

1 Technical Note – Revised Plant Layout and Specification

Introduction

1.1 The following Technical Note provides an addendum to the Mayer Brown Ltd Noise Impact Assessment report, dated April 2021 that accompanied a planning application for *"Retrospective permission for existing plant and the proposed erection of 21.no plant units, together with a three sided screen set behind a parapet wall"*, which is currently subject to determination by the London Borough of Camden (under Planning Reference 2021/2861/P).

Revisions to Plant Layout and Specification

1.2 Under the current proposals there are proposed alterations to the rooftop plant which entails the relocation of two condenser units from the Mews roof to the rooftop plant area, as shown in **Figure 1** below;



Figure 1: Rooftop Plant Layout Revisions

1.3 There are currently no condenser units in the proposed location as this space is set aside as contingency space, to enable additional plant items to be located, if and when required. It should be noted that in order to present a robust worst case assessment the Mayer Brown Ltd Plant Noise Impact Assessment, included 3 condenser units in the aforementioned contingency space, which were used in noise propagation calculations.



1.4 Table 1 below details the (assumed) condenser units located in the contingency space, along with the manufacturers noise data specification, that was used in the Mayer Brown Plant Noise Impact Assessment;

		Sound Pressure Level at 1m, dB re 20µPa								
Reference	Make Model	Octave Band Centre Frequency, Hz							" • 11	
		63	125	250	500	1k	2k	4k	8k	"A"
CON PBJL.P1	Daikin RZASG100MV1	58	57	53	51	47	42	37	32	57
CON 04.P1	Panasonic Mini ECOi Outdoor Unit U-4LE2E5	(53)	(56)	(52)	(53)	(47)	(42)	(39)	(34)	52
CON 36.01	Daikin RZAG71NV	53	52	47	45	40	35	29	23	51

Note: Data taken from manufacturer's datasheets where available. Assumed data shown in brackets.

Table 1: Plant Noise Specification of Assumed Units

CON 35.01



RZQG71L9V1B			=
MFG.NO. : 1607876 MFG.DATE : 2016.11 : 72 kg	PS HIGH: 4.0 MPa PS LOW: 3.1 MPa		EHEX _
-50 Hz 220-24	DV 20,6 A	Contains fluorivated	CE
R418A GWP: 2087,5	tCO2eq: 6,05		



CON 35.02



Figure 2: In-Situ Replacement Units

1.6 **Table 2** below details the units to be relocated along with the manufacturer's noise data specification;

		Sound Pressure Level at 1m, dB re 20µPa								
Reference	Make Model	Octave Band Centre Frequency, Hz							" A "	
		63	125	250	500	1k	2k	4k	8k	
CON 35.01	Daikin RZQG71L9V1B	49	51	49	46	43	38	33	28	48
CON 35.02	Daikin RZQG71L9V1B	49	51	49	46	43	38	33	28	48
Note: Data taken from manufacturer's datasheets										

Table 2: Plant Noise Specification of Replaced Units

1.7 It can be seen from the data presented in **Table 2** above that replacement units have a reduced noise output compared with the units used in the Plant Noise Impact Assessment.

Revised Plant Noise Propagation Calculations

1.8 Based on the revised plant layout and specifications, noise propagation calculations have been updated and are shown in **Table 3** overleaf;



Ref.	Location	Predicted Noise Level, L _{Aeq,1hour} dB	Revised Predicted Noise Level, L _{Aeq,1hour} dB
R1	Houses on Glenhurst Avenue – southern elevation	35	34
R2	Flats at Clanfield, Gordon House Road – northern elevation	35	34
R3	Houses on Gordon House Road – northern elevation	24	24

 Table 3: Revised Plant Noise Propagation Calculations

1.9 As shown above, the removal of one of the units and replacement of 2 units with quieter models has reduced predicted noise levels at R1 and R2 by 1dB whilst levels at R3 remained unchanged.

Revised Noise Impact Assessment

1.10 **Table 3** below provides an updated summary assessment of how the predicted noise levels compare with prevailing background noise levels, in line with the principles of BS 4142: 2014 + A1: 2019.

Location	Predicted Noise Level, L _{Aeq}	Character correction, dB	Rated Noise Level, L _{Ar,,} ^{1hour}	Background Noise Level, L _{A90}	Difference between Rated and Background Noise Level, dB	Assessment Outcome
R1	34	0	34	45	-11	"No observed effect"
R2	34	0	34	45	-11	"No observed effect"
R3	24	0	24	52	-28	"No observed effect"

Table 3: BS 4142 Noise Assessment

1.11 As shown above, based on the revised plant noise calculations, noise emissions should have "no observed effect" on neighbouring dwellings and ensure compliance with the LB Camden's policy requirements i.e that rated plant noise levels are no greater than 10dB below the prevailing background levels.



1.12 In light of the above, the proposed revisions to the scheme do not alter the findings of the previous Mayer Brown Ltd Plant Noise Impact Assessment, which concluded that plant noise emissions would not result in any adverse impact on neighbouring dwellings.

Conclusion

- 1.13 A proposed revised plant layout has been presented and updated noise propagation calculations and impact assessment undertaken. Based on the revised calculations, it has been demonstrated that the conclusions of the previous assessment remain valid.
- 1.14 It is concluded therefore that the proposed rationalisation of the plant complies fully with national, city-wide and local noise related planning policy objectives.

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