AECOM

UCL – Alexandra House MEP Planning Information

Project:	**UCL – Alexandra House Refurbishment**	Job No/Ref:	**60236694 Rev A**
Subject:	**MEP Information for Planning Submission**	Date:	**13/04/2015**
Title	**MEP External Plant Information**	Made by:	**Ope Oni**

No.	Item	Action By
1	**Proposed Scope of Works** This document details the design proposals for the installation of cooling to the fifth floor area as part of the refurbishment works. Cooling is provided to the fifth floor via a VRV heat pump system. The system comprises of indoor units and external condenser located on the ground floor plant area and all refrigerant pipe work. Subject to validation of the existing seminar room cooling unit, supplementary cooling may be provided meet the required cooling loads. The external plant area for the outdoor condenser units are indicated on the mark up appended to with this document. There are existing external condenser units in the proposed locations. At this stage, an acoustic engineer has not been appointed to advise the break out noise limits for the new condenser unit. However, it is envisaged that the noise break out from the new condenser unit will be similar to the existing and therefore would not considerably exceed the existing background noise level.	
2	**External Condenser Details** The proposed external condenser unit selection to the ground floor external plant area at the back of the building (see photo below of location B) is a Daikin VRV heat recovery unit model RYYQ 8T and the unit dimension and acoustic data are detailed below.  Unit Dimension RYYQ8T – 930mm x 765mm x 1685mm The proposed external condenser unit for the seminar room is a Daikin VRV heat recovery unit model RZQSG71L3V1 and the unit dimension and acoustic data are detailed below. The unit is proposed to be located in the light well at the front of the building. (See photo below of location A)	

RYYQ 8T Sound Data

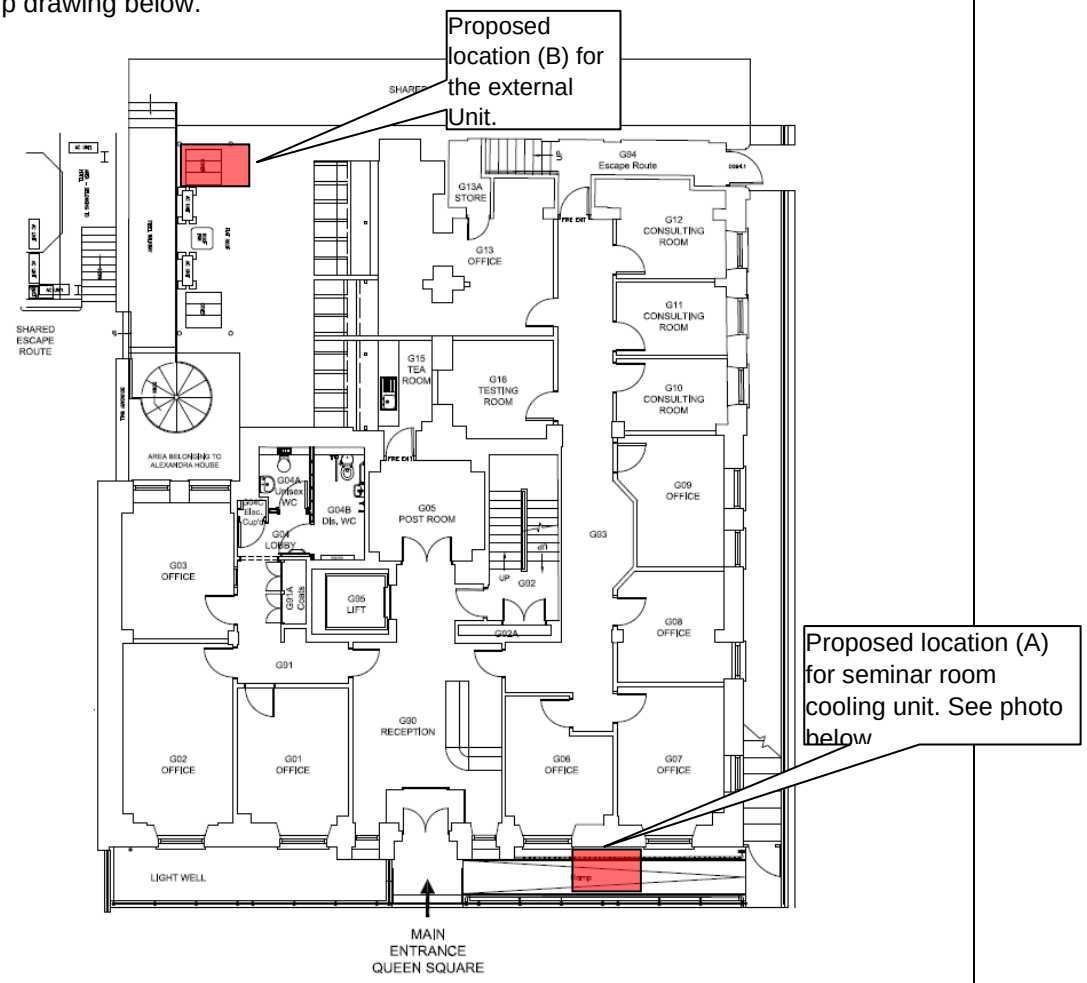
RYYQ-T

				RYYQ8T7Y1B	RYYQ10T7Y1B
Sound power level	Cooling	Nom.	dBA	78	79
Sound pressure level	Cooling	Nom.	dBA	58	58
Refrigerant	Type			R-410A	R-410A

RZQSG71L3V1 Sound Data

OUTDOOR UNIT					RZQSG71L3V1
Dimensions	Unit	HeightxWidthxDepth		mm	770x900x320
Weight	Unit			kg	67
Fan - Air flow rate	Cooling	Nom.		m^3/min	52
	Heating	Nom.		m^3/min	48
Sound power level	Cooling	Nom.		dBA	65
Sound pressure level	Cooling	Nom./Silent operation		dBA	49/47
	Heating	Nom.		dBA	51
	Night quiet mode	Level 1		dBA	
Operation range	Cooling	Ambient	Min.~Max.	°CDB	-5.0~46
	Heating	Ambient	Min.~Max.	°CWB	
Refrigerant	Type/GWP				
Piping connections	Piping length	OU - IU	Max.	m	30
		System	Equivalent	m	40
	Level difference	IU - OU	Max.	m	15
		IU - IU	Max.	m	
Power supply	Phase / Frequency / Voltage			Hz / V	
Current - 50Hz	Maximum fuse amps (MFA)			A	20

Plant Location - The proposed external plant location as indicated on the mark-up drawing below.



Below is a photograph of location (A) in the light well at the front of the building.

Below is a photograph of location B in the external ground floor plant area at the rear of the building.

New Exhaust Louvre

In addition to the above, the proposal also includes for replacing the panel above the door leading to the light well be replaced with an exhaust louvre for ventilation purposes.

Existing Panel above door to be replaced with louvre.

Typical proposed louvre above door.