

## **Technical Appendix 8.2: Baseline Noise and Vibration Survey**

## TECHNICAL APPENDIX 8.2: BASELINE NOISE AND VIBRATION SURVEY

### 1. Baseline Noise and Vibration Survey

#### 1.1 Methodology

A baseline noise and vibration survey was carried out by Ramboll to establish the existing conditions around the proposed development and at nearby noise-sensitive receptors.

The baseline noise survey comprised a combination of one-week unattended noise monitoring undertaken between Tuesday 15 September and Monday 21 September 2020 at two locations (LT1 and LT2 on Figure 1) and attended day and night-time measurements undertaken on Monday 21 - Tuesday 22 September (ST1-ST3 and NT1-NT3 on Figure 1). Vibration measurements were taken in the basement between 15 and 21 September.

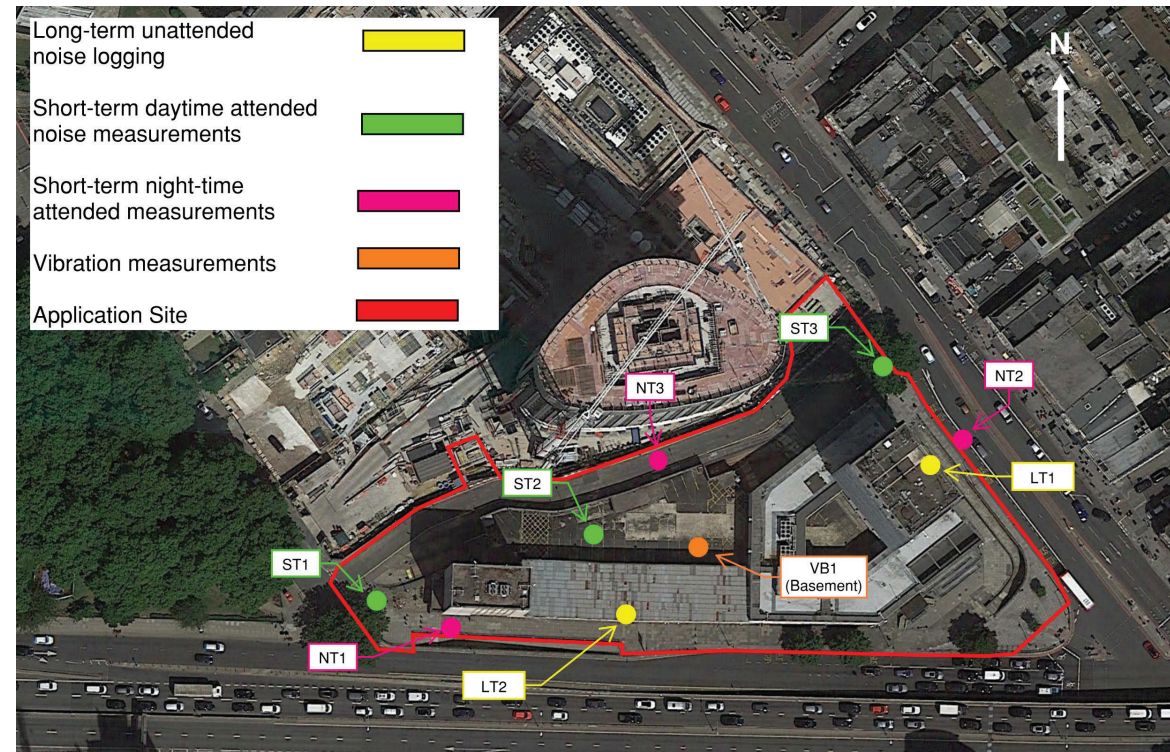


Figure 1: Measurement Locations

The logger locations (LT1 and LT2) were chosen to inform the sound insulation performance of the proposed building façade of noise sources from sources to the north and east of the site.

The noise sources heard during the daytime at each of the attended measurement locations were:

- ST1: Traffic noise from the A40 was the dominant noise source, construction noise from both to the north and south, some idling vehicles as they wait to pull out into Paddington Green road junction;
- ST2: Traffic from the A40 including public buses and audible construction noise; and
- ST3: Traffic from Edgware Road, construction noise to the north of the site, pedestrians and occasional aircraft noise.

The noise sources heard during the night time at each of the attended measurement locations were:

- NT1: Road traffic from A40, some construction noise but less in second and third measurement periods;
- NT2: Construction noise from road resurfacing; and
- NT3: Some construction noise in first measurement, minimal in second measurement.

#### 1.2 Equipment

The survey was carried out using the following equipment as presented in Table 1.

Position	Equipment Type	Model Number	Serial Number(s)
ST1 and ST2	Sound Level Meter	NTi XL2-TA	A2A-09209-E0
	Microphone	NTi MC230	8072
	Calibrator (94 dB)	CAL200	16089
LT1 (Edgware Road)	Sound Level Meter	Norsonic 140 (Class 1)	1406951
	Microphone	Nor 1225	285522
	Calibrator	Nor 1251	34964
LT2 (A40)	Sound Level Meter	Norsonic 140 (Class 1)	1403396
	Microphone	Nor 1225	112825
	Calibrator	Nor 1251	32853
V1	Vibration Meter	Svan 958a	15812
	3 nos. PCBs accelerometers	393B31	27605,58661,27624

All measurement equipment owned or hired and operated by Ramboll has regular calibration checks carried out by external companies traceable to UKAS or national standards. Copies of all calibration records are kept and can be provided upon request.

Attended noise measurements were taken at an approximate height of 1.5 m from the ground and a minimum of 3 m from the façade of any surrounding buildings. These measurements are, therefore, considered representative of free-field measurements. The calibration of the sound level meter was checked before and after measurements was taken. No significant drift was observed.

#### 1.3 Results

The key results of the daytime attended measurements are presented in Table 2 and the night-time attended measurements are presented in Table 3.

Location	Time	Ambient noise levels / dB L <sub>Aeq,15min</sub>	Background noise levels / dB L <sub>A90,15min</sub>	Maximum noise levels / dB L <sub>AFmax,15min</sub>
ST1	12:37	70	67	84
	13:40	71	69	80
	14:40	71	67	86
ST2	13:00	66	63	80
	14:01	67	63	80
	15:01	66	64	80
ST3	13:20	69	63	83
	14:21	69	64	86
	15:21	69	64	82

**Table 3: Summary of Night-Time Measurements**

Location	Time	Ambient noise levels / dB LAeq,15min	Background noise levels / dB LA90,15min	Maximum noise levels / dB LAFmax,15min
NT1	01:20	68	62	77
	02:05	66	58	77
	02:40	66	56	79
NT2*	01:40	78	66	88
NT3	01:02	63	60	74
	01:47	62	56	75
	02:21	58	55	66
	02:59	58	54	71

\*Cut short after 5 minutes due to high levels of construction noise

Results of the unattended measurements at location LT1 and LT2 are detailed in Tables 4-5. A graphical representation of the logging results is presented in Figures 2-3.

**Table 4: Results of Baseline Noise Survey at LT1 (Edgware Road)**

Time Period (T)	Representative ambient noise level+ / dB LAeq,T	Highest ambient noise levels / dB LAeq,15min	Lowest background noise levels / dB LA90,15min	Maximum noise levels* / dB LAFmax,15min
Daytime (07:00-23:00)	71	93	57	107
Night-time (23:00-07:00)	76	88	53	88

+ 90th percentile has been considered representative of the noise climate. As there was construction noise in the surrounding area, the ambient night-time noise levels used for the site-suitability assessment at this location are equal to that of the daytime ambient noise levels.

\* Top 10 noise event in each night-time period have been excluded, in accordance with BS8233:2014. Then the average of the nights taken.

**Table 5: Results of Baseline Noise Survey at LT2 (A40)**

Time Period (T)	Representative ambient noise level+ / dB LAeq,T	Highest ambient noise levels / dB LAeq,15min	Lowest background noise levels / dB LA90,15min	Maximum noise levels* / dB LAFmax,15min
Daytime (07:00-23:00)	74	91	57	104
Night-time (23:00-07:00)	73	87	53	85

+ 90th percentile has been considered representative of the noise climate. As there was construction noise in the surrounding area, the noise levels used for the site-suitability assessment are those from previous noise surveys conducted for West End Gate.

\*Top 10 noise event in each night-time period have been excluded, in accordance with BS8233:2014. Then the average of the nights taken.



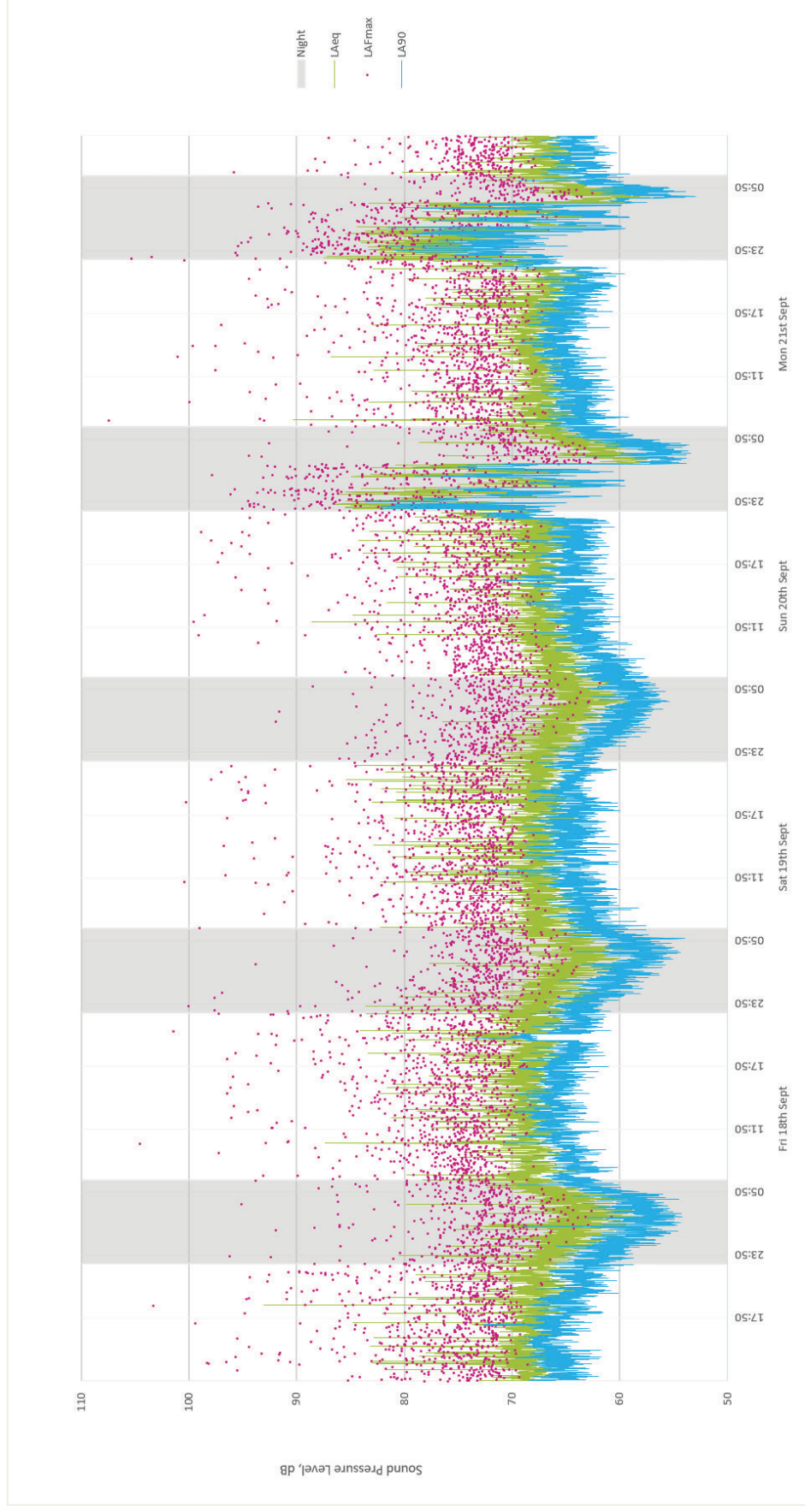


Figure 2: Measurement Results at LT1

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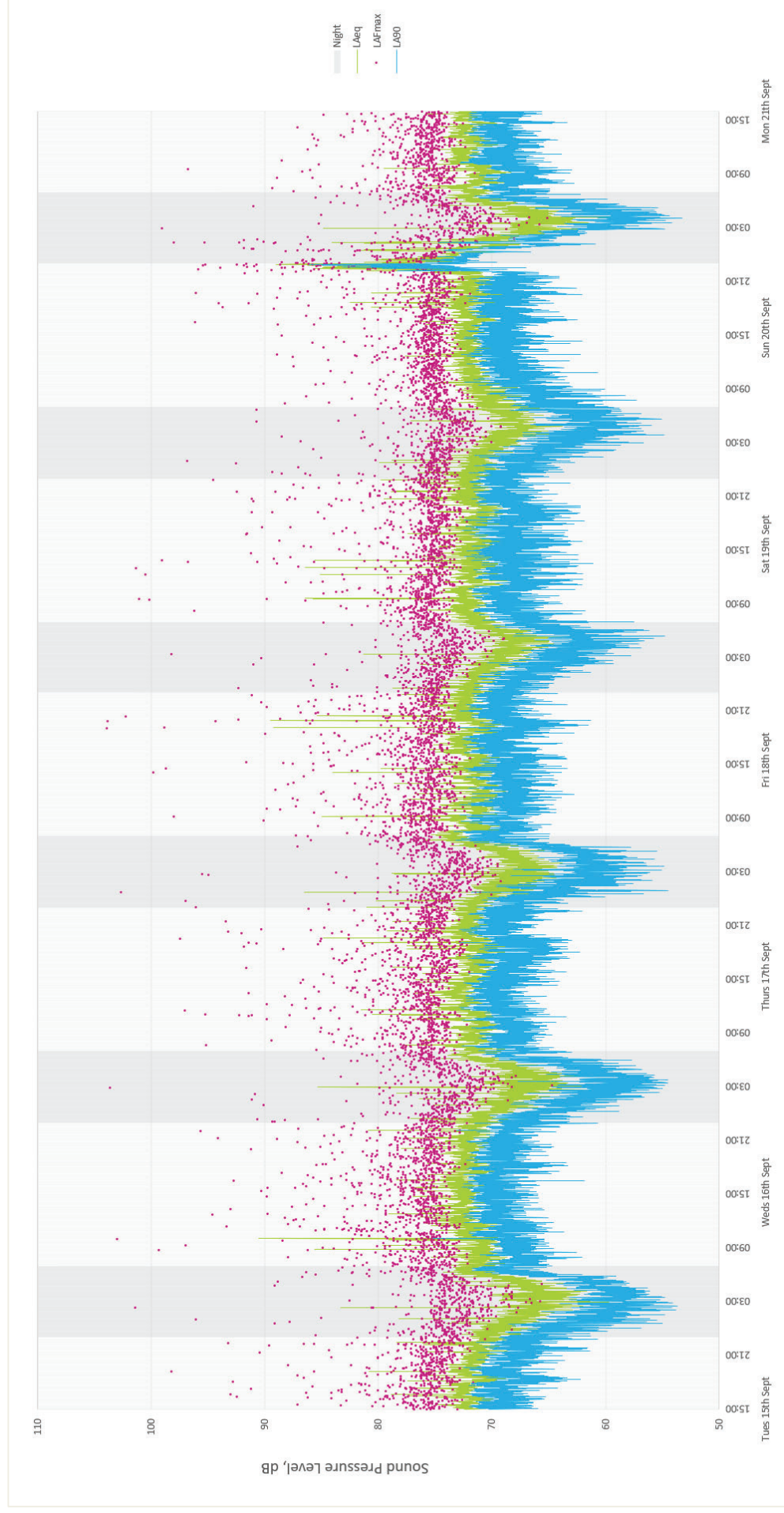


Figure 3: Measurement Results at LT2

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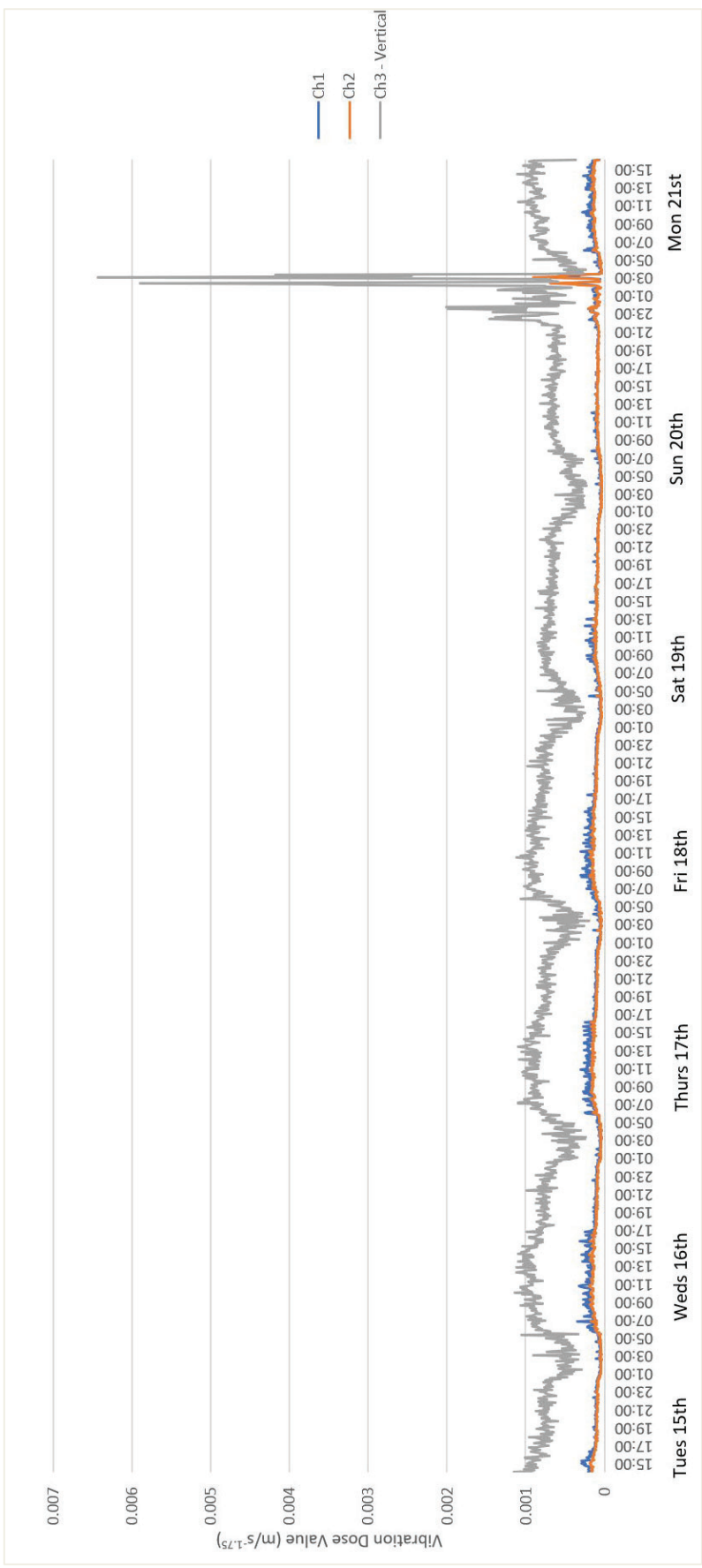


Figure 4: Measurement Results at V1 (vibration)

### 1.4 Weather

The weather history during the unattended logging period taken from [www.timeanddate.com](http://www.timeanddate.com) for Northolt, London is summarised in Table 6.

Date	Rain conditions	Wind speed (mph)
15 September	Dry	1-7
16 September	Dry	5-15 (highest in afternoon)
17 September	Dry	7-15 (highest in early evening)
18 September	Dry	8 – 20 (peaks around 3pm)
19 September	Dry	7 – 17 (peaks around 3pm)
20 September	Dry	7 – 13 (highest in afternoon)
21 September	Dry	3 – 6
22 September (half day)	Dry	1-9

The level of uncertainty in the data and associated calculations has been considered. The following may contribute to the overall measurement uncertainty:

- The level of rounding of each measurement recorded;
- The complexity and level of variability of the residual acoustic environment;
- The complexity of the sound source and the level of variability in sound emission from the source; and
- The distance between sources of sound and the measurement location and intervening ground conditions.

Periods that were noted to be dominated by construction noise have been excluded when utilised in the assessment. The data used in the assessment is reproduced in Chapter 8.

## 2. Historic Data

The assessment reports or data below have not been warranted for use on the proposed development, but the surveys provide a reasonable benchmark for the 2020 surveys undertaken by Ramboll, and are more accurate than predicting noise levels from traffic data alone. This approach was discussed with WCC in light of corroborating the recent survey undertaken during the COVID-19 pandemic. No responsibility is placed on the authors or owners of these reports for any outcome or conclusion for the PGPS project.

### 2.1 West End Green Noise and Vibration Survey<sup>1</sup>

A noise and vibration survey was undertaken for the WEG development environmental impact assessment (EIA) between Thursday 27 August and Tuesday 1 September 2015. The noise measurement locations are shown in Figure 5. A summary of the results for locations MP2 and MP3 is presented in Figures 6 and 7 respectively.

<sup>1</sup> ES Main Report, Chapter 2, ref UK11-22851, Ramboll Environ, February 2016

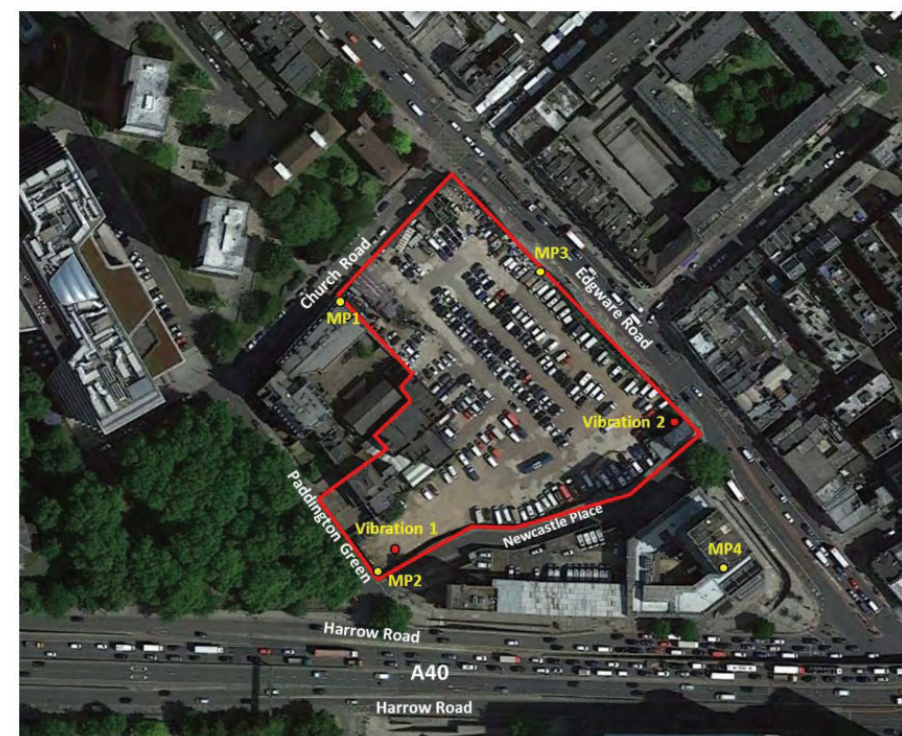


Figure 5: Noise Measurement Locations

Period	Daytime (07:00 – 23:00 Hours)				Night-time (23:00 – 07:00 Hours)			
	L <sub>Aeq</sub>	Lowest L <sub>A90,15min</sub>	L <sub>A10,T</sub>	L <sub>AFmax</sub>	L <sub>Aeq</sub>	Lowest L <sub>A90,15min</sub>	L <sub>A10,T</sub>	L <sub>AFmax</sub>
Thursday 27/08/15*	72.7	64.3	72.7	90.0	69.7	60.4	72.0	83.8
Friday 28/08/15	71.0	64.7	72.5	89.5	70.3	61.8	72.4	86.9
Saturday 29/08/15**	-	-	-	-	-	-	-	-
Sunday 30/08/15**	72.0	64.1	72.4	88.4	-	-	-	-
Monday 31/08/15**	-	-	-	-	70.1	57.4	72.0	82.5

Notes: The presented noise levels are the aggregated 16-hour (daytime) / 8-hour (night-time) logarithmic average L<sub>Aeq,T</sub>, the lowest L<sub>A90,15min</sub> levels, arithmetic average L<sub>A10,T</sub> levels and 90<sup>th</sup> percentile of the maximum L<sub>AFmax</sub>.  
 (\*): Daytime measurements started at 13:30h.  
 (\*\*): Measurements were impacted by rainy periods, therefore the measured noise levels have been omitted from our analyses.

Figure 6: Measured Levels for Relevant Survey Positions, West End Green, 2016

**Table 10.12: Summary of Measurement Results – Position 3**

Period	Daytime (07:00 – 23:00 Hours)				Night-time (23:00 – 07:00 Hours)			
	L <sub>Aeq</sub>	Lowest L <sub>A90,15min</sub>	L <sub>A10,T</sub>	L <sub>AFmax</sub>	L <sub>Aeq</sub>	Lowest L <sub>A90,15min</sub>	L <sub>A10,T</sub>	L <sub>AFmax</sub>
Thursday 27/08/15*	68.8	59.5	70.5	93.1	69.1	54.5	71.0	97.2
Friday 28/08/15	69.9	59.7	70.6	98.6	70.1	54.5	71.0	100.2
Saturday 29/08/15**	-	-	-	-	-	-	-	-
Sunday 30/08/15**	69.4	55.6	70.7	96.7	-	-	-	-
Monday 31/08/15**	-	-	-	-	67.8	52.7	71.1	88.1

Notes: The presented noise levels are the aggregated 16-hour (daytime) / 8-hour (night-time) logarithmic average L<sub>Aeq,T</sub>, the lowest L<sub>A90,15min</sub> levels, arithmetic average L<sub>A10,T</sub> levels and 90<sup>th</sup> percentile of the maximum L<sub>AFmax</sub>.  
 (\*): Daytime measurements started at 14:30h.  
 (\*\*): Measurements were impacted by rainy periods, therefore the measured noise levels have been omitted from our analyses.

**Figure 7: Measured Levels for Relevant Survey Positions, West End Green, 2016**

It can be seen from the measured levels that there is little difference in noise levels between the daytime (16 hours) and night-time (8 hours).

The maximum noise levels recorded over the four nights have been analysed. This typical maximum noise levels at MP2 and MP3 are summarised in Table 5.

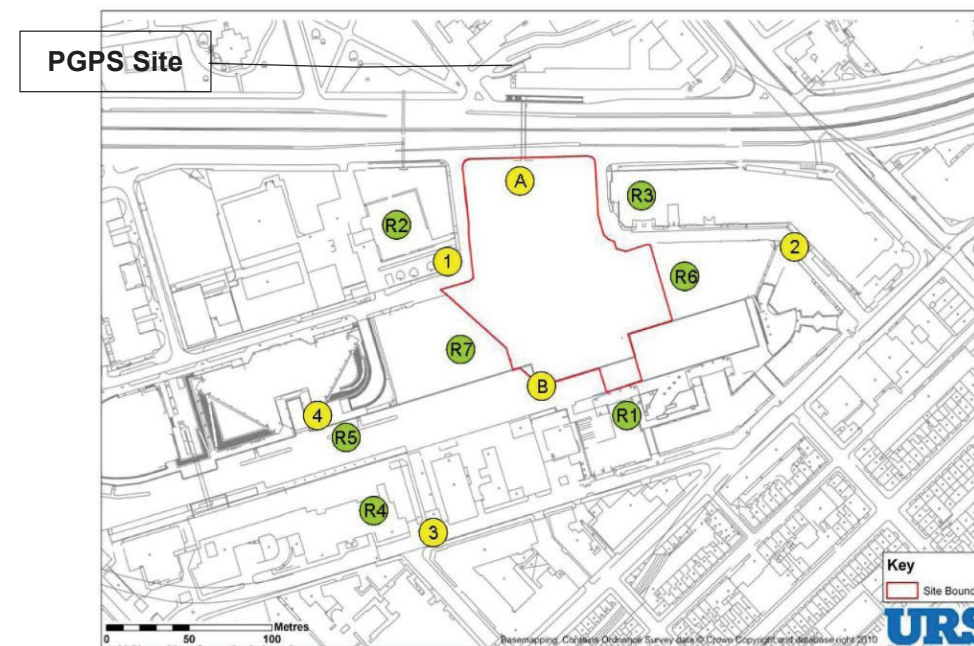
**Table 7: Typical Maximum Noise Levels**

Measurement Position	Typical Maximum Level
MP2 (facing Marylebone Road/Harrow Road)	81 dB LAFmax
MP3 (facing Edgware Road)	89 dB LAFmax

**2.2 Noise survey for Merchant Square<sup>2</sup>**

A noise survey was carried out in April and May 2010 at the site directly opposite the Paddington Green Police Station site on the A40. The locations of the survey are shown in Figure 8 and the key results reproduced in Figure 9.

<sup>2</sup> Environmental Statement, Chapter 9, ref UK11-22851, URS, November 2010



**Figure 8: Measurement Positions, Merchant Square, 2010**

*Table 10-12 Daytime, Evening and Night-Time Average Free-Field Ambient Levels*

Location	Average Ambient Level dB L <sub>Aeq</sub>		
	Daytime 07:00 - 19:00	Evening 19:00 - 23:00	Night-time 23:00 - 07:00
A	69	69	67
B	60	58	56
1	65-68	65	-
2	-	60	61-63
3	62-63	59	56-58
4	59	55	55

*Table 10-13 Typical Upper Range of Night-Time Free-Field Maximum Levels*

Location	Typical Upper Range of Night-Time Maximum Levels dB L <sub>Amax</sub>
A	79
B	71
1	-
2	81
3	78
4	71

**Figure 9: Measured Levels for Relevant Survey Positions, Merchant Square, 2010**

The historic data indicates that the data collected for the site in 2020 is representative despite the COVID-19 restrictions. It is noted that at the time of the survey, no national or regional lockdown was imposed.



## **Technical Appendix 8.3: Construction Noise Assumptions**

### TECHNICAL APPENDIX 8.3: CONSTRUCTION NOISE ASSUMPTIONS

#### Demolition and Construction Plant / Programme

The plant used for the assessment of demolition and construction noise to each of the noise-sensitive receptors is outlined in Table 1. The demolition and construction programme given in Table 2 has been used to compile the periods with the greatest number of activities occurring simultaneously. These are detailed in Chapter 8.

Activity	Project Plant	No. of plant	On-time (% of hour)	BS5228-1 Reference
<b>Site Enabling Works</b>	Bulldozers	1	30	Table C.2 no. 11
	Cranes and hoists	2	20	Table C.4 no. 48
	Cutters, drills and small tools	1	20	Table C.5 no. 6
	Floodlights	1	100	Table C.4 no. 86
	Generators	1	100	Table C.4 no. 85
	HGVs/lorries/vans	1	100	Table D.7 nos. 121-122
	Piling rigs	1	50	Table C.3 no. 22
	Scaffolding and mobile hydraulic access platforms	1	20	Table C.4 no. 57
<b>Demolition</b>	Bulldozers	1	30	Table C.2 no. 11
	Cranes and hoists	2	20	Table C.4 no. 48
	Cutters, drills and small tools	1	35	Table C.5 no. 6
	Crushers	1	40	Table C.1 no. 14
	360 excavators	1	40	Table C.2 no. 4
	Floodlights	1	100	Table C.4 no. 86
	Forklift truck	1	10	Table D.7 no. 94
	Generators	1	100	Table C.4 no. 85
	Hydraulic benchers and cutters	1	40	Table C.1 no. 18
	HGVs/lorries/vans	1	100	Table D.7 nos. 121-122
	Scaffolding and mobile hydraulic access platforms	1	20	Table C.4 no. 57
	<b>Excavation and Remediation</b>	Bulldozers	1	30
Cranes and hoists		2	10	Table C.4 no. 48
Crushers		1	40	Table C.1 no. 14
360 excavators		1	40	Table C.2 no. 4
Floodlights		1	100	Table C.4 no. 86
Generators		1	100	Table C.4 no. 85
HGVs/lorries/vans		1	100	Table D.7 nos. 121-122
Piling rigs		1	50	Table C.3 no. 22
Water pump		1	50	Table C.2 no. 45
Temporary supports	1	10	Table D.7 no. 1	
<b>Substructure</b>	Bulldozers	1	30	Table C.2 no. 11
	Compaction plant	1	30	Table C.2 no. 42

Table 1: Demolition and Construction Plant Items

Activity	Project Plant	No. of plant	On-time (% of hour)	BS5228-1 Reference
	Cranes and hoists	2	20	Table C.4 no. 48
	Cutters, drills and small tools	1	50	Table C.4 no. 93
	Floodlights	1	100	Table C.4 no. 86
	Forklift truck	1	10	Table D.7 no. 94
	Generators	1	100	Table C.4 no. 85
	Hydraulic benchers and cutters	1	30	Table C.1 no. 18
	HGVs/lorries/vans	1	100	Table D.7 nos. 121-122
	Piling rigs	1	50	Table C.3 no. 22
	Ready-mix concrete lorry	1	20	Table C.4 no. 20
	Concrete pump	1	20	Table C.4 no. 29
	Water pump	1	50	Table C.2 no. 45
	Temporary supports	1	10	Table D.7 no. 1
<b>Superstructure</b>	Cranes and hoists	2	20	Table C.4 no. 48
	Cutters, drills and small tools	1	50	Table C.4 no. 93
	Floodlights	1	100	Table C.4 no. 86
	Forklift truck	1	10	Table D.7 no. 94
	Generators	1	100	Table C.4 no. 85
	Hydraulic benchers and cutters	1	30	Table C.1 no. 18
	HGVs/lorries/vans	1	100	Table D.7 nos. 121-122
	Scaffolding and mobile hydraulic access platforms	1	20	Table C.4 no. 57
	Ready-mix concrete lorry	1	20	Table C.4 no. 20
	Concrete pump	1	20	Table C.4 no. 29
Temporary supports	1	10	Table D.7 no. 1	
<b>Fit-out</b>	Cranes and hoists	2	20	Table C.4 no. 48
	Cutters, drills and small tools	1	50	Table C.4 no. 93
	Forklift truck	1	10	Table D.7 no. 94
	Generators	1	100	Table C.4 no. 85
	HGVs/lorries/vans	1	100	Table D.7 nos. 121-122
	Scaffolding and mobile hydraulic access platforms	1	20	Table C.4 no. 57
	Mortar batching plant	1	20	Table D.5 no. 11
Hoists	1	20	Table C.4 no. 61	
<b>Roads and Landscaping</b>	Bulldozers	1	30	Table C.2 no. 11
	Compaction plant	1	20	Table C.2 no. 42
	360 excavators	1	40	Table C.2 no. 4
	Floodlights	1	100	Table C.4 no. 86
	Forklift truck	1	10	Table D.7 no. 94
	Generators	1	100	Table C.4 no. 85
HGVs/lorries/vans	1	100	Table D.7 nos. 121-122	

Activity	Project Plant	No. of plant	On-time (% of hour)	BS5228-1 Reference
	Water pump	1	50	Table C.2 no. 45

	Q 1 22	Q 2 22	Q 3 22	Q 4 22	Q 1 23	Q 2 23	Q 3 23	Q 4 23	Q 1 24	Q 2 24	Q 3 24	Q 4 24	Q 1 25	Q 2 25	Q 3 25	Q 4 25	Q 1 26	Q 2 26	Q 3 26	Q 4 26	Q 1 27	Q 2 27	Q 3 27	Q 4 27	Q 1 28	Q 2 28	Q 3 28	Q 4 28	
Site Enabling Works	x	x	x	x																									
Demolition	x	x	x	x																									
Excavation and Remediation	x	x	x	x																									
Substructure					x	x	x	x																					
Superstructure					x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Fit-out																													
Roads and Landscaping																													



## **Technical Appendix 8.4: Transport Data**

## TECHNICAL APPENDIX 8.4: TRANSPORT DATA

### Traffic Data

The traffic data used for the noise assessment is outlined in Tables 1-4.

**Table 1. Existing Baseline (2019): 2015 WEG Existing Baseline flows + Construction traffic flows for WEG Blocks A, B, D-F + Occupied Cumulative Schemes**

Highway Links	AAWT			Speed Limit (kph)
	All Vehs	HGVs	% HGV	
1. A5 Edgware Road (between Newcastle Place and Church Street)	22,370	3,063	14%	32
2. Church Street (west of Edgware Road)	1,557	40	3%	32
3. Newcastle Place	368	55	15%	32
4. Paddington Green	1,311	44	3%	32
5. A404 Harrow Road eastbound (west of Paddington Green)	21,520	1,145	5%	48
6. A40 Westway	58,637	2,645	5%	48
7. A404 Harrow Road eastbound (east of Paddington Green)	20,939	1,486	7%	48
8. A5 Edgware Road (north of Church Street)	23,270	3,094	13%	32
9. A5 Edgware Road (south of Newcastle Place)	22,399	2,931	13%	32

**Table 2. Demolition and Construction: Future Baseline (2025): 2015 WEG Existing Baseline flows + WEG occupied Blocks (844 units) + Occupied Cumulative Schemes**

Highway Links	AAWT			Speed Limit (kph)
	All Vehs	HGVs	% HGV	
1. A5 Edgware Road (between Newcastle Place and Church Street)	22,974	3,131	14%	32
2. Church Street (west of Edgware Road)	2,357	132	6%	32
3. Newcastle Place	455	55	12%	32
4. Paddington Green	1,420	37	3%	32
5. A404 Harrow Road eastbound (west of Paddington Green)	21,611	1,150	5%	48
6. A40 Westway	58,637	2,645	5%	48
7. A404 Harrow Road eastbound (east of Paddington Green)	21,623	1,491	7%	48
8. A5 Edgware Road (north of Church Street)	23,596	3,111	13%	32
9. A5 Edgware Road (south of Newcastle Place)	23,004	2,999	13%	32

**Table 3: Completed Development: Future Baseline (2029) + Proposed Development**

Highway Links	AAWT			Speed Limit (kph)
	All Vehs	HGVs	% HGV	
1. A5 Edgware Road (between Newcastle Place and Church Street)	23,023	3133	14%	32
2. Church Street (west of Edgware Road)	2,428	137	6%	32
3. Newcastle Place	511	58	11%	32
4. Paddington Green	1,518	42	3%	32
5. A404 Harrow Road eastbound (west of Paddington Green)	21,636	1152	5%	48
6. A40 Westway	58,637	2645	5%	48
7. A404 Harrow Road eastbound (east of Paddington Green)	21,696	1494	7%	48
8. A5 Edgware Road (north of Church Street)	23,646	3115	13%	32
9. A5 Edgware Road (south of Newcastle Place)	23,053	3001	13%	32

**Table 4: Completed Development: Future Baseline (2029) + Proposed Development + Cumulative Schemes**

Highway Links	AAWT			Speed Limit (kph)
	All Vehs	HGVs	% HGV	
1. A5 Edgware Road (between Newcastle Place and Church Street)	23,109	3133	14%	32
2. Church Street (west of Edgware Road)	2,428	137	6%	32
3. Newcastle Place	511	58	11%	32
4. Paddington Green	1,518	42	3%	32
5. A404 Harrow Road eastbound (west of Paddington Green)	21,636	1152	5%	48
6. A40 Westway	58,637	2645	5%	48
7. A404 Harrow Road eastbound (east of Paddington Green)	21,696	1494	7%	48
8. A5 Edgware Road (north of Church Street)	23,732	3115	13%	32
9. A5 Edgware Road (south of Newcastle Place)	23,139	3001	13%	32

# Technical Appendix 8.5: Site Suitability Assessment



## TECHNICAL APPENDIX 8.5: SITE SUITABILITY FOR RESIDENTIAL USE

### 1. Introduction

This technical appendix outlines the site suitability for its intended purpose from a noise perspective. It is, therefore, an outline assessment of possible design solutions.

The effect of noise sources on the proposed residential development (as the most noise-sensitive of the proposed uses) have been assessed in line with BS8233:2014 and Professional Practice Guidance (ProPG) on Planning and Noise developed by the Institute of Acoustics (IOA) and the ANC Acoustics, Ventilation and Overheating Residential Design Guide.<sup>1</sup>

ProPG considers new residential dwellings that will primarily be exposed to transportation noise. The preparation of this guidance was overseen by a Working Group consisting of representatives of the Association of Noise Consultants (ANC), IOA and Chartered Institute of Environmental Health (CIEH), together with practitioners from a planning and local authority background.

This guidance has been produced to provide practitioners with advice on a recommended approach to the management of noise within the planning system in England. It takes into account the guidance on the control and mitigation of noise detailed in the National Planning Policy Framework (NPPF) and the Noise Policy Statement for England (NPSE) and presents them in one overall document. It also provides further clarification and guidance for appropriate noise levels and suitable design, such as proposing suitable maximum noise levels in bedrooms at night.

The assessment covers the following:

- Internal ambient noise levels during whole-dwelling ventilation;
- Internal ambient noise levels during the overheating condition;
- External amenity noise levels; and
- Internal vibration levels.

### 2. Criteria

#### 2.1 Internal Ambient Noise Level

##### 2.1.1 Whole dwelling (background) ventilation

The internal ambient noise levels have been assessed in line with BS8233:2014, which recommends that for resting/sleeping conditions in living rooms and bedrooms, the internal noise levels should not exceed 35 dB  $L_{Aeq,16hour}$  (daytime) and 30 dB  $L_{Aeq,8hour}$  (night-time).

Consideration has also been given to the individual noise events, which should not regularly exceed 45 dB  $L_{Amax}$  during night-time hours (more than 10-15 times a night).

##### 2.1.2 Overheating

The ANC AVO Design Guide<sup>1</sup> provides a two-level assessment methodology for assessing noise impacts within developments during the overheating condition:

- Level One – high-level assessment based on external noise levels (see Figure 1) and determines whether a level two assessment is required.
- Level Two – based on internal noise levels, where the frequency of overheating is also considered.

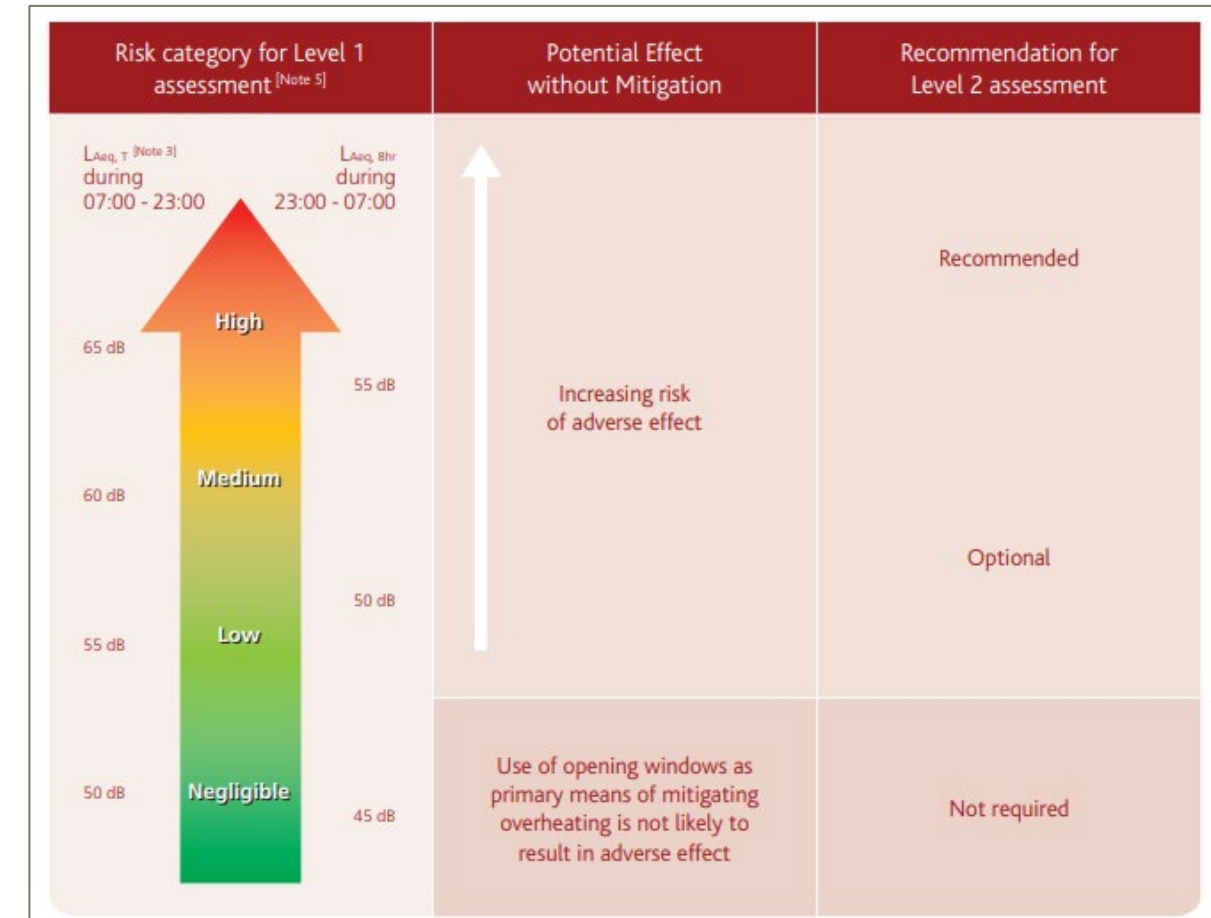


Figure 1: ANC AVO Guide Level 1 Assessment

The AVO Guidance provides a sliding scale that states that the more often overheating occurs, the lower the internal ambient noise level limit should be. Assuming that overheating occurs often ('worst-case' scenario), Significant Observed Adverse Effect Level (SOAEL) is considered when the internal ambient noise level exceeds 40 dB  $L_{Aeq,16hour}$  during daytime hours (0700-2300) and  $L_{Aeq,8hr}$  35 dB during night-time hours (2300-0700), i.e. 5dB higher than the BS8233:2014 guideline levels. This is based on Appendix B of the AVO guide.

#### 2.2 External Amenity Noise Levels

The noise levels in external amenity areas have been assessed in line with BS 8233:2014, which recommends that noise in external amenity spaces should not normally exceed 50dB  $L_{Aeq,T}$  or 55 dB  $L_{Aeq,T}$  in busy areas such as adjoining a transport network. It also recognises that the guideline values are not achievable in all circumstances where development might be desirable and that a compromise between elevated noise and other factors is warranted. In these instances, the development should seek to achieve the lowest practicable levels in these external amenity spaces and should not be prohibited.

In addition, ProPG states the following:

- "Where, despite following a good acoustic design process, significant adverse noise impacts remain on any private external amenity space (e.g. garden or balcony) then that impact may be partially off-set if the residents are provided, through the design of the development or the planning process, with access to:

<sup>1</sup> Association of Noise Consultants, 2020. Acoustics, Ventilation and Overheating: Residential Design Guide.

- a relatively quiet façade (containing openable windows to habitable rooms) or a relatively quiet externally ventilated space (i.e. an enclosed balcony) as part of their dwelling; and/or a relatively quiet, protected, publicly accessible, external amenity space (e.g. a public park or a local green space designated because of its tranquillity) that is nearby (e.g. within a 5 minutes walking distance)."

Consultation was undertaken with the Environmental Health Officer at Westminster City Council (WCC), Mark Walshe, who confirmed the following (by email) regarding acceptable noise levels in external amenity areas and balconies: "Where possible all external areas should achieve noise levels in line with WHO and BS8233, however we accept that this is not always possible. We would encourage all developments to try and meet these levels where possible through good design".

### 2.3 Vibration

BS 6472-1:2008 – 'Guide to evaluation of human exposure to vibration in buildings, Part 1: Vibration sources other than blasting' outlines methods for evaluating human response to structural vibration in buildings for residential use. It provides guidance on how to undertake vibration measurements, determining vibration dose value (VDV) and uses this metric to estimate the probability of adverse comment. These are summarised in Table 1.

Table 1: Vibration dose value ranges which might result in various probabilities of adverse comment within residential buildings			
Measurement	Low probability of adverse comment / $ms^{-1.75}$	Adverse comment possible / $ms^{-1.75}$	Adverse comment probable / $ms^{-1.75}$
Residential buildings 16hr day	0.2 to 0.4	0.4 to 0.8	0.8 to 1.6
Residential buildings 8hr night	0.1 to 0.2	0.2 to 0.4	0.4 to 0.8

### 3. Baseline

Noise and vibration measurements were undertaken to quantify the baseline noise and vibration climate at the site as described in Technical Appendix 8.2: Baseline Noise and Vibration Survey.

The noise measurements were used to calibrate the baseline noise model (undertaken with commercially available noise mapping software – CadnaA) and the noise levels incident on the façade were predicted using the predicted future traffic flows.

### 4. Modelling and Prediction

Noise levels at the proposed development have been predicted using the CadnaA suite of noise modelling software. This software utilises standard acoustic principles in conjunction with approved prediction methodologies (ISO 9613-2) and is an industry-standard method for predicting and assessing the impact of noise from a variety of sources.

The following noise sources were incorporated into the model:

- Traffic links surrounding the application site.
- The model allows for no ground absorption, as surfaces are understood to be hard / tarmacked. All buildings were assumed as acoustically reflecting. The model was set to consider three-orders of reflection.

The CadnaA model was calibrated to the levels recorded during the noise survey.

The noise levels at the proposed façades have then been calculated. Predicted future traffic flows are not predicted to result in measurable change to the façade noise levels.

The predicted daytime façade noise levels are shown in Figures 2 - 4.

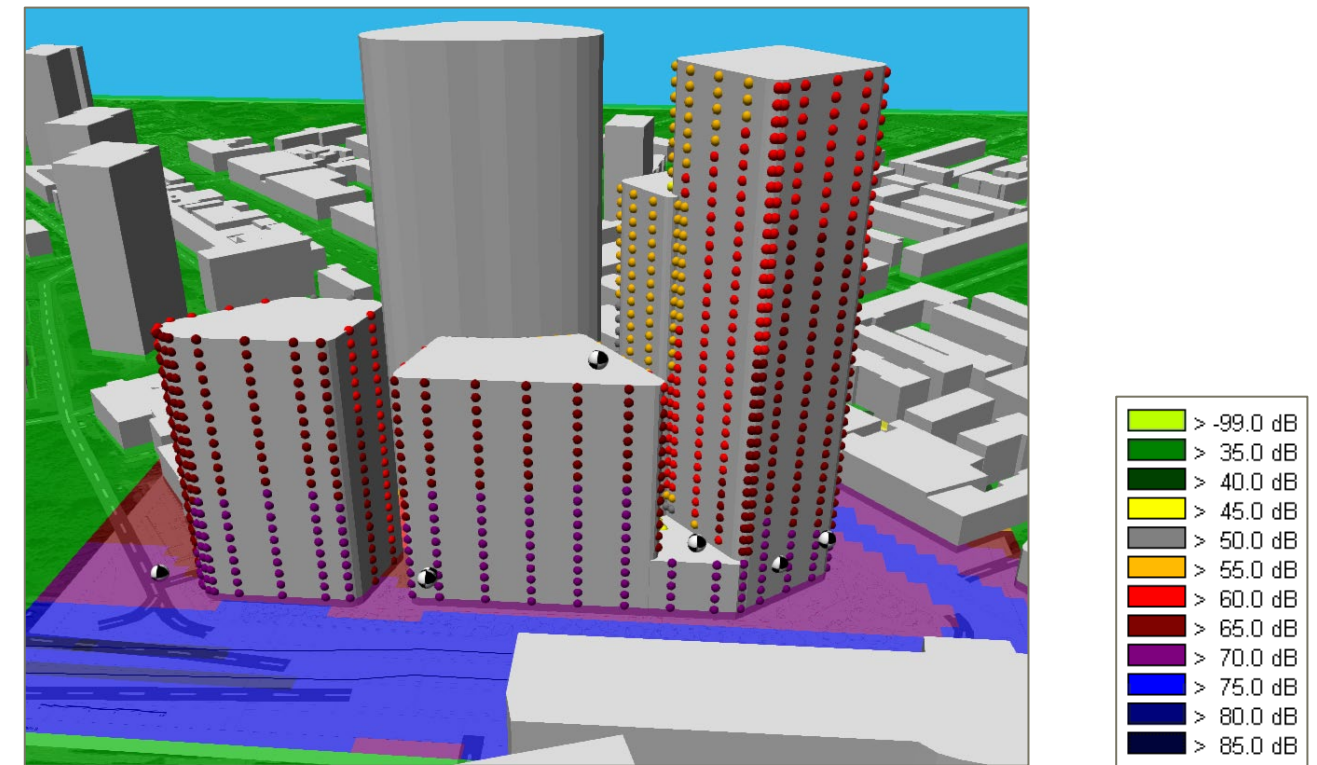


Figure 2: Daytime Average Noise Levels, dB LAeq – South Facades (Marylebone Road)

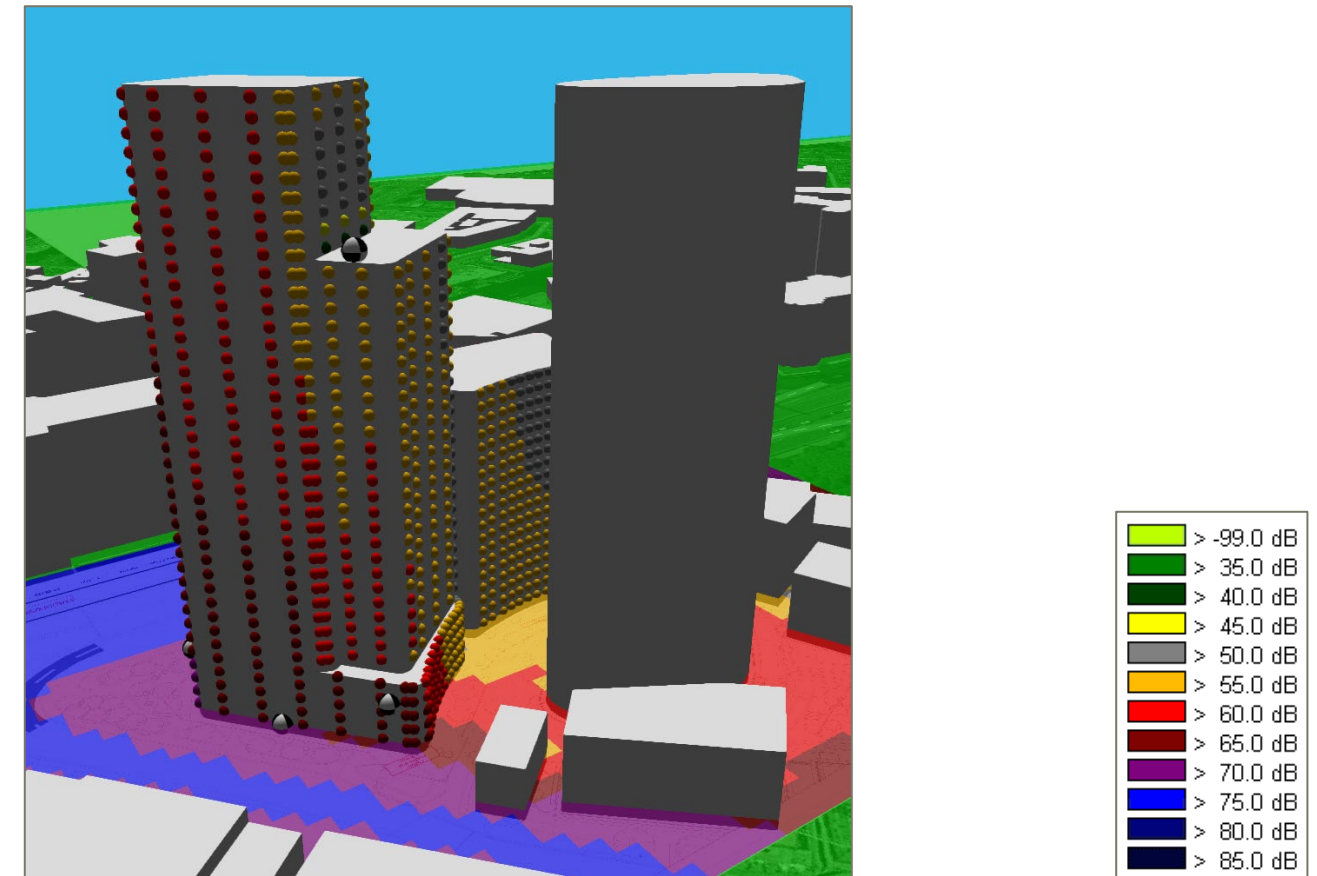


Figure 3: Daytime Average Noise Levels, dB LAeq – East Facades (Edgware Road) and North Facades



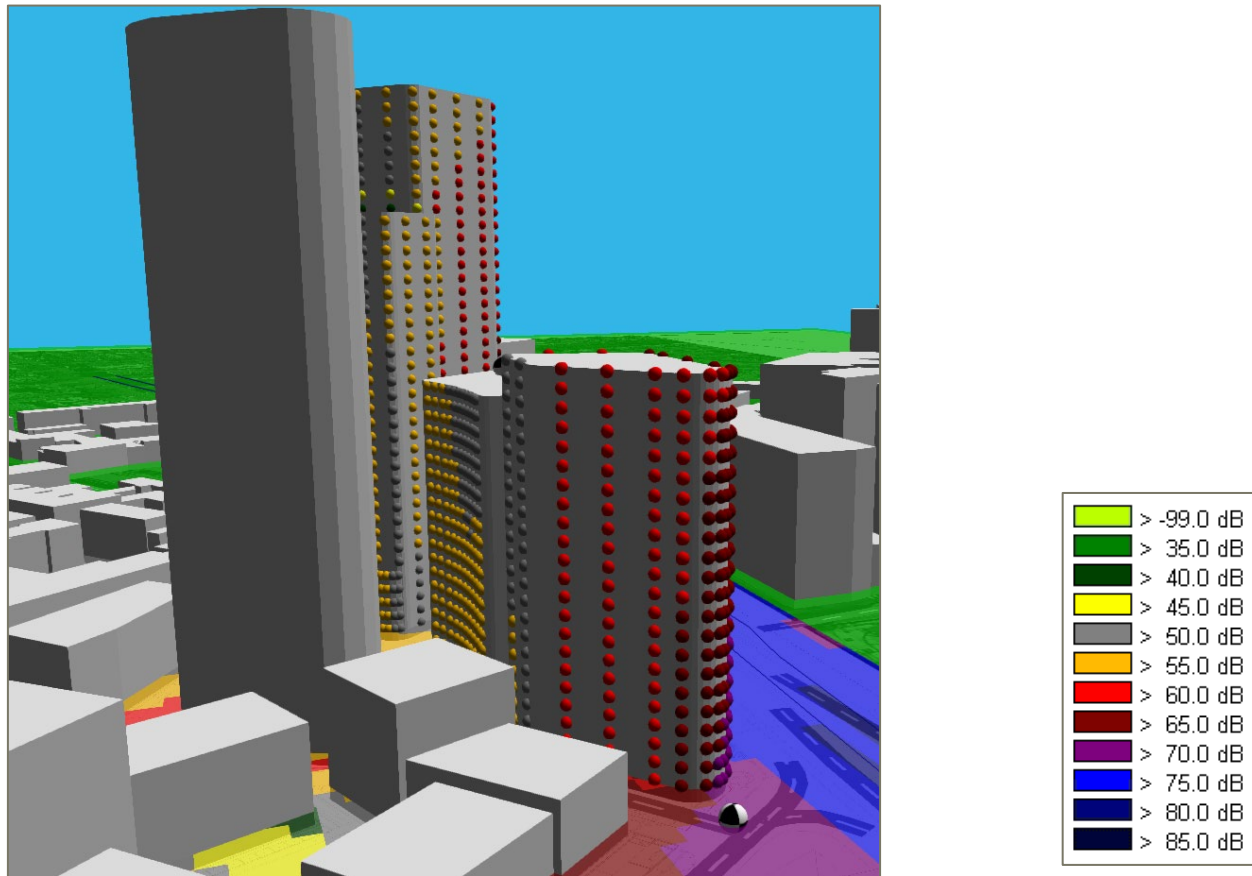


Figure 4: Daytime Average Noise Levels, dB LAeq – West Facades (Marylebone Road) and North Facades

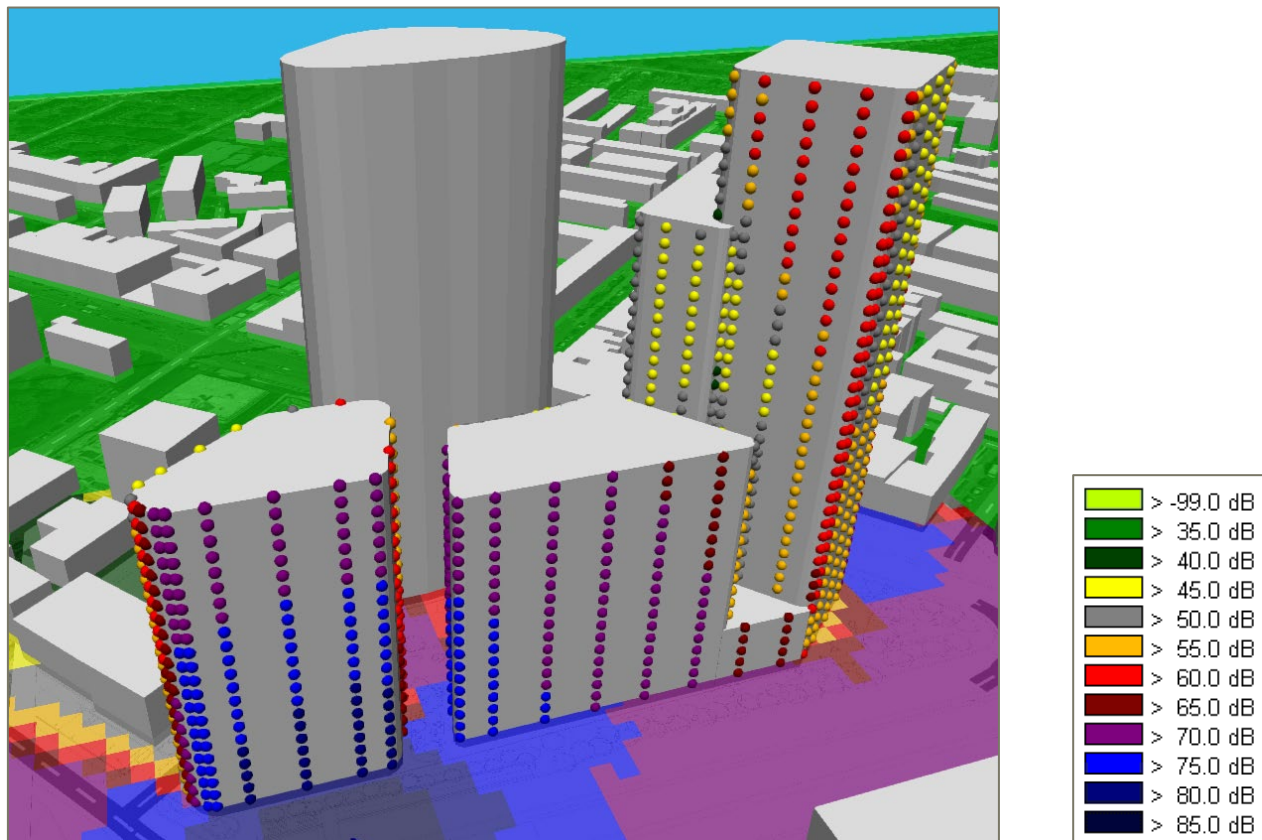


Figure 5: Night Time Maximum Noise Levels, dB LAFmax – South Facades (Marylebone Road). Source of maxima in front of Block I.

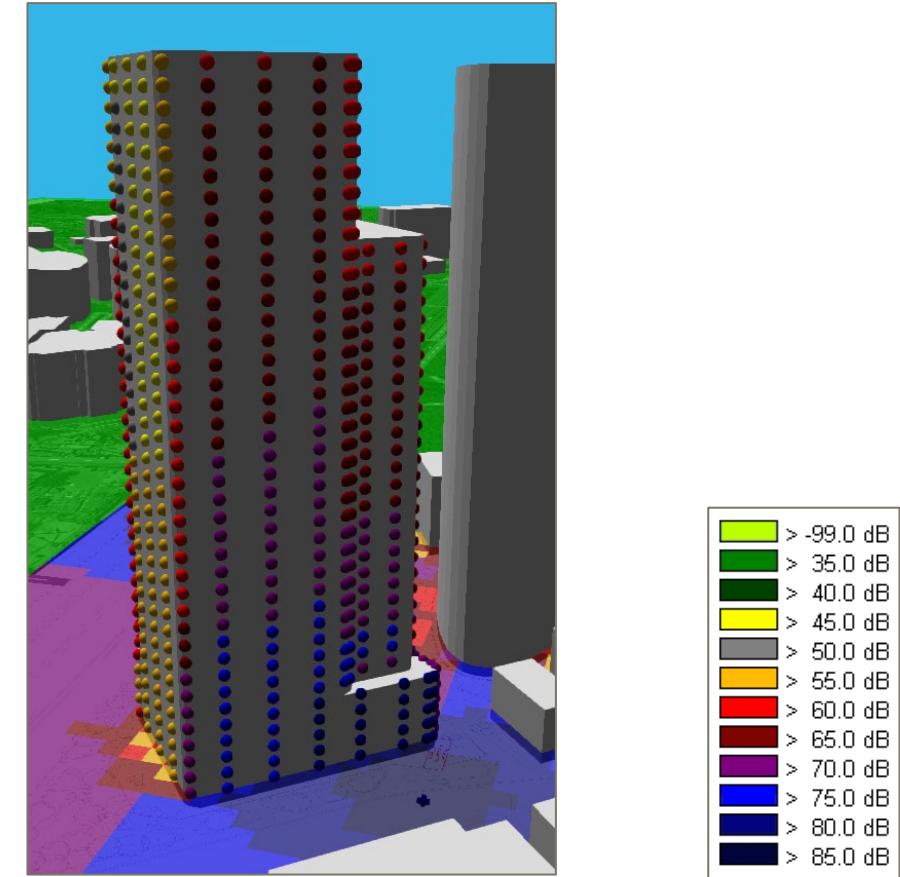


Figure 6: Night Time Maximum Noise Levels, dB LAFmax – East Facades (Edgware Road). Source of maxima in front of Block K.



## 5. Assessment

### 5.1 Internal Ambient Noise Level

Whole-Dwelling Ventilation

Façade specifications are given in Table 3 which would be capable of achieving the internal noise level requirements:

- 35dB LAeq Day; and
- 30dB LAeq, 45 dB LAFmax Night.

Calculations are based on a typical bedroom size of 3.8 m x 3.4 m x 2.4 m, and a window area of 4 m<sup>2</sup>.

Façade specifications are driven by achieving the maximum noise level (LAFmax) criterion in bedrooms. The façade specifications required to control maximum levels are also sufficient to meet the average (LAeq) level criteria (day and night).

It is assumed that the same glazing would be applied to living rooms as to bedrooms (for consistency); however, in practice it may be possible to reduce the specification of living room glazing slightly as the maximum noise level criterion does not apply in living rooms.

In all cases it is assumed that the remaining façade construction achieves at least 43 dB Rw+Ctr. This is typically achievable with heavy rainscreen cladding or brick slips on insulation-filled SFS with two layers of acoustic plasterboard internally.

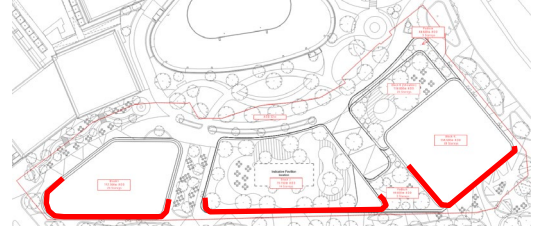
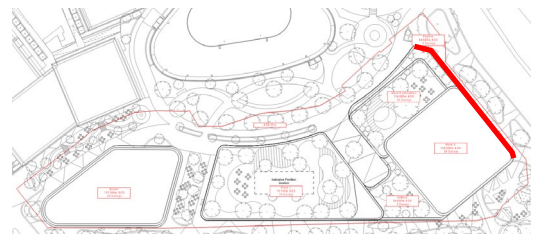
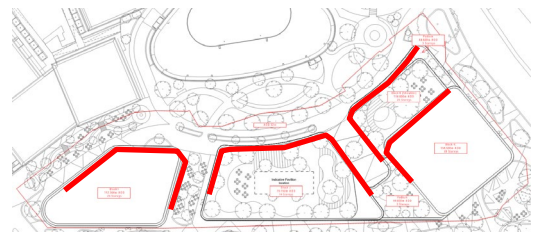
Example glazing configurations that are suitable to achieve the performance specifications in Table 3 are given in Table 2 to provide an indication of widths/weights etc. However, octave frequency band performance of any final glazing proposals would need to be reviewed and the Rw+Ctr values are used here to provide an initial guide.

The Applicant would aim to rationalise the glazing so as to minimise the types of glazing on-site. This will be developed during detailed design and co-ordinated in respect of energy performance requirements.

**Table 2: Example Glazing Configurations – For Guidance**

Performance Requirement	Example Glazing Specification (for guidance)
44 Rw+Ctr	16.8A / 15 / 16.8A acoustic laminate, or secondary glazing
43 Rw+Ctr	14.4A / 24 / 8.4A acoustic laminate, or secondary glazing
42 Rw+Ctr	12 / 20 / 12.8A acoustic laminate, or secondary glazing
41 Rw+Ctr	12 / 20 / 8.8A acoustic laminate
40 Rw+Ctr	10 / 16 / 12.4A acoustic laminate
39 Rw+Ctr	10 / 16 / 8.4A acoustic laminate
37 Rw+Ctr	10 / 12 / 8.4A acoustic laminate
36 Rw+Ctr	10 / 12 / 8.4A acoustic laminate
35 Rw+Ctr	10 / 20 / 6
34 Rw+Ctr	10 / 12 / 6

**Table 3: External Maximum Noise Levels and Façade Specifications Required to Meet WCC Requirements**

Façade (approximate extents shown in red)	Floor Level	Approx. External Levels, Typical LAFmax	Outline Glazing Performance	Ventilation Strategy
South Facing A40 	00	84	41 Rw+Ctr	MVHR i.e. ventilation provided by mechanical means. Windows can be openable at user discretion, but noise and ventilation requirements must be met when windows are closed.
	01	84	41 Rw+Ctr	
	02	84	41 Rw+Ctr	
	03	84	41 Rw+Ctr	
	04	84	41 Rw+Ctr	
	05	83	40 Rw+Ctr	
	06	82	39 Rw+Ctr	
	07	81	38 Rw+Ctr	
	08	81	38 Rw+Ctr	
	09	80	37 Rw+Ctr	
	10	79	36 Rw+Ctr	
11+	78	35 Rw+Ctr		
East Facing Edgware Road 	00	87	44 Rw+Ctr	MVHR
	01	87	44 Rw+Ctr	
	02	86	43 Rw+Ctr	
	03	85	42 Rw+Ctr	
	04	84	41 Rw+Ctr	
	05	83	40 Rw+Ctr	
	06	82	39 Rw+Ctr	
	07	81	38 Rw+Ctr	
	08	80	37 Rw+Ctr	
	09	79	36 Rw+Ctr	
	10	78	35 Rw+Ctr	
11+	77	34 Rw+Ctr		
North 	All levels	<77 (though maxima from development traffic will need to be assessed)	34 Rw+Ctr	MVHR Potential scope for acoustic trickle vents in some rooms.

Note that the performance stated must be achieved by the window/curtain wall as a whole including the frame and any opening lights. The acoustic performance of the frame becomes a significant factor for glazing over about 38dB Rw+Ctr.

Attenuators are likely to be required on the atmospheric connections of MVHRs at least up to the 10<sup>th</sup> floor on the facades facing Marylebone and Edgware Road. This is to control noise breaking in through the façade connections and out of the ductwork into the room.

All specifications are subject to a detailed review, since final room sizes, glazing areas and façade constructions are all variables which must be factored into the calculations used to determine the specifications outlined above.

#### 5.1.1 Overheating Condition

Based on the risk categories given in the Level 1 assessment from AVO (Figure 2) the site is in a 'high' risk category, meaning that there is a significant risk of adverse effects on residents if

overheating is relieved with open windows or other façade openings. Some parts of the buildings facing north may fall into a 'medium' risk category during the day but as night time levels at the site do not fall significantly from daytime levels, these parts of the buildings fall into the 'high' risk category at night.

With external levels of around 70dB LAeq at the lowest floor levels and around 60dB LAeq at the highest floor levels facing the roads, internal levels would be in the region of 57-47dB LAeq when windows are opened for rapid cooling (depending on the opening area required). Comparing this to the AVO guidance, the internal levels would have significant impacts on sleep disturbance and quality of life (see Red category of Figure 2). On this basis, control of overheating through open windows (or other simple façade openings) is not likely to be possible on any façade or floor level of the building.

In order to comply with the overheating requirements the design should use a combination of passive (minimising solar gains using blinds / balconies / external fins) and non-passive (mechanical cooling via FCU served from an air cooled chiller on the roof in the private apartments / inline DX cooling module within the affordable units) measures. The exact combination would be finalised at detailed design stage when more advanced thermal analysis for the building has been undertaken.

### 5.1.2 Summary

With the application of a façade strategy similar to that given in Table 3 (and consideration of the overheating provision), the internal ambient noise levels are predicted to fall below the target level. On the basis that these requirements are secured by planning condition, the proposed development would be acceptable for residential use and the effects would be Negligible.

## 5.2 External Amenity Noise Levels

The proposed amenity spaces are private recessed balconies and communal amenity areas, particularly the rooftop of Blocks J and K.

### 5.2.1 Rooftop Terraces

The ambient noise levels predicted on the rooftop terraces are given in Table 4. The levels are predominantly <55dB i.e. the BS8233 target for busy urban areas / adjoining a major transport network. Thus, all residents would have access to amenity spaces with suitable noise levels.

Table 4: Noise Levels Predicted on Rooftop Terraces	
Block	Noise Level on Roof Terrace
J	59-51 dB LAeq
K (northern section)	53-54 dB LAeq
K (private roof terraces)*	49dB LAeq

### 5.2.2 Balconies

The EHO consultation acknowledges that higher levels than WHO guidelines may be acceptable; although no definitive limits are provided. The facades noise levels have been categorised as high / medium / low (without mitigation) to show regional variation (see Table 5 and Figures 7-9). It should be noted that these bands are intended as a way of judging the potential risk of using typical, open balconies at different parts of the building facades. These are not fixed limits and it is not to say that open balconies could not be proposed for 'High Risk' areas. These noise level bandings are marked on the building elevations in the Figures 7 to 9, where each coloured dot represents a building storey with a vertical interval between dots of approximately 3.3 m. The first dot is 2 m from ground level.

Table 5: Assessment of Balcony Noise in Urban Environment		
Balcony Noise Levels	Noise Level on Balcony	Comment
Low	≤55 dB LAeq,16hr	Levels in line with WHO, assumed to be acceptable
Medium	56-65 dB LAeq,16hr	Levels up to 10dB higher than WHO. Risk of unacceptability increases with noise level, but should be balanced with the benefit afforded by private amenity space.
High	>65 dB LAeq,16hr	

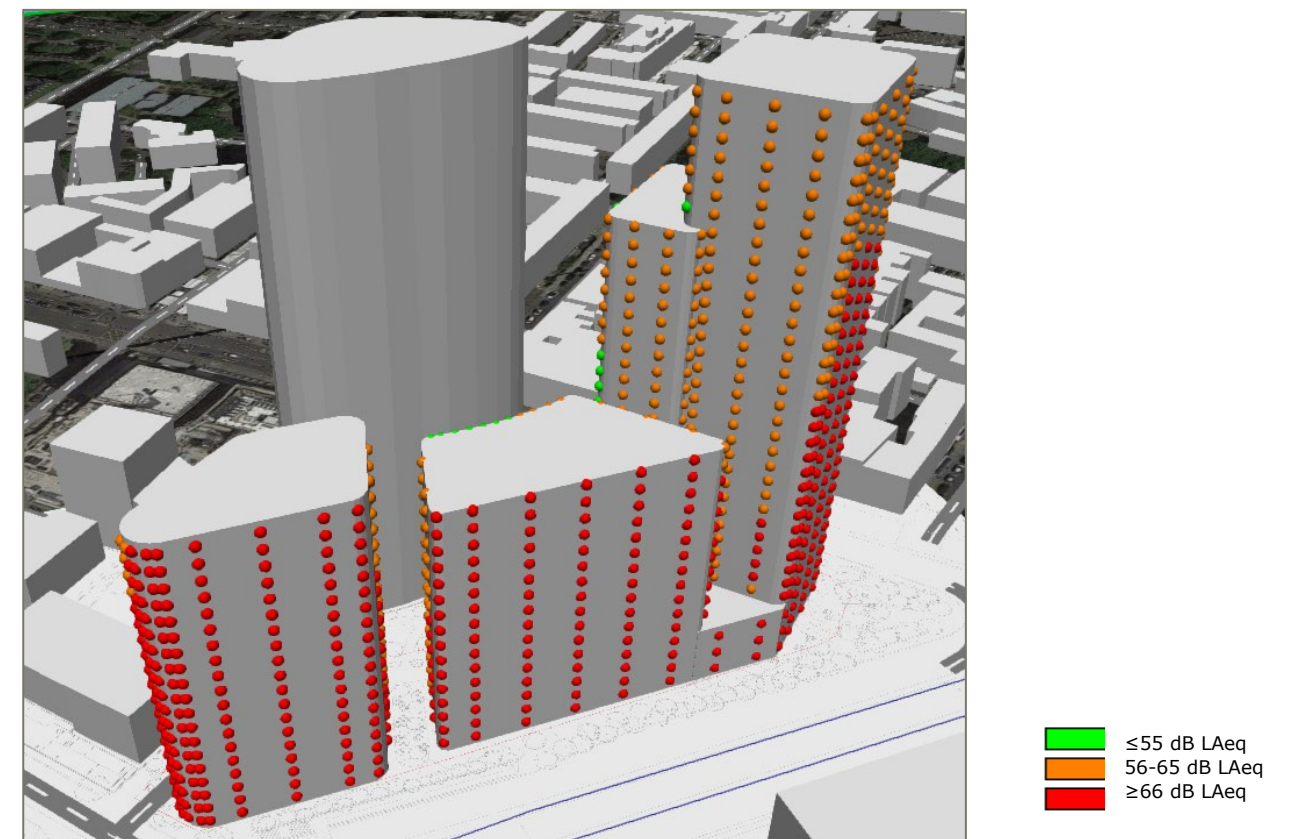


Figure 7: Façade noise levels at different storeys, facing A40



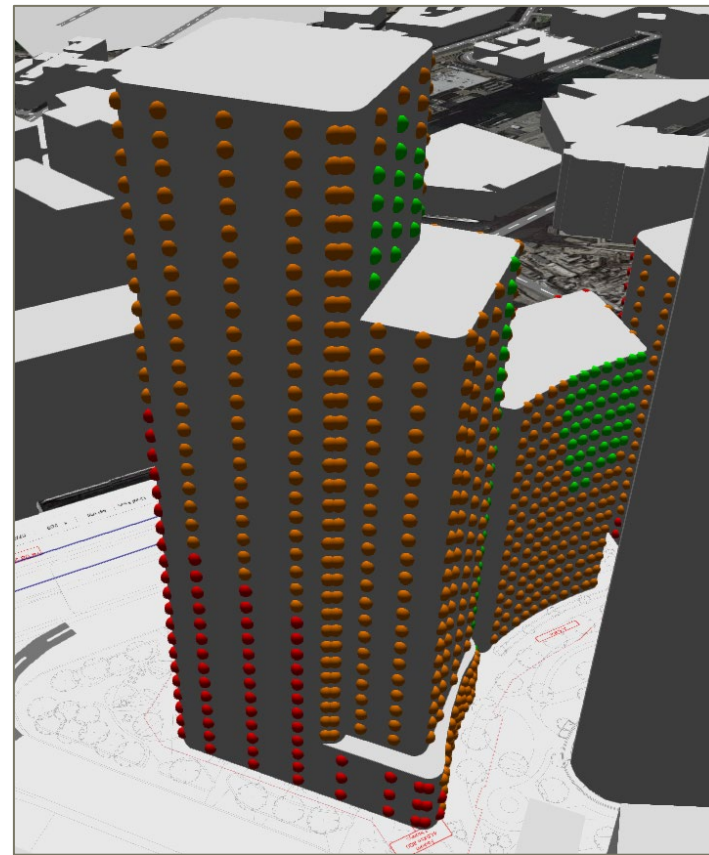


Figure 8: Façade noise levels at different storeys, facing Edgware Road

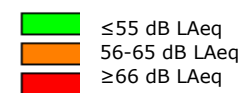
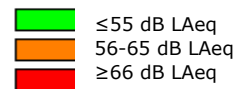
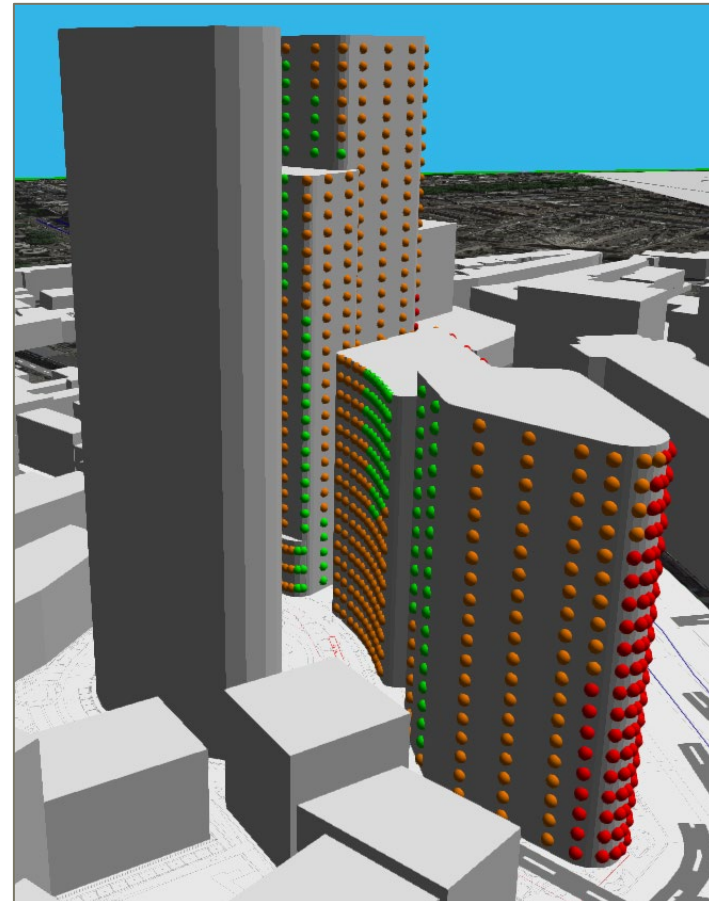


Figure 9: Façade noise levels at different storeys, facing Paddington Green

The proposed balconies are to be recessed from the façade with solid balustrade floor levels. This is expected to reduce the noise levels on the balconies by up to 5dB at lower levels and by up to 10dB at higher levels (approximately 10<sup>th</sup> floor and above) when seated.

### 5.2.3 Summary

The majority of balconies are predicted to experience noise levels in excess of the 55dB target for urban areas. However, with the proposed embedded mitigation, at least 5dB of attenuation is predicted. It should also be noted that, residents would have access to additional amenity areas such as the rooftop terraces and Paddington Green within 5 minutes walk. The rooftop terraces would experience noise levels below the 55dB target.

Taking into account the urban location of the site and the open balconies provided within the adjacent WEG and 14-17 PB schemes, external noise levels of up to 65 dB are considered appropriate for the proposed development.

### 5.3 Vibration

As outlined in the BS6472, the vibration measurement results provided in Technical Appendix 6.2 indicate that there is 'low probability of adverse comment' in both the daytime and the night-time.

However, the measured levels are indicators at surface level only and that driven piles for any buildings may result in significantly higher levels of vibration within any buildings due to structureborne noise propagating through the foundations. Vibration levels typically reduce as they enter the structure of a building due to impedance differences. However, this is not necessarily a linear trend. Vibration levels can amplify as the move up through the first few floors of a building due to structural elements and connections. The precise foundation and building constructions are not known at this time, therefore it is not possible to predict the transfer function between the vibration in the ground and the vibration experienced by the occupiers.

Based on the current levels measured on the basement slab, it is considered that proposed development would be acceptable for residential use from a vibration perspective.

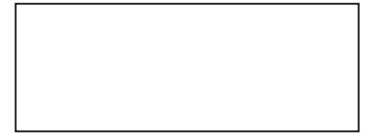
# Technical Appendix 10.1: Pre-Application Consultation

## Appendix 10.1 Pre-Application Consultation

Westminster City Council

Pre-Applications  
Place Shaping and Town Planning  
Westminster City Council  
PO Box 732  
Redhill, RH1 9FL

westminster.gov.uk



Your ref:  
My ref: P21/00119

**Please reply to:** Nathan Barrett  
Tel No: 07866036771  
Email: northplanningteam@westminster.gov.uk

Berkeley Homes (Central London) Limited  
c/o Turley

By email to laurence.brooker@turley.gov.uk

**Place Shaping and Town Planning**  
Westminster City Council  
PO Box 732  
Redhill  
RH1 9FL

Date: 15 February 2021

Dear Sir,

### **TOWN AND COUNTRY PLANNING ACT 1990 PLANNING (LISTED BUILDINGS AND CONSERVATION AREAS) ACT 1990**

#### **Paddington Green Police Station, 4 Harrow Road, London, W2 1XJ**

Further to your email of 27 January 2021, I set out our comments on the several aspects of the pre-application proposals that have been presented to us on 27 November 2020 and 5 February 2021. Comments on the height of the proposed blocks, highways aspects of the proposal and viewpoint selection have been forwarded separately and we will be relying on the GLA's expertise for the energy and sustainability aspects of the development. We will provide our comments on the detailed design of the proposal as soon as we receive them.

#### **Development Plan Status**

As you are aware, the New London Plan (January 2021) ("The London Plan") has very recently been adopted and - at least by the time the City Council comes to decide this application - we will have adopted the Draft City Plan 2019-2040 ("Draft City Plan") in largely its present form. The comments below therefore assess this proposal against the New London Plan and Draft City Plan. It should be noted that the development plan will be completely up-to-date and have been adopted post-Covid. It will therefore have considerable weight and there are few if any conceivable material considerations that would justify a departure from its policies.

It is expected that the development will meet the Draft City Plans policies and that any deviation from its policies will need to be robustly justified. Much of the discussion thus far has focussed on the building heights proposed, which greatly exceed that envisaged by policy 41 of the Draft City Plan. Significant deviations from the remaining policies will work against the exceptional public benefits test that must be met to justify the building heights proposed and we would expect these policies to be largely met to enable a positive officer recommendation.

#### **Land Use**

##### Loss of Existing Police Station Use

The Draft City Plan does not explicitly protect police station floorspace whilst policy S1 of the London Plan indicates that its loss may be acceptable where it is part of a wider public service transformation plan. As noted when considering application RN: 20/06527/FULL, the police station was identified as surplus to the Metropolitan Police's requirements in MOPAC's 2013-16 Estate Strategy. Accordingly,



the loss of the police station use is consistent with policy S1 of the London Plan.

#### Provision of Residential

As you are aware, the provision of residential is strongly supported by policy S14 of the City Plan (November 2016) (“the City Plan”) and policy 8 of the Draft City Plan.

It is unclear whether 38% of the residential units or whether 38% of the residential floorspace would be affordable. Provided it is the latter however, then the quantum of affordable housing would accord with policies S16 of the City Plan and 9 of the Draft City Plan. As this site is “public sector land” it is understood that an affordable housing contribution is to be provided within LB Barnet, in accordance with MOPAC’s portfolio agreement with the Mayor. This would provide the equivalent of 50% affordable housing by habitable room required by policy H4 of the London Plan. On this basis, it is understood that the GLA are content for this scheme to be considered under the Fast Track Route, pursuant to policy H5 of the London Plan.

The tenure mix, as of 5 February 2021, is approximately 58 (intermediate) : 42 (social) which broadly accords with the 60:40 split sought by policy 9 of the Draft City Plan. As you will be aware from your discussions with Fergus Coleman (Head of Affordable Housing and Strategy), the City Council seeks nomination rights for the affordable units to be provided within LB Barnet and it is understood that this is acceptable to LB Barnet, as per MOPAC’s letter dated 8 February. We would seek to secure this as far as possible, via a legal agreement should permission be granted. A copy of MOPAC’s letter and an anticipated delivery date for the units in LB Barnet should accompany your application.

#### Housing Mix

Based on the typical floorplans and unit mix submitted, approximately 6% of the proposed units would be studios, which accords with policy 10 of the Draft City Plan. However, the unit mix indicates that approximately 22% of all flats are family sized. This does not meet the 25% strategic target set out in policy 10 of the Draft City Plan and no case has been made for this, as per para 10.6 of the same. It is also noted that the penthouse flats proposed exceed the 200 sqm maximum set out in policy 8 of the Draft City Plan and no justification has been provided for this. These flats could be split to add additional large units that would go some way toward addressing the family sized housing deficit against policy 10. At the present time, the unit mix proposed cannot be supported.

#### Housing Quality

The typical floor plans submitted indicate that the proposed flats will all exceed the Nationally Described Space Standards and in this respect are consistent with policies D6 of The London Plan and 12 of the Draft City Plan. It is also noted that all flats have access to a private balcony and accord with the Private Outside Space standards contained within policy D6 (F). All flats will also have access to the communal roof terraces proposed and it was reassuring to hear in our meeting on 5 February that all residents, including those in the social and intermediate units, would have access to these spaces. Although floorplans for the flats have not been provided, it is expected that they would meet the Private Internal Space standards set out in policy D6 (F) and this should be demonstrated as part of your application.

As per the presentation on 27 November 2020, 48% of the proposed flats will be dual or triple aspect. Whilst the remaining 52% of homes have been termed “semi-dual aspect”, we would consider these single aspect. It is recognised that the layout of the proposed blocks optimises space on-site and that this will result in a proportion of single aspect flats. As per policies D6 (C) of the London Plan and Policy 12 (E) of the Draft City Plan, the acceptability of these single aspect flats is dependent on

the adequacy of passive ventilation, daylight and privacy and how they avoid overheating. With respect to daylight, your application should demonstrate Average Daylight Factor (ADF) levels for the proposed flats and the degree to which these flats do or do not meet the criteria within BRE’s “Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice” (2011) (“the BRE Guide”). With respect to privacy, it is noted that the single aspect flats that face into the gap between the blocks are approximately 10 m from one another. This is very close and you will need to demonstrate how the privacy of these flats will be maintained.

#### Non-residential Uses

Given this sites location within the CAZ and Church Street / Edgware Road Housing Renewal Area, the provision of Class E floorspace is supported in principle by policies 6, 13 and 14 of the Draft City Plan.

The location of offices at first and second floor is supported. With regards to the ground floor uses, no specific Class E use has been stated, although uses that provide an active frontage are required by policy 14 (B) of the Draft City Plan. These could include retail, restaurant and professional services open to visiting members of the public. Offices or other uses with inactive frontages should not be located on the ground floor frontages to accord with policy 14 (B) but also to create activity vital to your clients placemaking aspirations around the blocks.

Although Class E is supported in principle, there may be some uses within Class E (including but not limited to, creche, day nursery, day centre or supermarket) that result in highways, noise or air quality impacts that are unacceptable on this particular site. If your client seeks the ability to provide all uses within Class E, then your application must demonstrate the potential impact of all uses on the adjacent highways network and uses and set out any necessary mitigation.

The provision of affordable workspace is also supported by policies E3 of the London Plan and 13 (C) of the Draft City Plan. Your application should be accompanied by a Draft Planning Obligation that sets out how this affordable workspace will be secured, having regard to the considerations within policy E3 (A) of the London Plan.

#### **Daylight/Sunlight**

The full impact on neighbours can only be fully assessed when a planning application has been made and neighbours have had a chance to comment on the development. Notwithstanding, it is recognised that this scheme is likely to result in high levels of light loss to neighbouring residential properties (albeit many of these are also owned by the applicant at present) although this will be weighed in the planning balance against this schemes significant contribution to housing and affordable housing and its location within the Church Street /Edgware Road Housing Renewal Area. It is also recognised that the general absence of high buildings on the application site at present will make Vertical Sky Component (VSC), No Sky Line (NSL) and Annual Probable Sunlight Hours (APSH) losses appear higher than they would ordinarily be.

Given the location of this site, you should demonstrate typical VSC levels to be expected in central London to indicate whether VSC to surrounding sites are appropriate. This would give a more appropriate benchmark for acceptable VSC levels to neighbouring properties, rather than the 27% figure indicated in the BRE Guide which is intended to apply across the country. As noted in our meeting on 27 November 2020, the use of ADF over NSL is also queried. Paragraph F7 to Appendix F of the BRE Guide notes that ADF is generally not recommended when considering light loss to existing buildings.

## Public Realm

Our Placeshaping team have reviewed the proposal and have the following comments and queries:

### Newcastle Place

As an area which suffers from high levels of crime, active frontages and light levels will be essential for ensuring safety along Newcastle Place. The piazza seating outside blocks A & B is supported but how will the other commercial units support active facades along the south side? Due to the significant height proposed on both sides of the street information on the overshadowing and daylight impact on Newcastle Place should be provided. Is there any greening proposed on the south side? It is unclear from the images submitted.

### Underpass

The lighting proposals would activate the underpass and are supported. Greening along the access to the underpass is also supported, although good visibility must be maintained to ensure safety. Does the scheme look at additional ways to improve underpass access?

### Edgware Road Junction

The idea of a water play area within the scheme is encouraged, although we are not convinced that the position at this junction is the most suitable, as it's a busy junction with significant movement requirements and high pollution. It would be better positioned on Newcastle Place, where its quieter and children can play more safely. Activation of this corner provides an opportunity to transform this junction and the Marylebone Flyover, but needs review with some good case studies.

The Placeshaping team have produced a draft Paddington Places report which includes details of soft and hard landscaping palettes, lighting and wayfinding that the City Council are looking to encourage across the area. The Placeshaping team would be happy to share this information to inform the next stage of your design. Please contact Joanna Turner for more information ([jturner2@westminster.gov.uk](mailto:jturner2@westminster.gov.uk)).

## Waste Strategy

Our Waste Project Officer (Saeed Oluwadipe [soluwadipe@westminster.gov.uk](mailto:soluwadipe@westminster.gov.uk)) has reviewed the proposed waste strategy and has the following comments:

- The waste storage capacity proposed is acceptable and the size of bin store is adequate to accommodate expected waste generation;
- Your application should ensure that the separate bin stores for the commercial and residential uses are labelled as such;
- The bins should be labelled R (for recycling), O (for food waste) and W (for general waste) on the application drawings;
- The swept path analysis is not very clear including the waste servicing details. Your application should include a clear detailed swept path analysis and waste servicing details to include the name of street or road for accessing and exiting the site. The vehicle dimensions must match exactly the refuse vehicle dimension stated in the council waste storage requirements;

- The waste chute in Block K is not supported. Residents should use the lift to access the waste store directly. Currently, the council is not meeting the government recycling target of 50% for households waste, as the council recycling rate fluctuates between 19% - 22%. There are so many problems associated with the use of tri separator or single chutes especially where all the types of wastes (food waste, residual waste and recyclable materials) will be travelling in the same vertical column or tube. There are issues of food waste bags bursting and polluting the chute internal surfaces and therefore contaminating recyclable materials that will be disposed using the same chute. More importantly, recyclable materials such as cardboard block the chute easily and cause confusion for other users of the chute. Some residents may not be patient enough to use the tri-separator correctly if they are disposing of two different type of waste and use the recycling button to dispose of both waste and recycling or use the waste button to dispose of both waste and recycling.
- Whilst it is recognised that a chute was permitted in the Westmark Tower at West End Gate, that development and its waste disposal details were considered before the adoption of the City Council's most recent guidance and therefore does not justify a chute in this instance.

## Noise and Air Quality

As you are aware, the application site is heavily impacted by both air pollution and traffic noise due to its location at the junction of Harrow and Edgware Roads and next to the A40. The use of MVHR systems with NOx filters to mitigate harmful air quality levels is acceptable in principle and it is recognised that their full extent will be determined following a yet to be completed monitoring study. This study will also need to demonstrate air pollution levels for the proposed balconies and roof terraces and indicate whether they will be safe for future residents to use and/or the need for any mitigation. As per policy 32 D of the Draft City Plan, your application must be accompanied by an Air Quality Assessment.

With regards to internal and noise levels, the targeting of 35dB(A) daytime and 30dB(A) night time noise levels and the use of the MVHR system to achieve this on the flats facing Harrow and Edgware Roads and the A40 is also supported. With regards to the balconies, you will need to demonstrate the extent of otherwise of compliance with BS8233:2014 and how they have been designed to minimise noise exposure as part of your application.

## Public consultation

The consultation summary from Concilio is noted. In addition to the stakeholders already consulted, you should also share your proposals with the Paddington Waterways and Maida Vale Society as the recognised amenity society for this site and with the St Marylebone Society whose area is located to the east of the site, across Edgware Road. With the addition of these two amenity societies, the extent of consultation should cover all areas that your proposals will directly impact. Using the viewpoint analysis as a guide, you should also consider consulting with those amenity societies areas from which your proposals will be visible. It would also be helpful if the 'raw' consultation responses were submitted with the report as part of your application to gauge public opinion early in the process.

The advice contained within this letter is for guidance and does not prejudice the consideration of any future applications under the Planning Acts. If you require any further guidance please contact Nathan Barrett on 07866036771.

Yours faithfully

Nathan Barrett

**Nathan Barrett**

NB In order to speed up the processing of your application, submitted documents and drawings should be titled in accordance with our file naming protocol. More information is available on our website: <https://www.westminster.gov.uk/submitting-your-planning-application>. If you provide the drawings on a CD or an USB stick, the size of each document must be maximum 5 MB.

## Technical Appendix 10.2: Drawings





**SOURCES OF INFORMATION**

- IR11-1021 - Squires and Partners
- IR12-1021 - VUCITY-VERTEX
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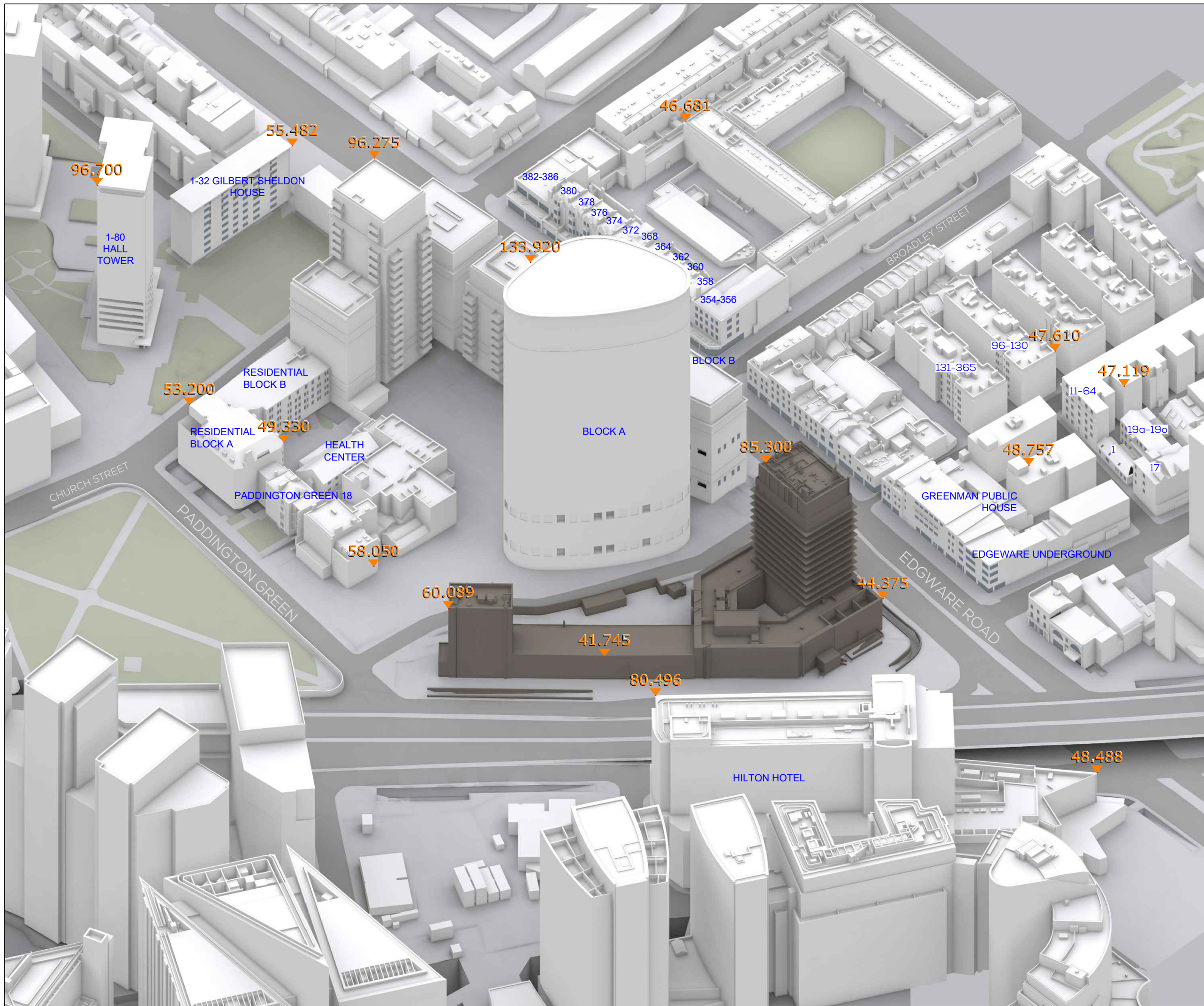
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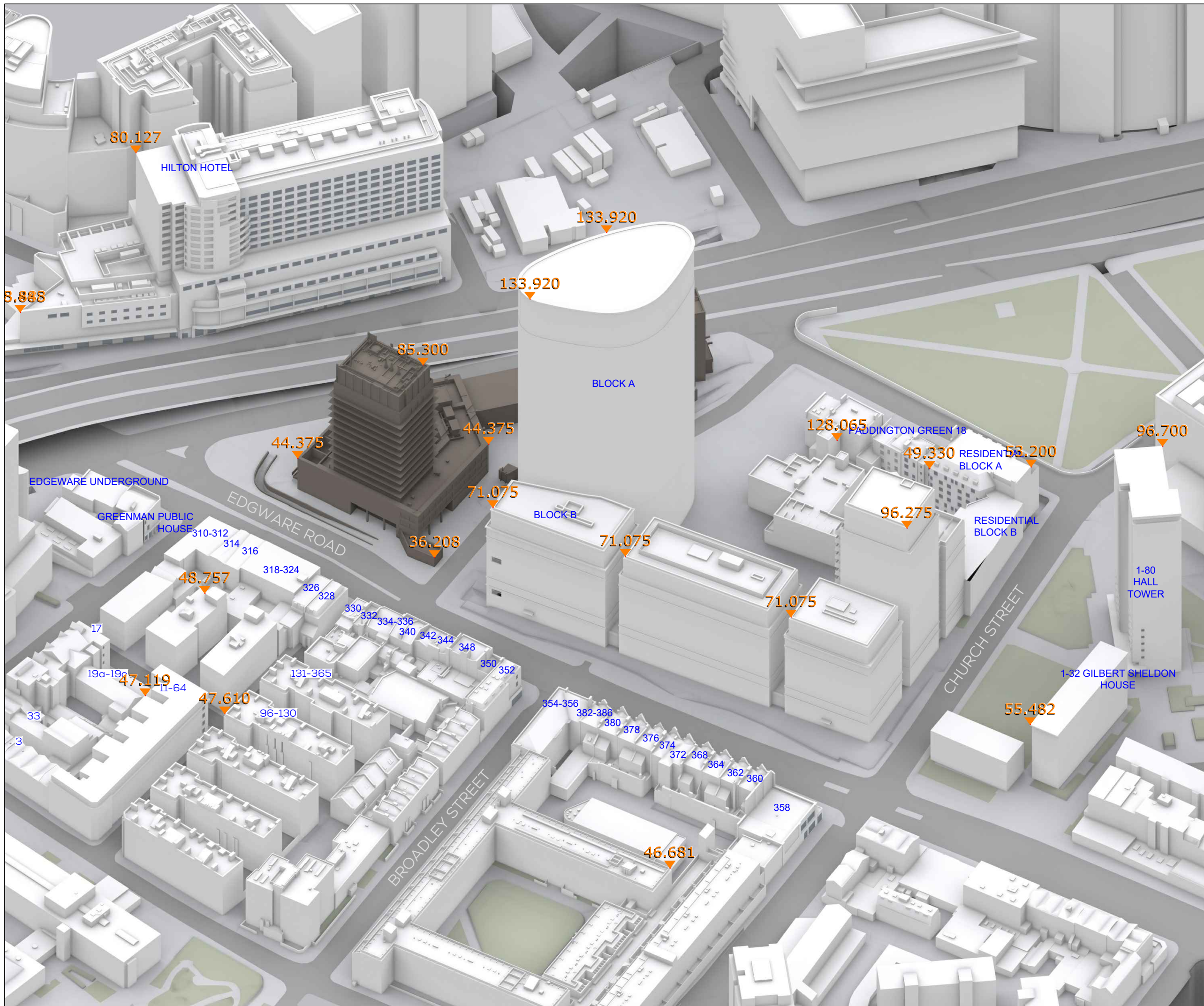
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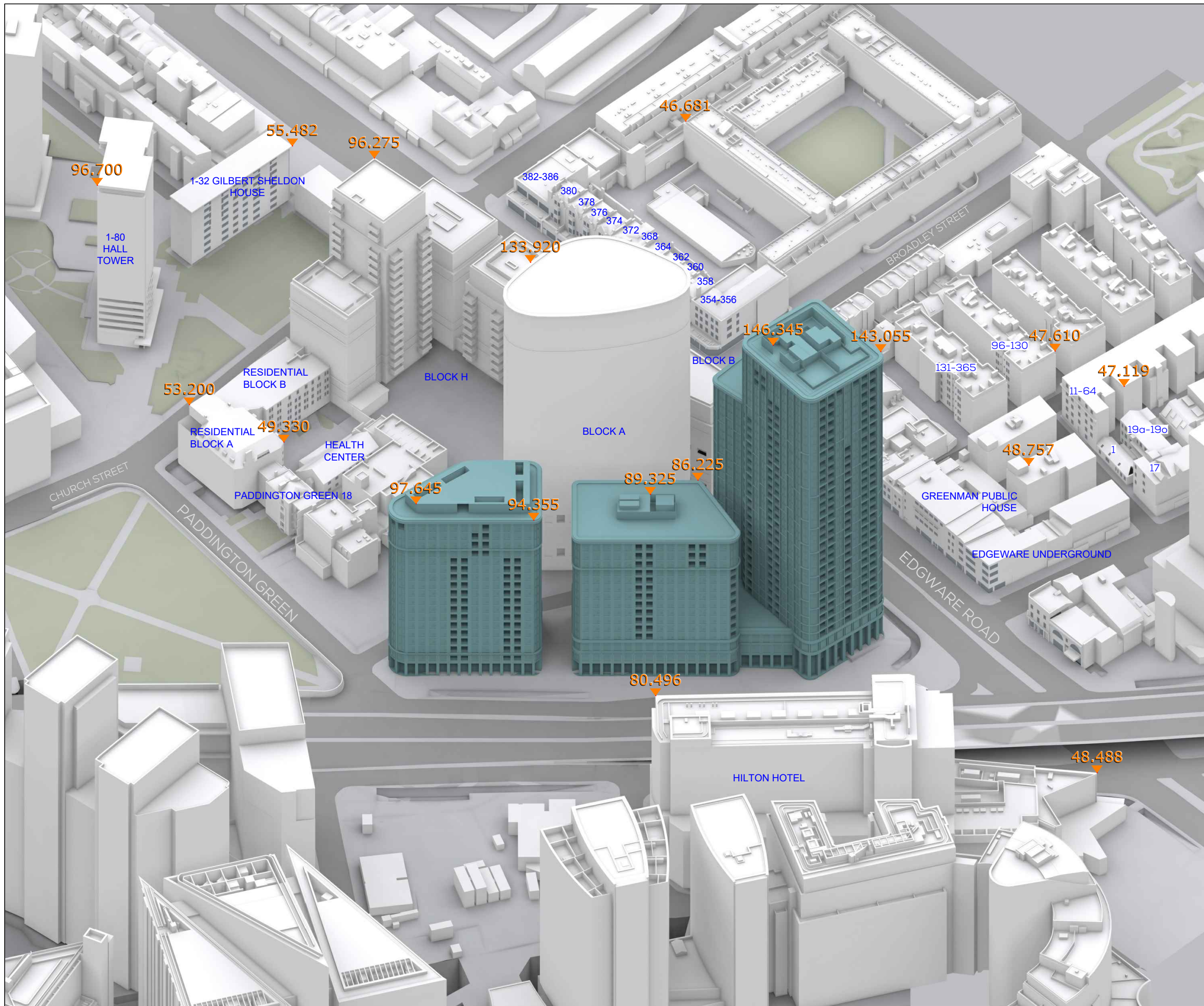
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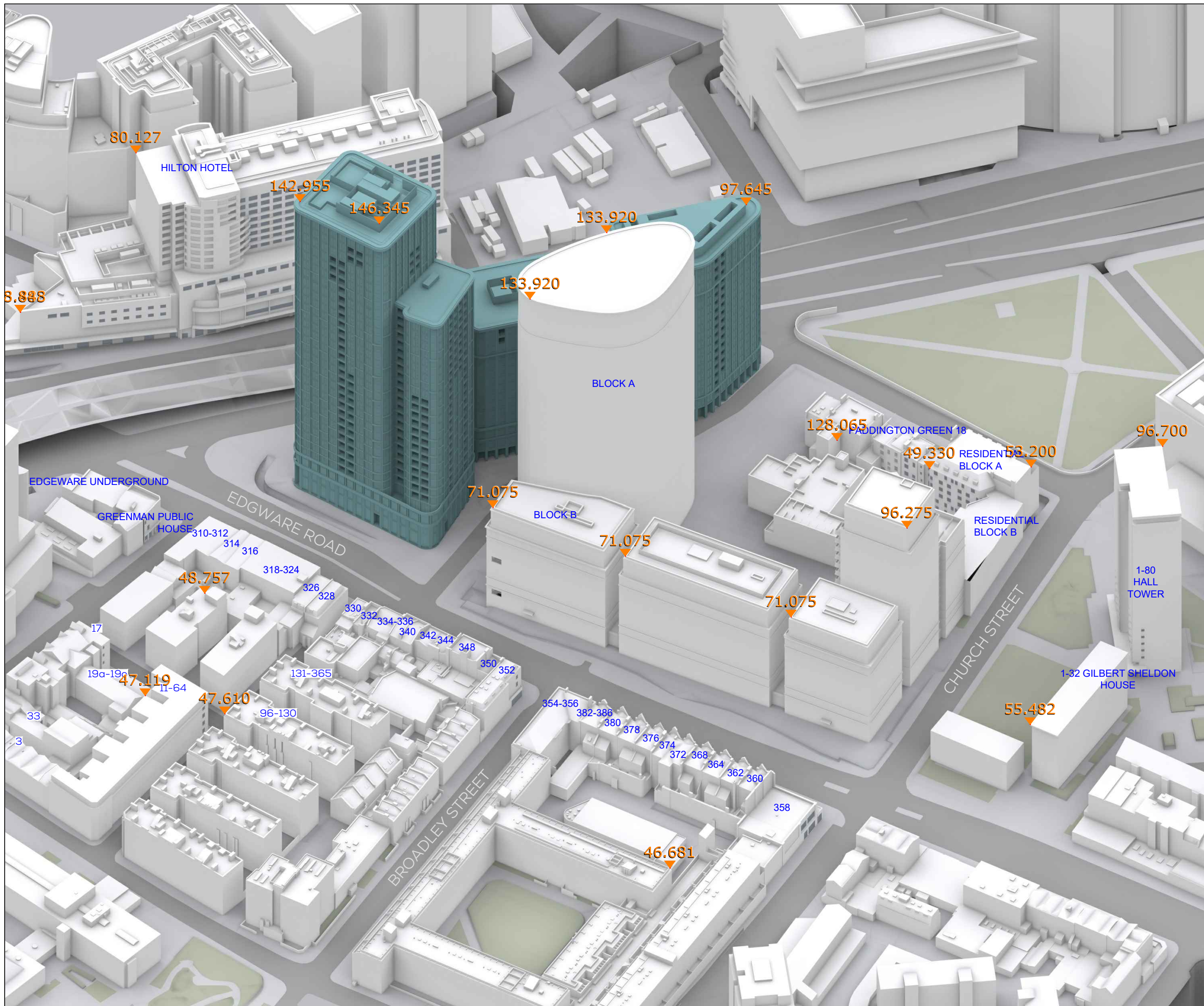
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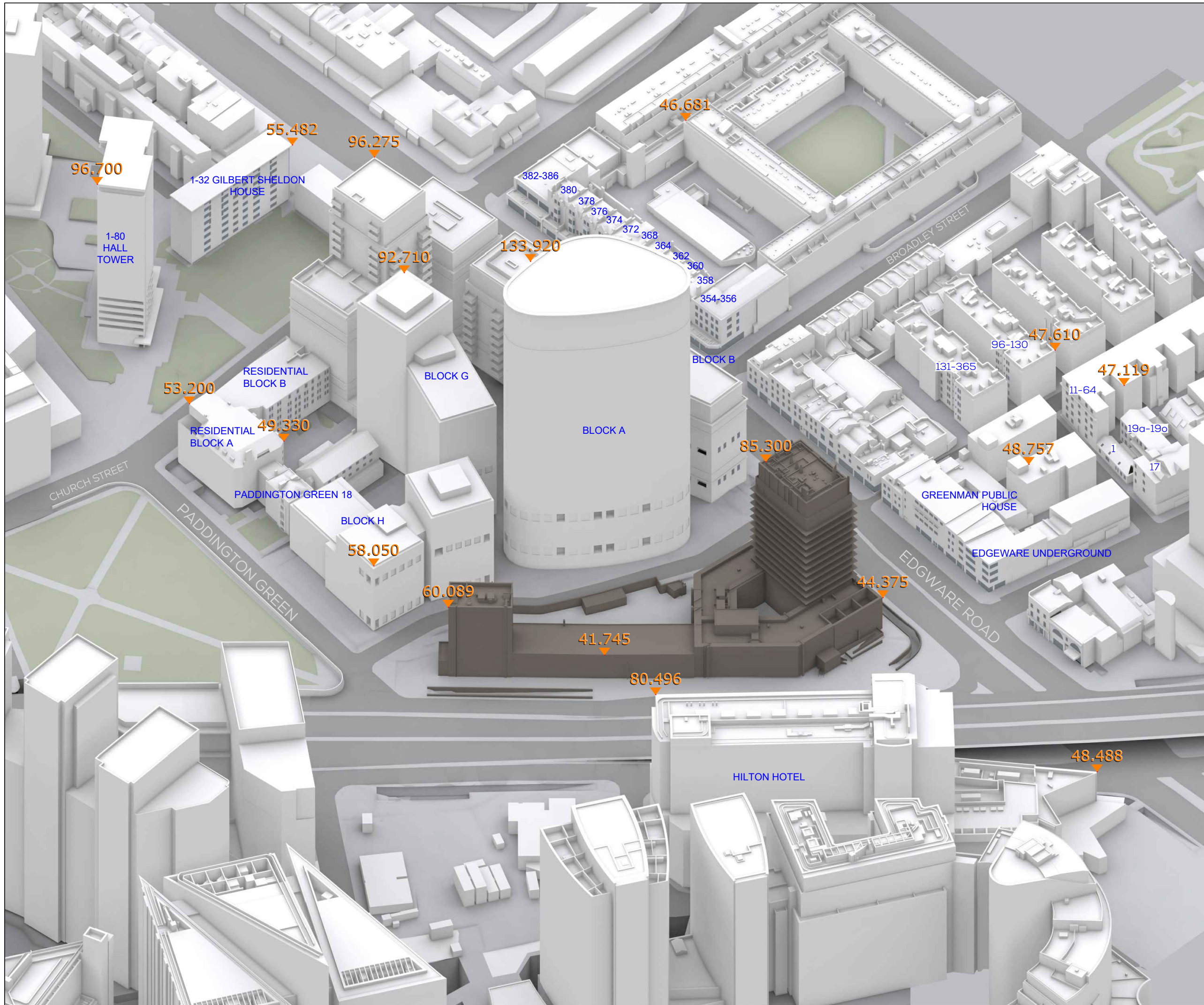
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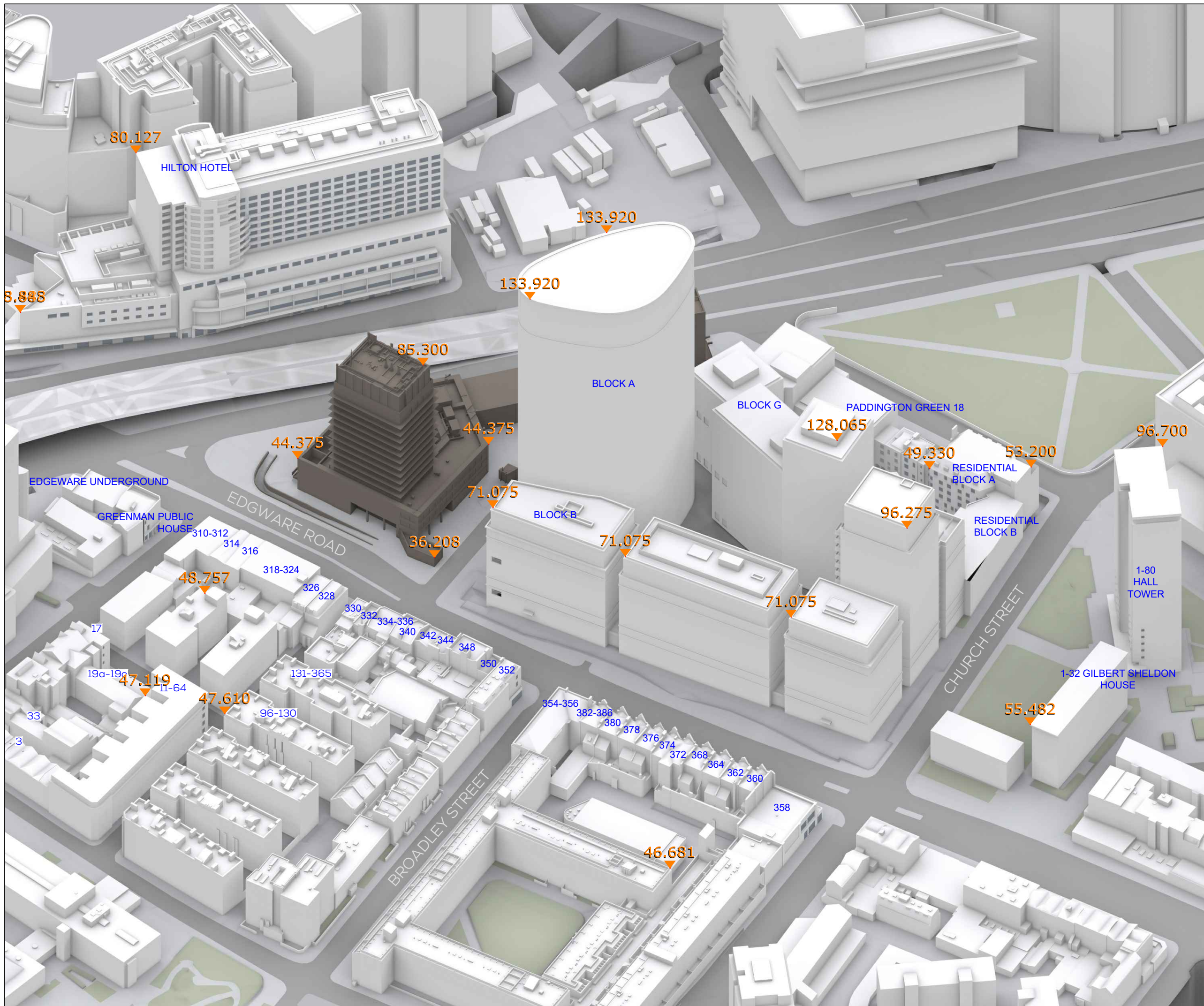
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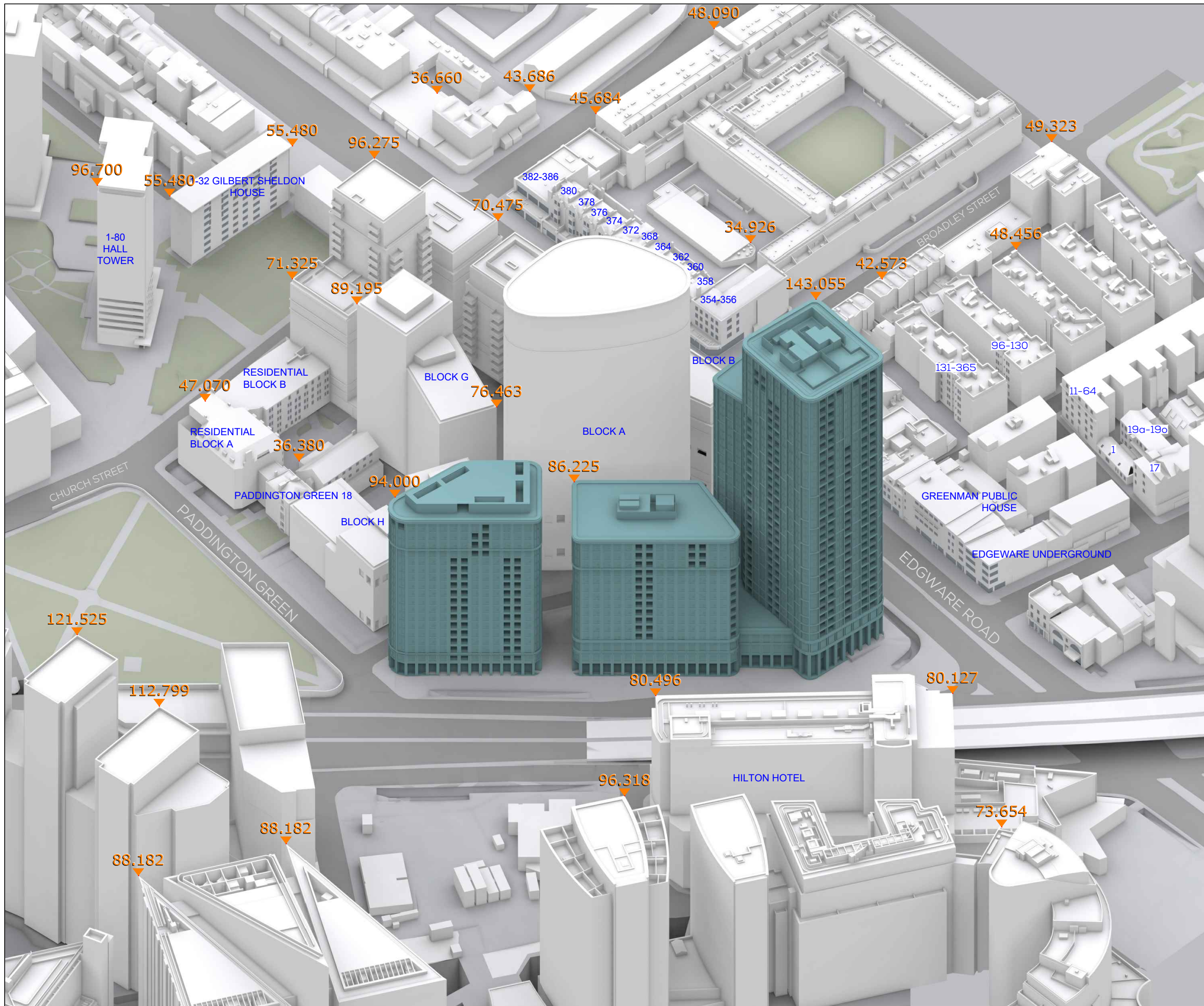
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