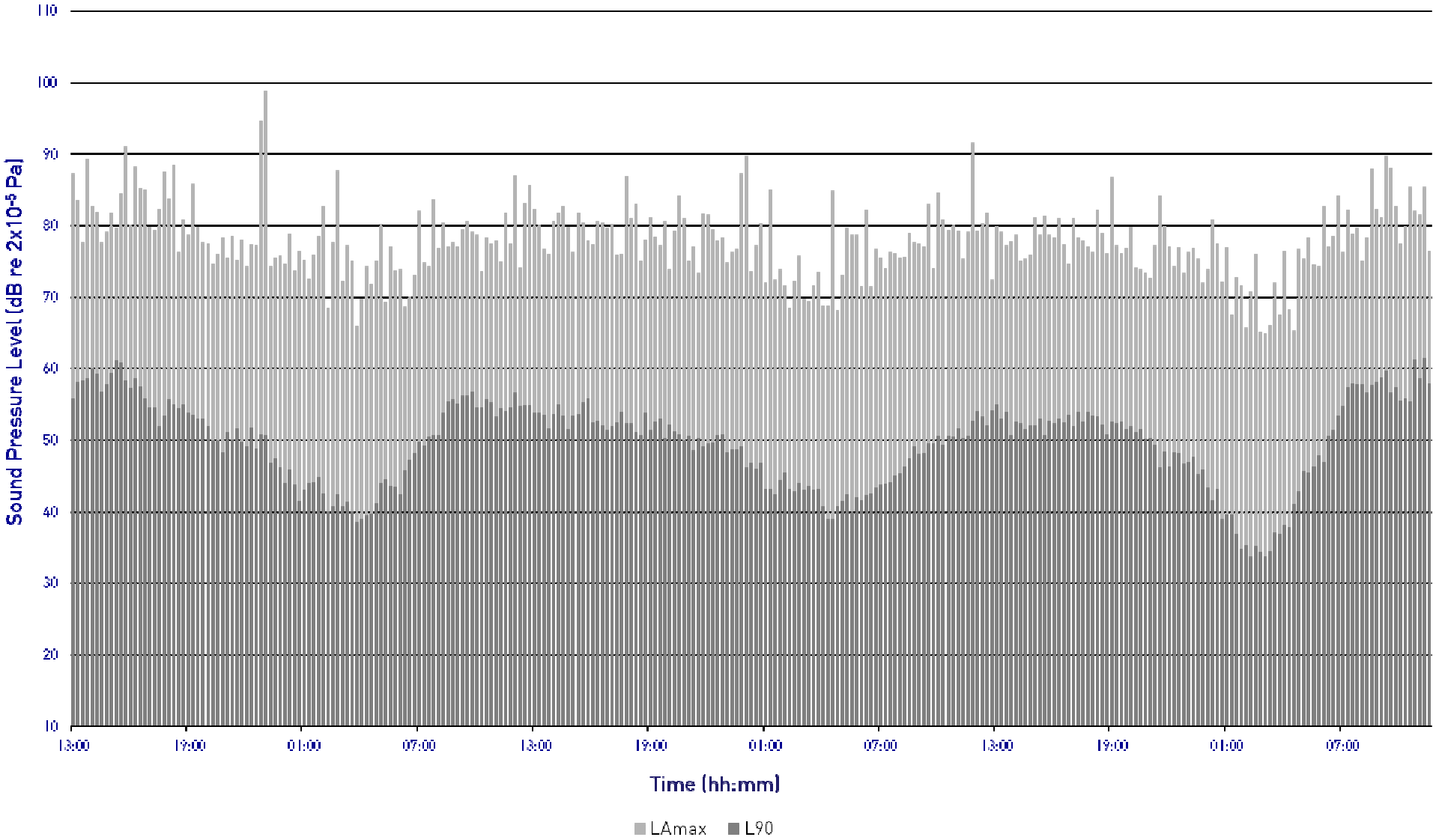
Phase 2, Kidderpore Avenue

L_{Amax} and L_{A90} Time History

Measurement Position 2 - Platts Lane, Friday 17th to Monday 20th April 2015

RBA ACOUSTICS

Graph 6573/G4



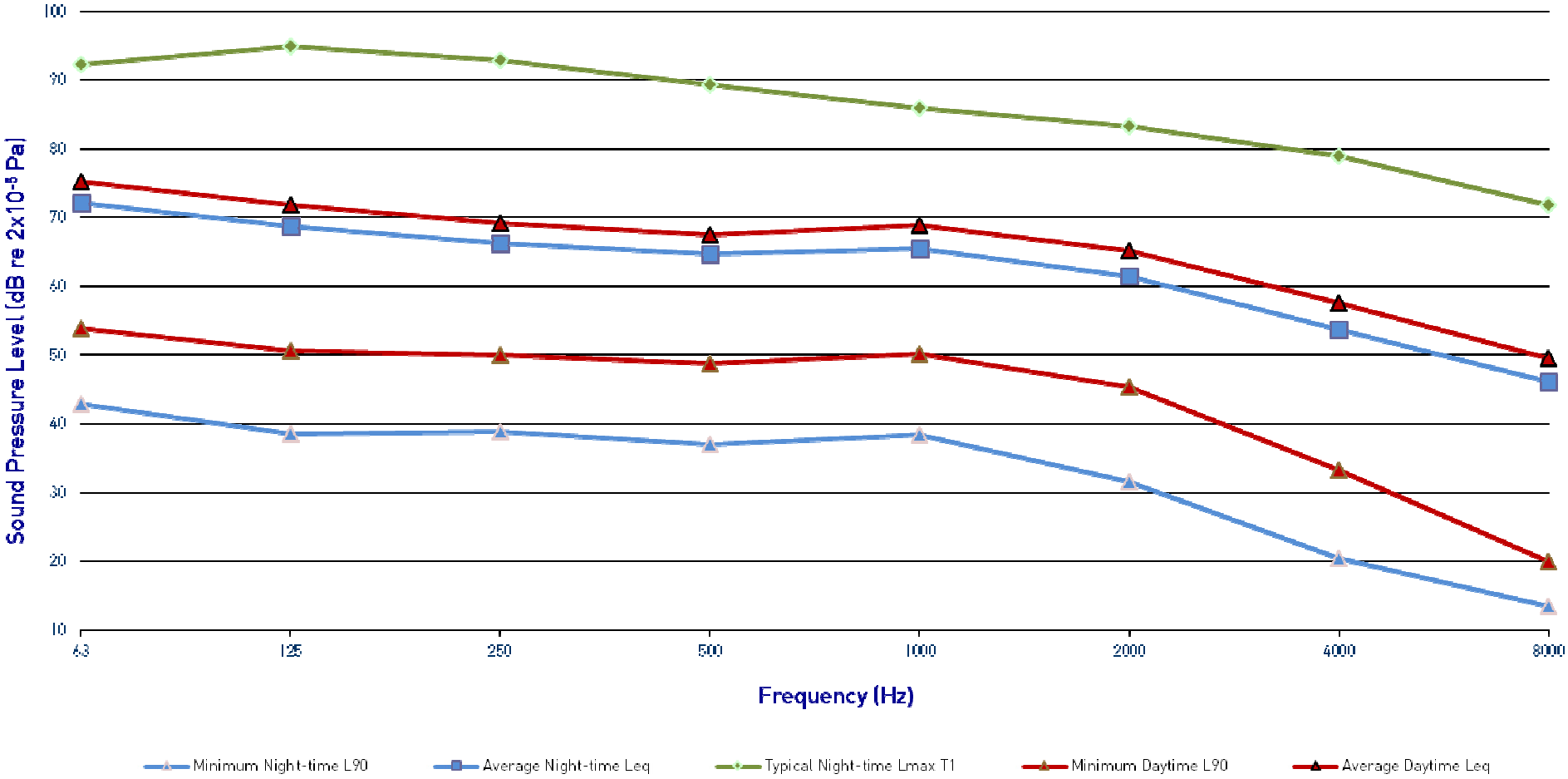
Phase 2, Kidderpore Avenue

Measured Noise Levels

Measurement Position 1 - Finchley Road, Friday 17th to Monday 20th April 2015

RBA ACOUSTICS

Graph 6573/G5



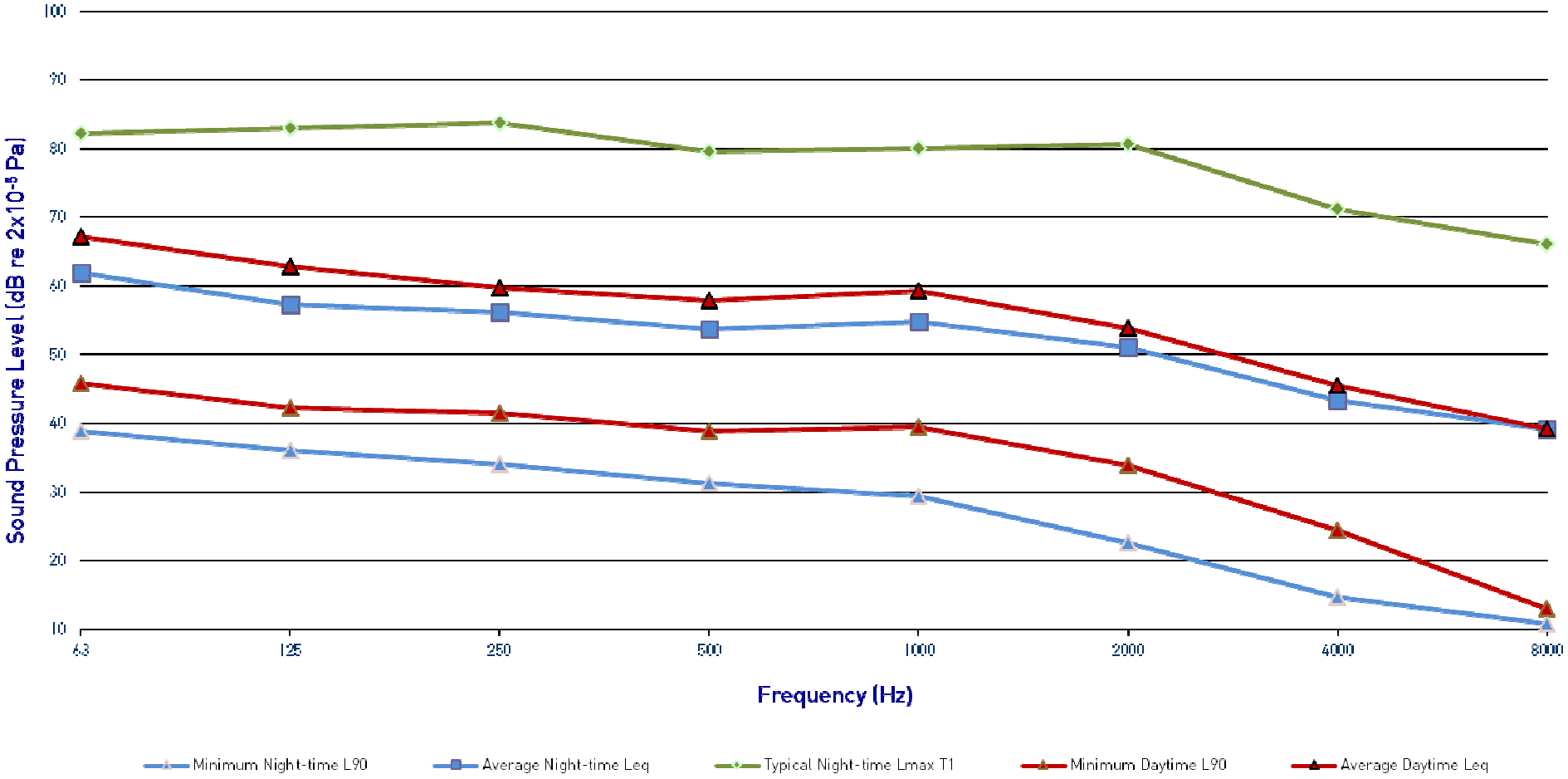
Phase 2, Kidderpore Avenue

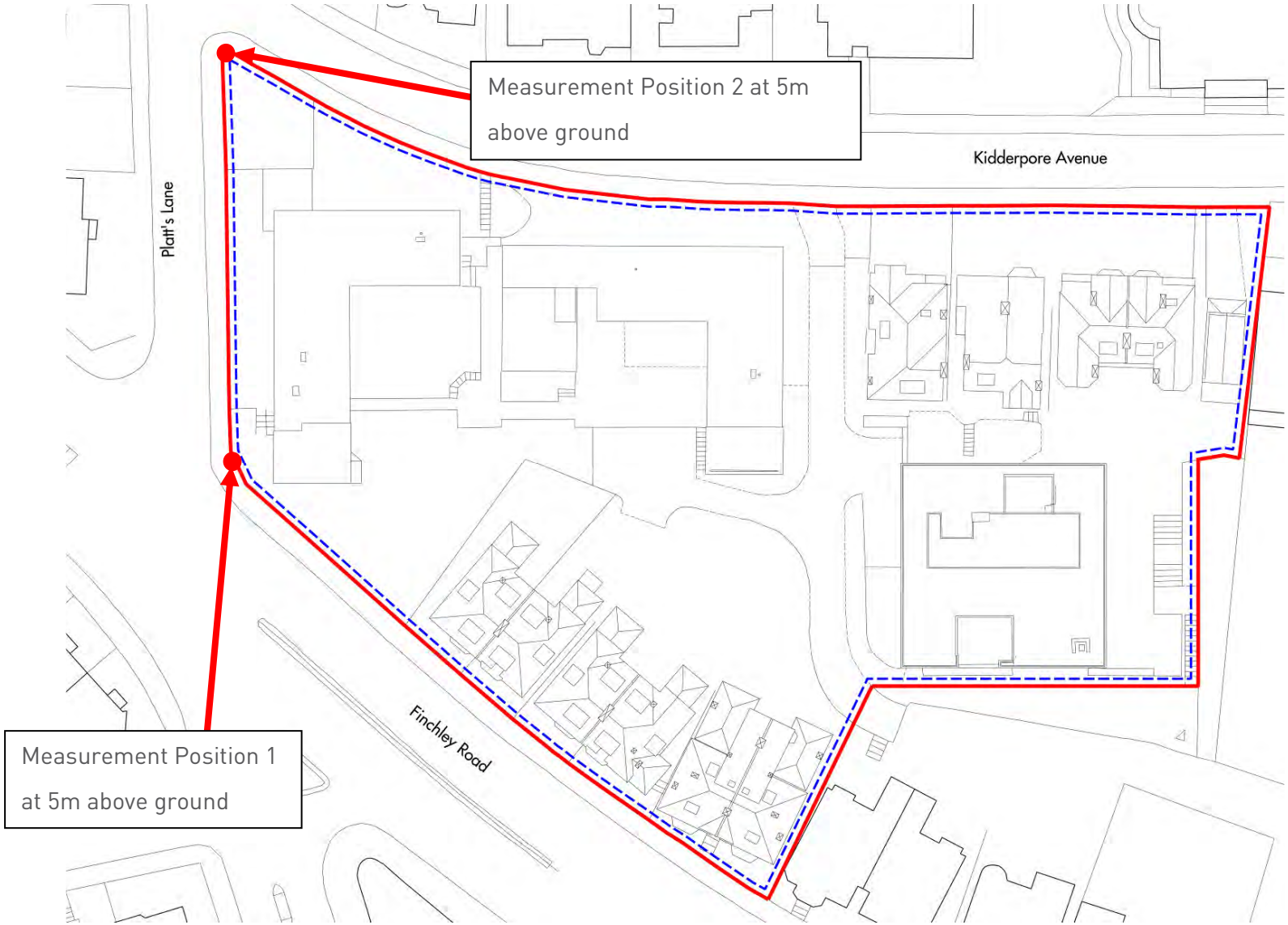
Measured Noise Levels

Measurement Position 2 - Platts Lane, Friday 17th to Monday 20th April 2015

RBA ACOUSTICS

Graph 6753/G6





PHASE 2 KIDDERPORE AVENUE, LONDON

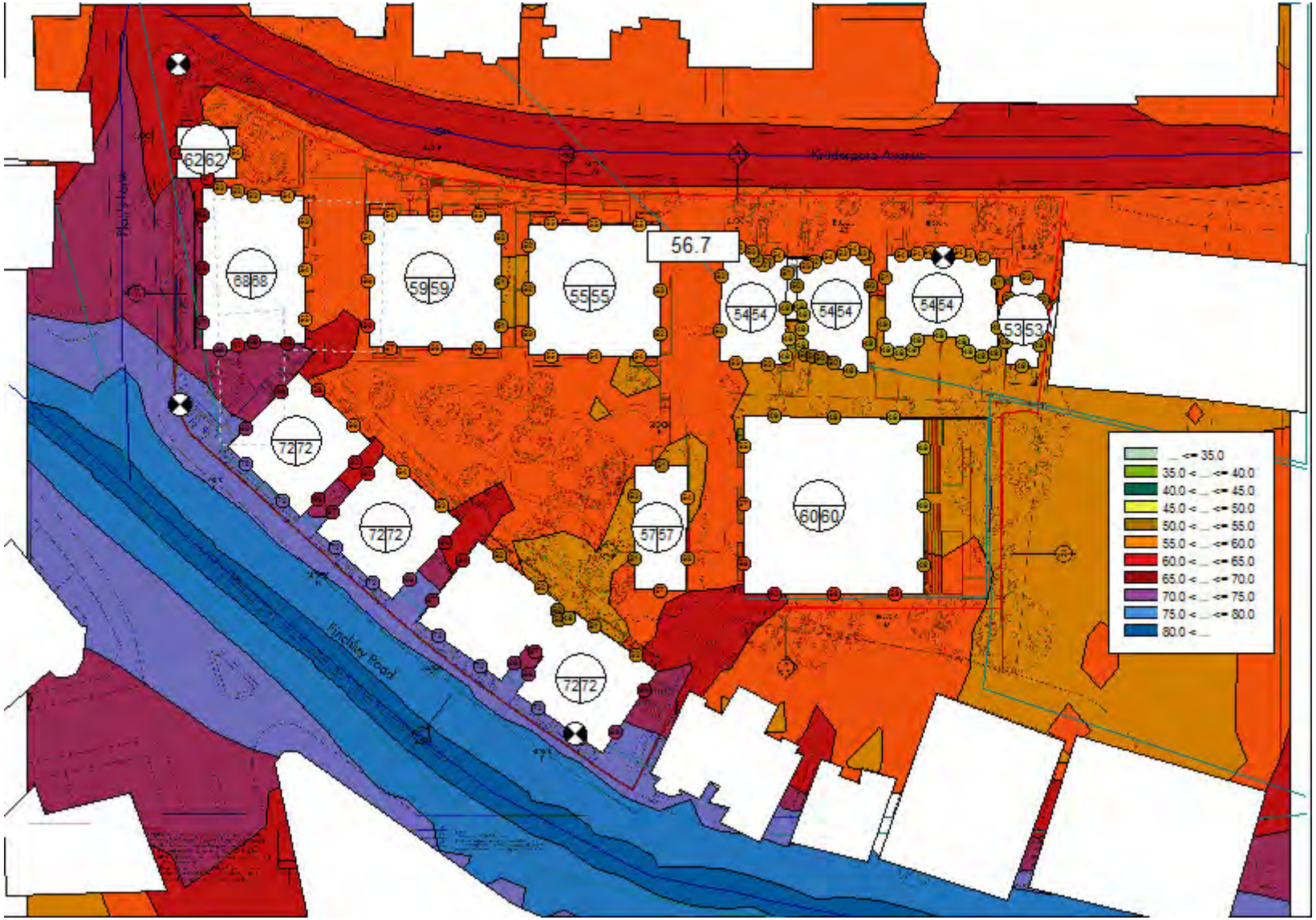
Site Plan Showing Measurement Positions

Site Plan 6573/SP1

22 May 2015

Not to Scale

RBA ACOUSTICS



PHASE 2 KIDDERPORE AVENUE, LONDON

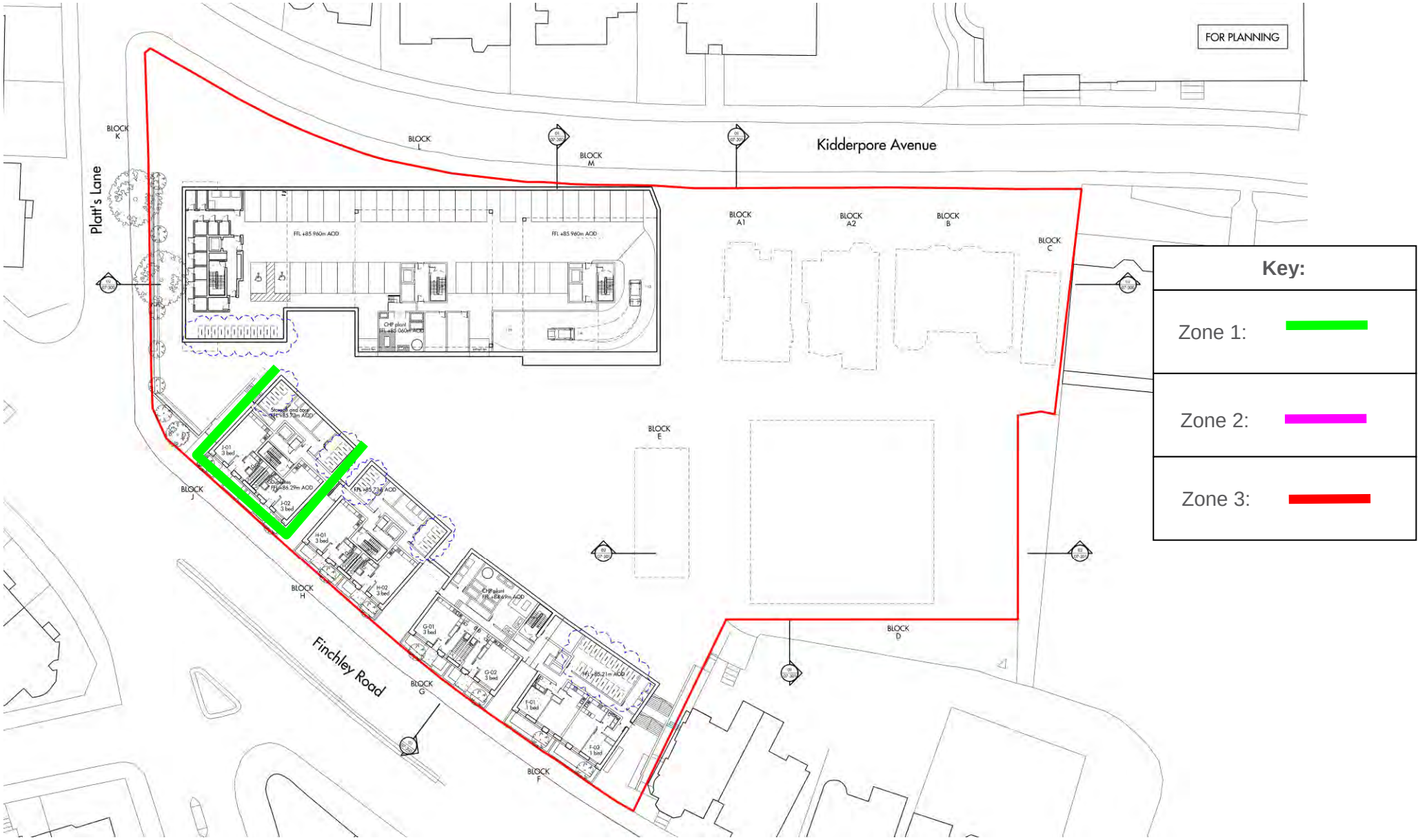
CadnaA Noise Map showing daytime $L_{eq,16hour}$ noise levels at 1.5m and maximum façade incident $L_{eq,16hour}$ noise levels.

6573/Cad1

22 May 2015

Not to Scale

RBA ACOUSTICS



PHASE 2 KIDDERPORE AVENUE, LONDON

Façade Zoning Plan – Level -03

6573/FZP-03

22 May 2015

Not to Scale

RBA ACOUSTICS

PHASE 2 KIDDERPORE AVENUE, LONDON

Façade Zoning Plan – Level -02

6573/FZP-02

22 May 2015

Not to Scale

RBA ACOUSTICS

PHASE 2 KIDDERPORE AVENUE, LONDON

Façade Zoning Plan – Level -01

6573/FZP-01

22 May 2015

Not to Scale

RBA ACOUSTICS

PHASE 2 KIDDERPORE AVENUE, LONDON

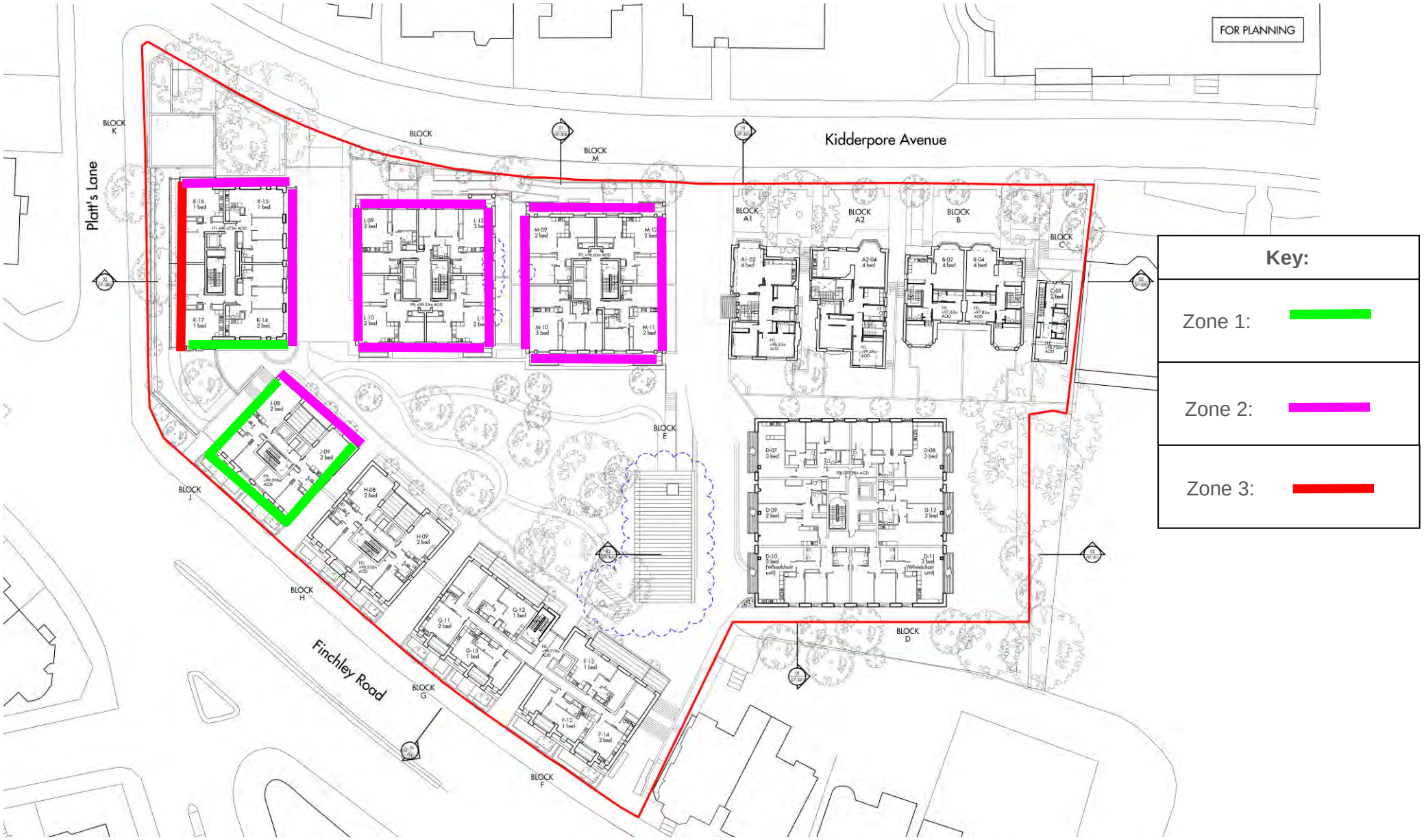
Façade Zoning Plan – Level 00

6573/FZP00

22 May 2015

Not to Scale

RBA ACOUSTICS



PHASE 2 KIDDERPORE AVENUE, LONDON

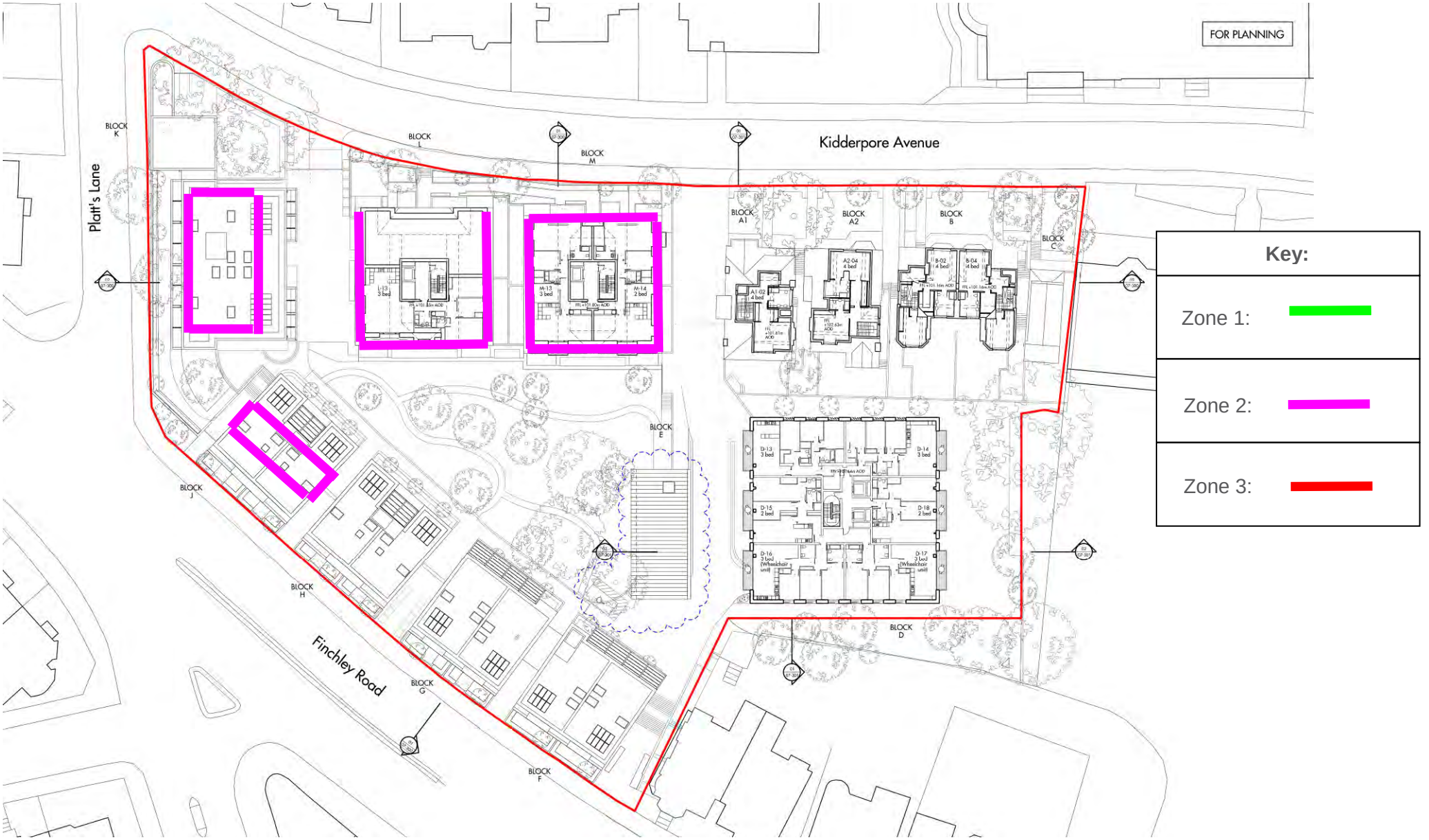
Façade Zoning Plan – Level 01

6573/FZP01

22 May 2015

Not to Scale

RBA ACOUSTICS



PHASE 2 KIDDERPORE AVENUE, LONDON

Façade Zoning Plan – Level 02

6573/FZP02

22 May 2015

Not to Scale

RBA ACOUSTICS

PHASE 2 KIDDERPORE AVENUE, LONDON

Photograph detailing measurement position 1

Finchley Road

Measurement Position 1

6573/P1

22 May 2015

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PHASE 2 KIDDERPORE AVENUE, LONDON

Photograph detailing measurement position 2

Platt's Lane

Measurement Position 2

6573/P2

22 May 2015

RBA ACOUSTICS

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