RESULTS OF A 24-HOUR NOISE LEVEL SURVEY CARRIED OUT ON THE ROOF OF THE COMMERCIAL PREMISES KNOWN AS MELIA WHITE HOUSE HOTEL, LONDON NW1 AND A REPORT ON THE NOISE IMPACT OF THE NEW EXTERNAL PLANT

Test Engineer : P G H Roberts

Report Author : P G H Roberts

Authorised for Release by : J Tait

Client	:	Proffetional Finishing Design S.L.
Project	:	Melia White House Hotel, London NW1
Emtec Ref.	:	QF9065-PF6759-RP1_00
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Emtec Products Ltd
T: +44(0)20 8848 3031
E: sales@emtecproducts.co.uk
W: emtecproducts.co.uk

Unit L, Turnpike Way
High Wycombe
Buckinghamshire
HP12 3TF

Registered in England No. 3164658 VAT Reg. No. GB675017042

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1.0. INTRODUCTION

This report details the results of a 24-hour noise survey, carried out on the roof of the north east corner of the commercial building known as Melia White House Hotel, London NW1.

The objectives of the survey were as follows:

- To measure noise levels on the roof in exactly the same location as a survey undertaken in 2017
- To compare the results of this survey with the results of the 2017 survey
- To comment on whether new plant that has been installed on the roof has affected the amenities of the nearest affected properties with regard to noise

This report has been divided into the following sections for ease of analysis:

2.0. SITE DESCRIPTION

The building known as the Melia White House Hotel is a large nine storey building. The building is currently utilised as a hotel. The building has frontages to Longford St. to the north and Osnaburgh St. to the east.

The façade of the building facing the junction of Longford St. and Osnaburgh St. can be seen on the attached Photo A.

Mechanical services plant is located in the centre of the roof of the building, as can be seen in the attached Photo D.

An aerial overview of the site can be seen in the attached Photo E.

3.0. TEST INSTRUMENTATION

All measurement equipment used during the survey complied with the requirements of BS4142:2014 "Method for Rating Industrial Noise Affecting Mixed Residential and Industrial Areas". Details of the equipment are as follows:

Integrating Sound Level Meter:	Rion type NL-52 class 1 Sound Level Meter fitted with a Rion type UC-59 ½ inch condenser microphone. Serial No.: 01121378
Statistical Analysis Modules:	Built in module capable of computing the percentile levels LA_1, LA_{10}, LA_{50}, LA_{90} and LA_{99} and also the LA_{eq} level.
Acoustic Calibrator:	Bruel & Kjaer type 4231 electronic calibrator. Serial No.: 1934160

Calibration was performed before and after the survey and found to be, in all cases, +/- 0.1 dB from the reference source.

3.1. Existing Noise Climate

Road traffic travelling on surrounding roads could be heard at the start and end of the survey, so the noise levels measured will include contributions from road vehicles.

Commercial jet aircraft were not observed during the manned periods at the start and the end of the survey, but it is possible that the noise levels measured could include contributions from medium altitude jet aircraft.

Construction works were observed being carried out in the vicinity during the manned periods at the start and end of the survey so the daytime sound levels recorded could include contributions from construction work.

The current COVID-19 outbreak could also have affected the baseline sound levels, because typical road, air and rail transport usage have been reduced by travel restrictions and social distancing measures. Other sound sources may also have been affected – for example, due to changes in operating patterns at nearby commercial premises. Noise measurements recorded at nighttime and early morning are likely to carry less uncertainty, as transport noise, construction noise and noise from nearby commercial premises are typically subdued during the nighttime.

4.0. TEST PROCEDURE

The survey was conducted during a continuous 24-hour period from 11:50 am on Wednesday the 17th of June 2020 to 11:50 am on Thursday the 18th of June 2020.

Data was continuously acquired throughout the measurement period with the individual averaging time for statistical noise data set to 15 minutes. The following 'A' weighted statistical measurements were recorded concurrently: -

LA_1 - The Sound Pressure Level exceeded for 1% of the measurement period.

LA_{10} - The Sound Pressure Level exceeded for 10% of the measurement period.

LA_{50} - The Sound Pressure Level exceeded for 50% of the measurement period.

LA_{90} - The Sound Pressure Level exceeded for 90% of the measurement period. LA_{90} is considered to represent the "background noise level" during the measurement period and is used for the assessment of noise to determine the likelihood of complaints (See BS 4142:2014).

LA_{99} - The Sound Pressure Level exceeded for 99% of the measurement period.

LA_{eq} - The continuous steady state Sound Pressure Level that has the same acoustic energy as the real fluctuating level.

4.1. Measurement Positions

The microphone was mounted on a tripod and positioned towards the north east corner of the roof of the building known as Melia White House Hotel, London NW1. The microphone was oriented vertically and approximately 1.5m above the level of the roof. The location of the microphone can be seen on the attached Photos A, B, C and E.

The microphone was connected by a low impedance cable to the associated instrumentation which was contained within a weatherproof housing.

4.2 Weather Conditions

The weather conditions prevailing during the measurement period were in line with those recommended in BS 4142:2014: -

Weather daytime: -	Overcast	Weather night time: -	Overcast
Wind daytime: -	Calm	Wind night time: -	Calm

The microphone was protected throughout the survey by an acoustically transparent wind balloon.

5.0. SUMMARY OF RESULTS

The raw test data, gathered during the noise survey, is given in Appendix 'A 'of this report.

The 'A' Weighted L_{eq} levels measured over each 15 minute interval throughout the 24-hour period, denoted by LA_{eq}, (15 mins), are displayed as a bar graph on the attached Sketch No. QF/9065/T1 in Appendix 'B' of this report.

The 'A' Weighted percentile levels measured over each 15 minute interval throughout the 24-hour period, denoted by LA_{10} (15 mins), LA_{50} (15 mins) and LA_{90} (15 mins) are displayed as line graphs on the attached Sketch No. QF/9065/T2 in Appendix 'B' of this report.

5.1. Summary of June 2020 Results and Comparison with May 2017 Results

Table QF/9065/D1/2020 below summarises the noise levels taken over the 24-hour period in terms of the maximum and minimum Sound Pressure Levels recorded. Table QF9095/9065/D1/2017 shows comparable results of the May 2017 survey.

Table QF/9065/D1/2020 – Summary of Maximum and Minimum Noise Levels - June 2020

June 2020	**LA_{eq}**	**LA_{1}**	**LA_{10}**	**LA_{50}**	**LA_{90}**	**LA_{99}**
Minimum	54dBA	56dBA	55dBA	54dBA	53dBA	52dBA
Maximum	62dBA	71dBA	65dBA	60dBA	58dBA	56dBA

Table QF/9065/D1/2017– Summary of Maximum and Minimum Noise Levels – May 2017

May 2017	**LA_{eq}**	**LA_{1}**	**LA_{10}**	**LA_{50}**	**LA_{90}**	**LA_{99}**
Minimum	55dBA	57dBA	56dBA	55dBA	54dBA	54dBA
Maximum	64dBA	76dBA	68dBA	61dBA	58dBA	56dBA

Table QF/9065/D2/2020 below states the arithmetically averaged LA_{90} noise levels recorded during the time periods of 7.00am to 23.00pm (Daytime / Evening) and 23.00pm to 07.00am (Nighttime). Table QF9095/9065/D2/2017 shows comparable results of the May 2017 survey.

Table QF/9065/D2/2020 – Average LA_{90} Noise Levels – Daytime/Evening and Nighttime – June 2020

June 2020	**Average LA_{90}**
Daytime/Evening (7am to 11pm)	55dBA
Nighttime (11pm to 7am)	54dBA

Table QF/9065/D2/2017 – Average LA90 Noise Levels – Daytime/Evening and Nighttime – May 2017

May 2017	**Average LA_{90}**
Daytime/Evening (7am to 11pm)	59dBA
Nighttime (11pm to 7am)	55dBA

6.0. DISCUSSION OF RESULTS

In May 2017 a 24-hour noise survey was conducted on the roof of the Melia White House Hotel, at a location considered closest to the nearest neighbouring residential property. Throughout the survey, all existing external roof plant was in normal operation, so the measured noise levels included the cumulative noise levels of all existing plant. The results of this survey are the baseline noise levels.

After the 2017 noise survey, some items of external plant were removed from the roof and new items of plant were installed. Some items of plant were retained, and remained in operation.

This report provides the results of a second 24-hour noise survey, conducted in exactly the same location as the May 2017 survey. Shortly before the test was carried out it was confirmed that all external roof plant was in normal operation, so the measured noise levels include the cumulative noise levels of all plant – new plant and retained plant.

The results of the May 2017 survey, the baseline noise levels, have been compared with the results of the June 2020 survey. The comparison shows that the average LA_{90} sound pressure levels have reduced slightly throughout the 24-hour period, as has the minimum recorded noise level.

The reduction in the average daytime and evening noise level indicates that the new external plant has not lead to an increase in the baseline noise levels, although there is a degree of uncertainty attributed to the effects of the COVID-19 outbreak as described in section 3.1. However, the reduction in the average nighttime noise level is a positive indication that the new items of plant have not increased the baseline noise levels. Based upon the results of this survey, operation of the retained plant and the new plant should meet the conditions set out in the Camden Council's planning policies and therefore reservations should not be expected from the planning authority on the grounds of noise.

Emtec Products Ltd.
22nd June 2020

APPENDIX 'A'

Raw Data – Noise Survey

17th of June 2020 to 18th of June 2020

Project: Melia White House Hotel, London NW1
Client: Proffetional Finishing Design S.L.
Date: 17th to 18th June 2020
Serial No: 01121378

Address	Start Time	LA_{eq}	LE	Lmax	Lmin	LA_{1}	LA_{10}	LA_{50}	LA_{90}	LA_{99}
1	11:50	58	88	80	50	68	59	56	54	53
2	12:05	57	87	78	53	63	58	56	55	54
3	12:20	57	86	73	52	64	58	56	54	53
4	12:35	57	87	71	53	66	58	56	55	54
5	12:50	58	88	75	53	66	61	57	55	54
6	13:05	62	91	87	54	71	62	59	57	55
7	13:20	58	87	69	54	62	59	57	56	55
8	13:35	59	88	73	54	63	60	58	56	55
9	13:50	58	88	79	54	63	59	57	56	55
10	14:05	60	90	90	54	61	59	57	56	55
11	14:20	57	87	63	54	60	59	57	55	55
12	14:35	57	87	65	53	60	58	57	55	55
13	14:50	58	87	76	54	63	60	57	55	55
14	15:05	57	87	68	53	63	59	57	55	54
15	15:20	57	87	71	53	64	59	57	55	55
16	15:35	57	87	68	54	60	58	57	56	55
17	15:50	58	87	72	53	64	59	57	55	54
18	16:05	57	87	69	53	63	59	56	55	54
19	16:20	57	87	71	53	65	59	56	55	54
20	16:35	58	87	85	53	61	58	56	54	54
21	16:50	56	86	67	52	61	58	56	54	53
22	17:05	56	86	68	52	62	58	56	54	53
23	17:20	56	86	72	53	61	57	56	55	54
24	17:35	57	86	71	53	63	58	56	55	54
25	17:50	56	86	71	53	61	57	56	54	53
26	18:05	56	86	67	52	61	57	56	54	53
27	18:20	58	87	74	52	66	59	56	54	53
28	18:35	56	86	69	52	63	58	56	54	53
29	18:50	56	86	66	53	60	57	56	54	54
30	19:05	57	86	71	52	65	58	56	54	53
31	19:20	56	86	63	52	60	57	56	54	53
32	19:35	57	87	78	53	65	58	56	54	54
33	19:50	57	87	70	53	65	59	56	54	54
34	20:05	56	86	69	53	60	58	56	55	54
35	20:20	56	86	66	53	61	58	56	54	53
36	20:35	59	89	76	53	70	59	57	55	54
37	20:50	57	87	79	53	63	58	56	55	54
38	21:05	56	86	64	53	61	57	56	54	54
39	21:20	56	86	71	52	64	58	55	54	53
40	21:35	56	85	66	52	62	57	55	54	53
41	21:50	55	85	69	51	61	57	55	53	52
42	22:05	54	84	63	51	58	56	54	53	52
43	22:20	58	87	77	52	70	57	55	54	53
44	22:35	55	84	63	52	58	56	54	53	52
45	22:50	54	84	61	51	58	56	54	53	52
46	23:05	55	85	71	52	62	56	54	53	52
47	23:20	55	84	64	52	60	56	54	53	53
48	23:35	55	85	65	52	60	57	55	54	53
49	23:50	55	85	61	52	59	57	55	54	53

50	00:05	55	85	61	52	59	56	55	54	53
51	00:20	56	85	68	53	59	57	55	54	53
52	00:35	55	85	62	52	59	57	55	54	53
53	00:50	55	85	71	52	61	56	55	54	53
54	01:05	55	84	62	52	58	56	55	54	53
55	01:20	56	85	65	53	58	57	55	54	54
56	01:35	55	85	62	52	59	57	55	54	53
57	01:50	55	84	59	52	57	56	54	54	53
58	02:05	54	84	67	52	57	56	54	53	53
59	02:20	54	84	63	52	58	55	54	53	52
60	02:35	54	84	60	52	58	55	54	53	53
61	02:50	54	84	59	52	56	55	54	53	52
62	03:05	54	83	59	52	57	55	54	53	52
63	03:20	54	84	62	52	57	55	54	53	52
64	03:35	54	84	59	52	57	55	54	53	53
65	03:50	54	84	59	52	57	56	54	53	53
66	04:05	55	84	60	52	59	56	54	54	53
67	04:20	55	84	62	52	59	56	54	54	53
68	04:35	55	84	63	52	58	56	54	53	53
69	04:50	55	85	63	52	59	57	54	53	53
70	05:05	55	85	60	52	58	56	55	53	53
71	05:20	56	85	61	53	59	57	55	54	53
72	05:35	56	86	63	53	59	58	56	54	54
73	05:50	57	86	64	53	60	58	56	55	54
74	06:05	57	87	68	53	62	59	57	55	54
75	06:20	58	88	69	54	62	60	58	56	55
76	06:35	59	88	66	54	63	60	58	57	55
77	06:50	60	89	75	55	68	61	59	57	56
78	07:05	62	91	82	55	70	63	60	58	56
79	07:20	59	88	67	54	62	60	59	57	55
80	07:35	59	89	77	55	65	61	59	57	56
81	07:50	59	89	77	54	65	60	59	57	56
82	08:05	58	88	71	54	66	60	58	56	55
83	08:20	58	88	76	54	62	59	57	56	55
84	08:35	59	88	69	55	64	60	58	57	56
85	08:50	58	88	66	54	62	60	58	57	55
86	09:05	59	88	71	55	65	60	58	57	56
87	09:20	61	90	70	55	68	65	58	57	56
88	09:35	59	89	68	55	66	60	58	57	56
89	09:50	58	87	69	54	61	59	57	56	55
90	10:05	58	87	71	54	62	59	57	56	55
91	10:20	60	89	71	54	69	61	58	56	55
92	10:35	58	88	67	55	62	60	58	57	56
93	10:50	58	88	66	54	62	59	58	56	55
94	11:05	60	89	74	54	70	60	58	57	55
95	11:20	61	90	75	55	71	62	58	57	56
96	11:35	60	90	70	56	67	61	59	57	56

APPENDIX ‘B’

Photos and Noise Data Graphs

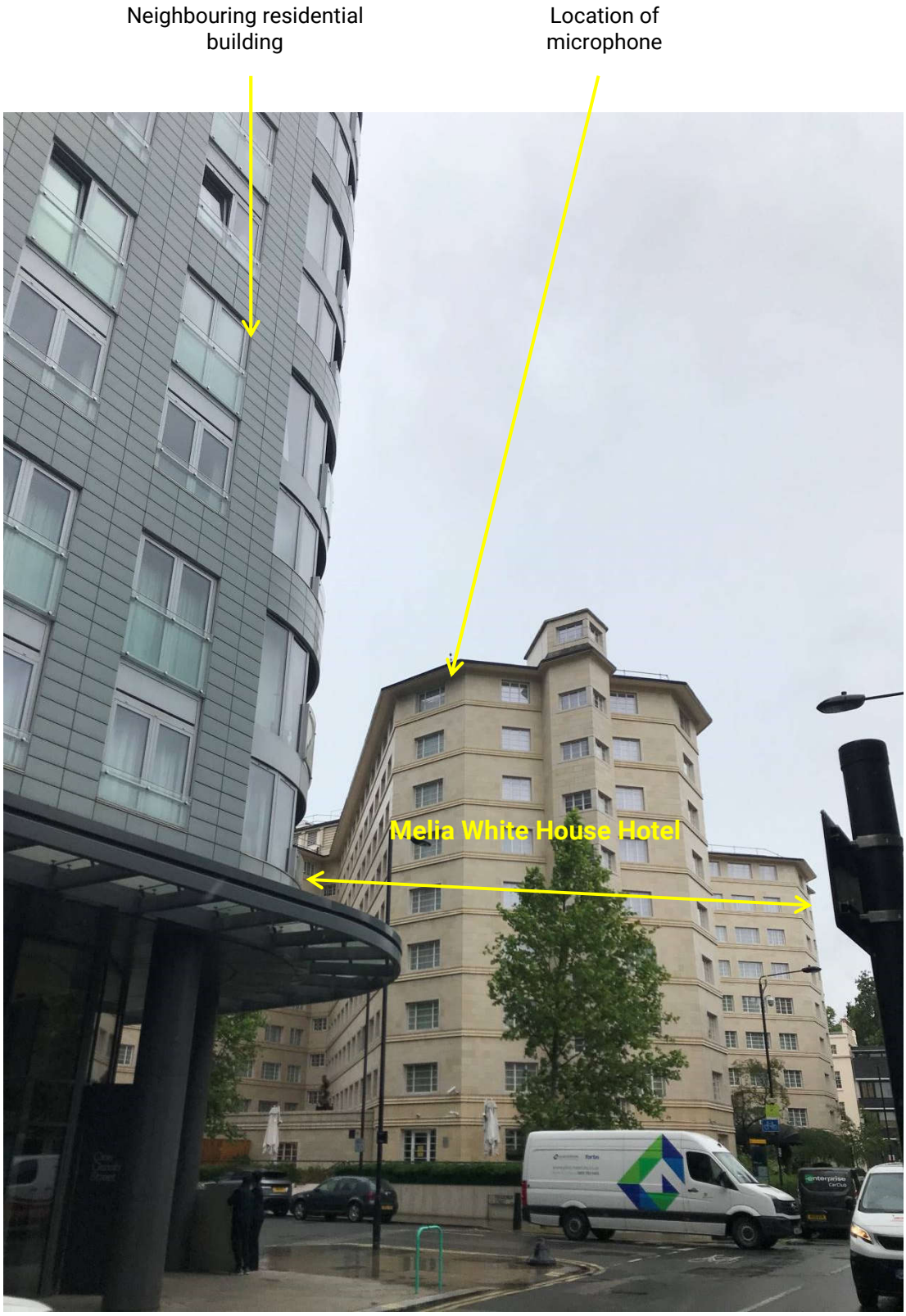


Photo A – View from Longford Street looking towards the Melia White House Hotel, London NW1

Photo B – View to the north east at roof level from the Melia White House Hotel, London NW1

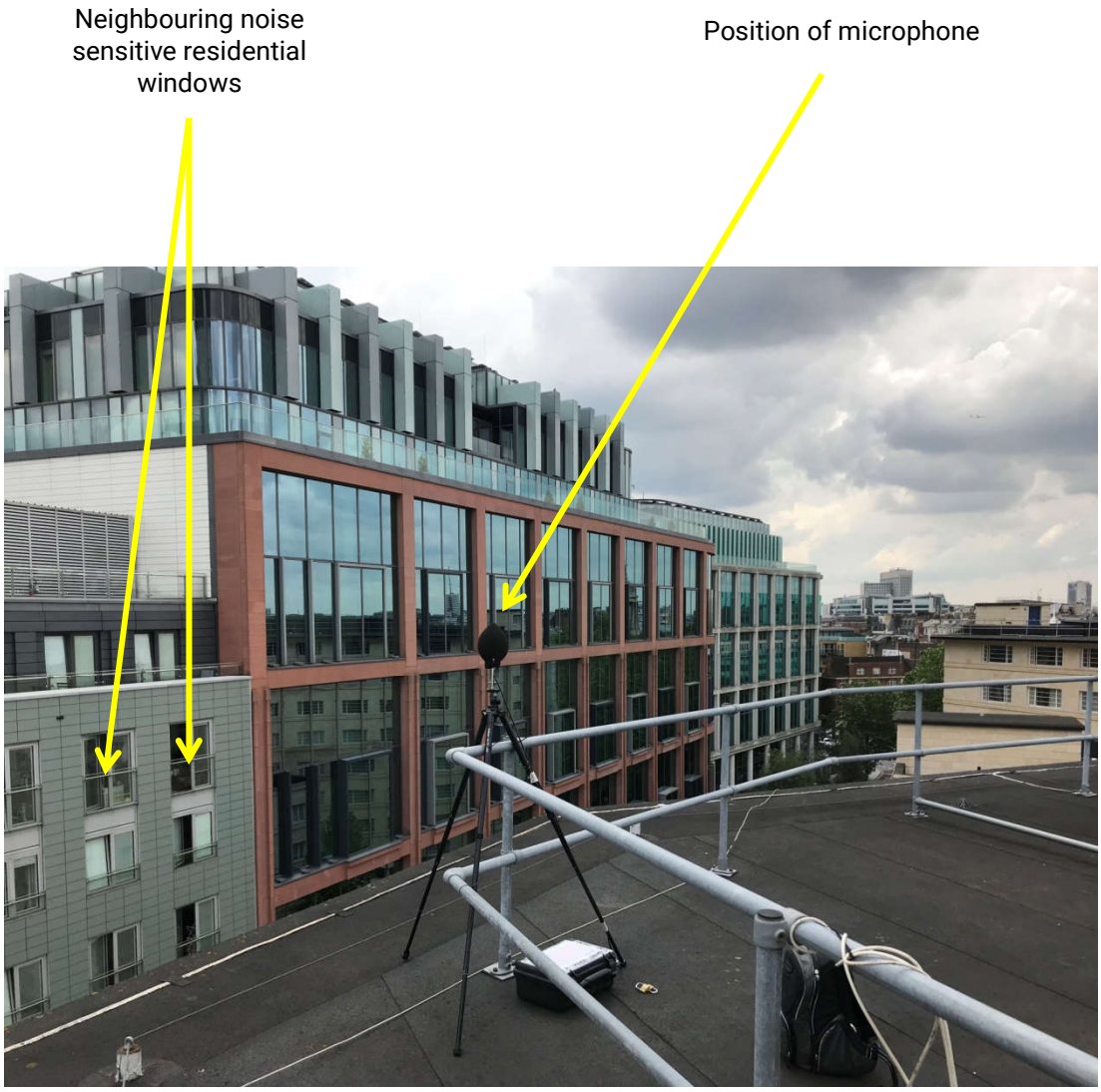


Photo C: View to the south east at roof level from Melia White House Hotel, London NW1

External plant installation

Photo D: View of plant installation on roof of the Melia White House Hotel, London NW1

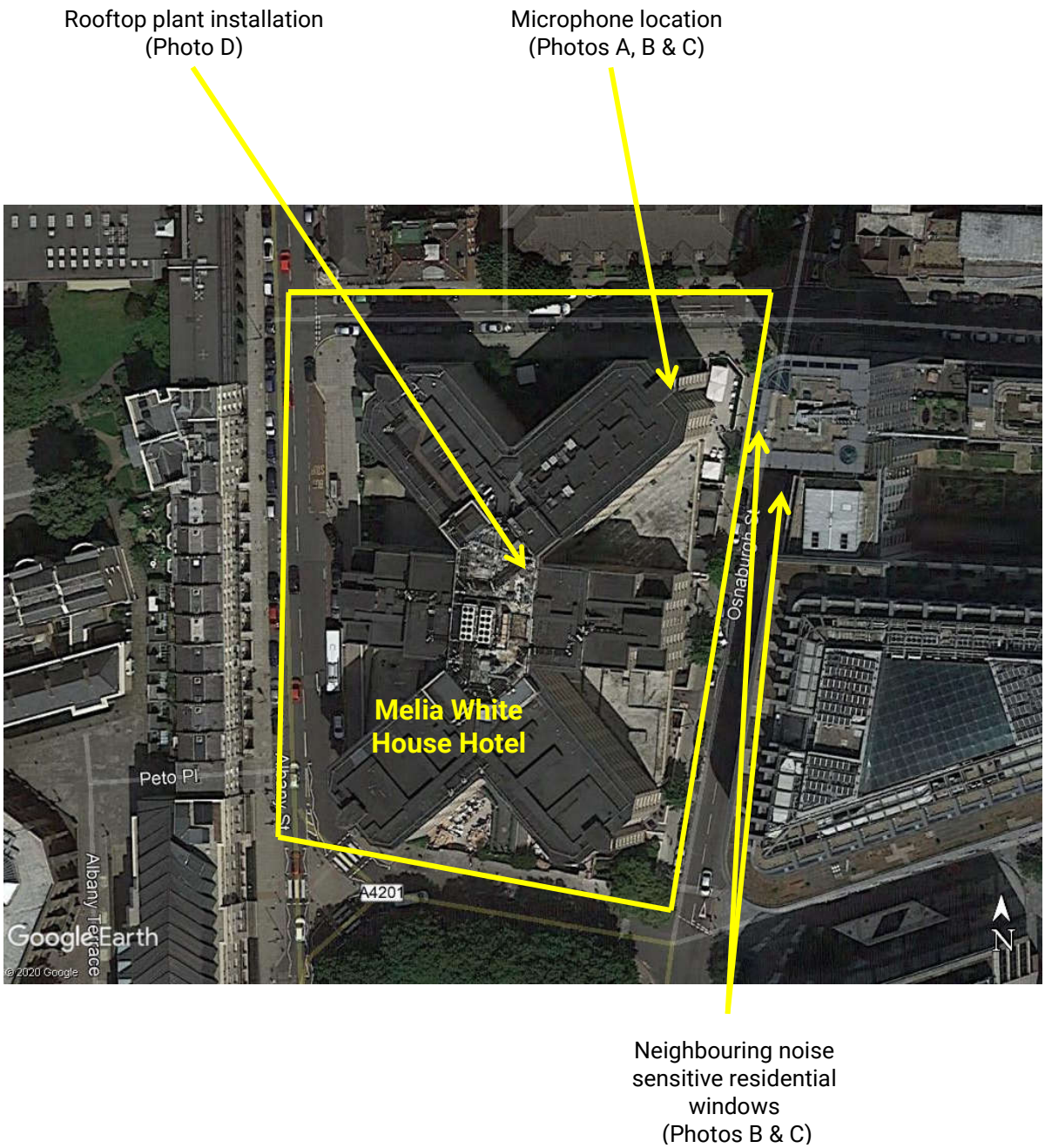
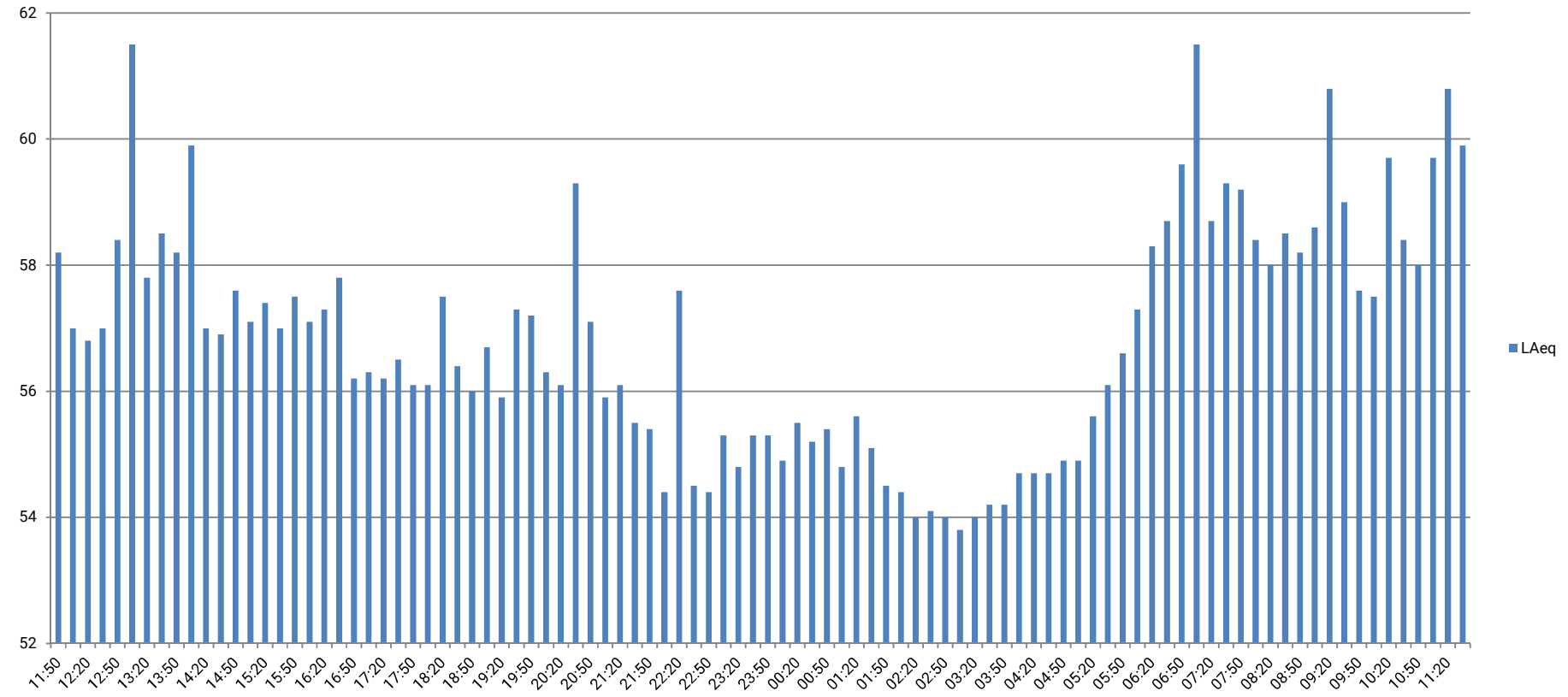


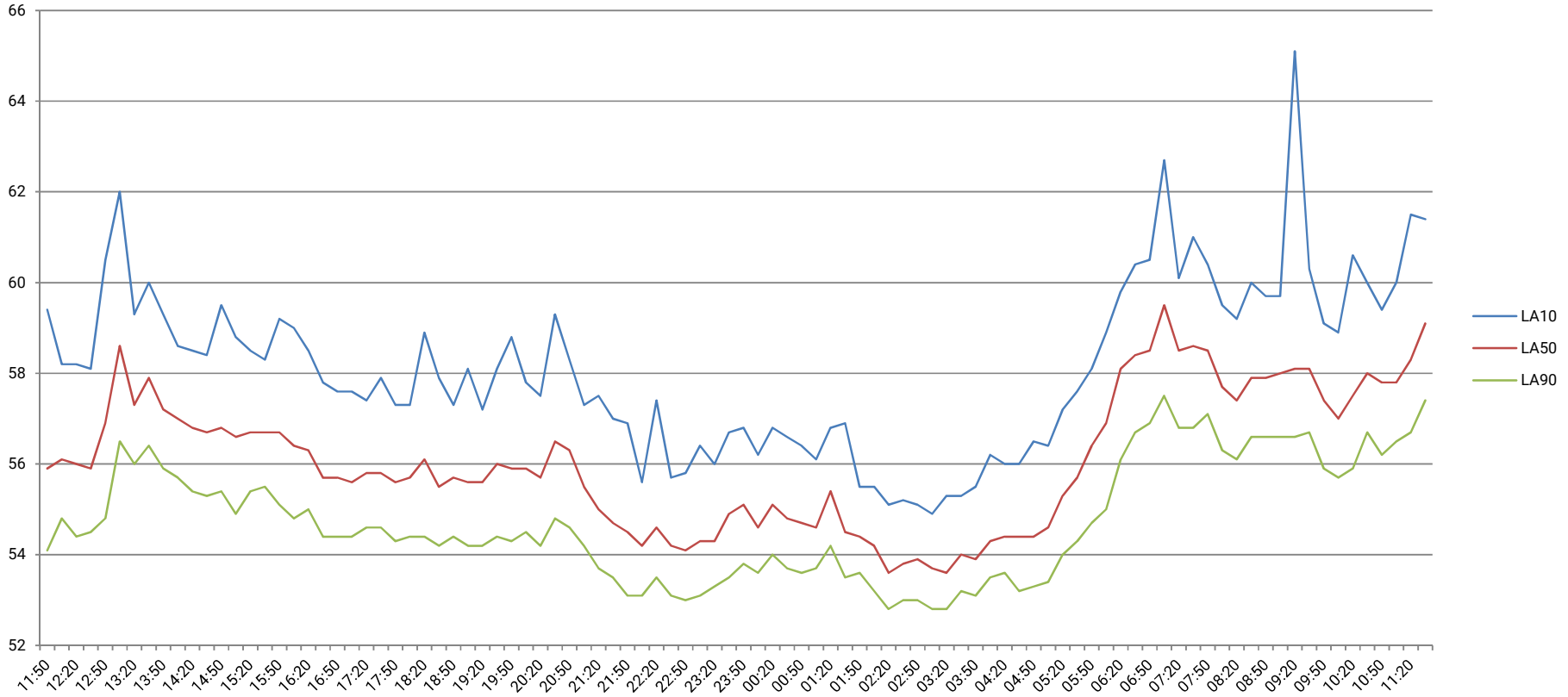
Photo E: Aerial view of site and surroundings of the Melia White House Hotel, London NW1



TITLE: *LAeq Levels*	*ISSUE DATE:* *22nd June 2020*				*DRAWN BY:* *MGR*	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*
CLIENT: Proffetional Finishing Design S.L.	*PF No: 6759*				*APPROVED BY:* *MGR*	*REVISION*							
PROJECT: Melia White House Hotel, London NW1	*Q*	*A*	*M*	*I*	*DESIGN AUTH:* *MGR*	*SKETCH No. QF/9065/T1*							

EMTEC

Unit L, Turnpike Way, High Wycombe,
Buckinghamshire, HP12 3TF
Telephone: 020 8848 3031
www.emtecproducts.co.uk



TITLE: *LA10; LA50 & LA90 Levels*	*ISSUE DATE:* *22nd June 2020*				*DRAWN BY:* *MGR*	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*
CLIENT: Proffetional Finishing Design S.L.	*PF No: 6759*				*APPROVED BY:* *MGR*	*REVISION*							
PROJECT: Melia White House Hotel, London NW1	*Q*	*A*	*M*	*I*	*DESIGN AUTH:* *MGR*	*SKETCH No. QF/9065/T2*							

EMTEC

Unit L, Turnpike Way, High Wycombe,
Buckinghamshire, HP12 3TF
Telephone: 020 8848 3031
www.emtecproducts.co.uk