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## **WAC ARTS CENTRE**

### **MECHANICAL AND ELECTRICAL SERVICES PROPOSALS**

The existing services in the refurbished and remodelled areas will be replaced with new energy efficient systems, designed to be in keeping with the building's listed status.

Ventilation will be a significant aspect, due to the anticipated large number of café users, the brief for acoustic separation of the Council Chamber and the creation of 'inner' rooms with no external windows.

The café will be naturally ventilated by making use of the existing vent and rooflight void above the main staircase. A proprietary natural ventilation terminal will be installed in the roof, hidden from view, allowing warm air from the staircase to exhaust to outside. Fresh air will enter the café from the existing high level ocular windows which will be fitted with automatic actuators. In summer, additional ventilation will be available by opening the doors onto the new terrace. The café will be heated by new radiators connected to the existing heating system.

A new commercial kitchen ventilation system will be provided in the new café kitchen, with its fresh air intake on the north elevation and exhaust cowl on the roof behind a parapet.

Since the Council Chamber will now be used for performances, an acoustically-treated mechanical ventilation system will be provided. An air handling unit will incorporate heating, cooling and heat recovery and will be at high level on the ground floor, ducted to traditional style floor grilles in the Chamber. The supply duct will run through the basement offices within wall lining, and extract via a new grille at high level in the Chamber adjacent to the chimney breast. The existing basement mechanical ventilation system will need to be modified to accommodate the supply duct, with 4 new external wall vents being introduced for the existing offices.

The new multi-purpose rooms formed out of the existing cafeteria will have local fan-coil heating and cooling units. Fresh air will be by opening windows, and via a fan-assisted ventilation unit connecting to the adjacent atrium space.

Heat pump heating and cooling to the Council Chamber and multi-purpose rooms will be from two outdoor heat pumps in the basement lightwell adjacent to the South lift.

Electrical services will be supplied from existing distribution boards. Wiring will be concealed in walls and ceilings. Where this is impractical, soft cable will be used and routed to be as inconspicuous as possible.

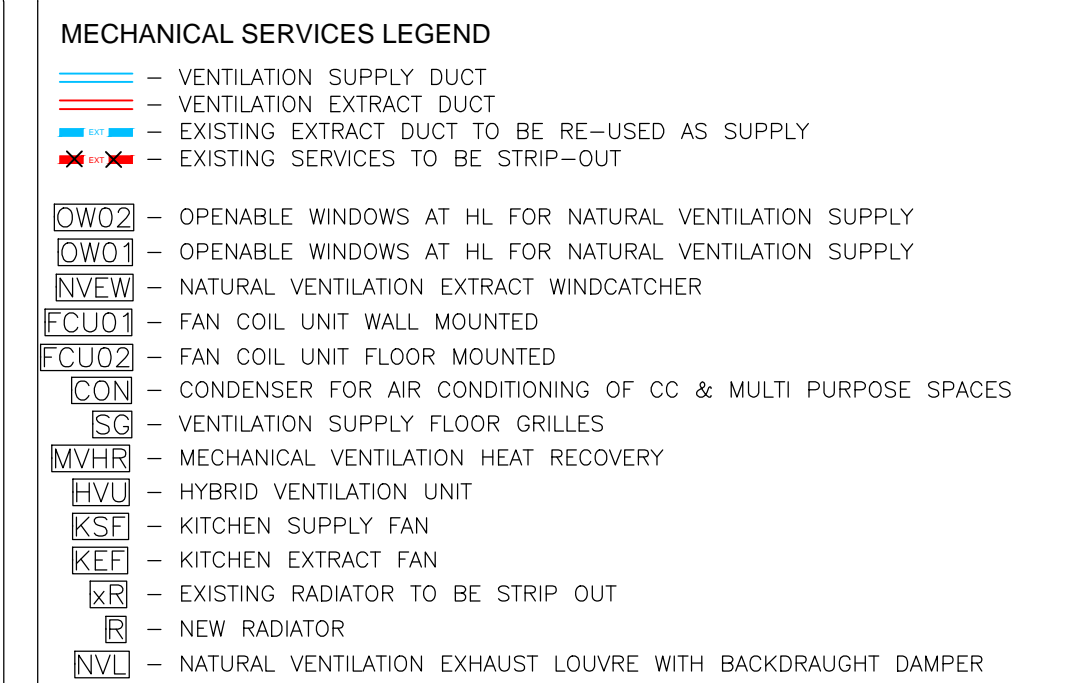
New lighting will use low energy LED sources. Controls will include scene-setting dimmers in the Café and Council Chamber, and occupancy sensing in circulation areas and WC's.

T 020 7490 7848  
E [mail@p3r-engineers.co.uk](mailto:mail@p3r-engineers.co.uk)  
W [www.p3r-engineers.co.uk](http://www.p3r-engineers.co.uk)

P<sup>3</sup>R

Job no.	1911	Project title
Sheet no.	1 of 1 - Mech	

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P4	12.08.2019	PRELIMINARY ISSUE
P3	18.07.2019	WIP PRELIMINARY ISSUE
P2	08.07.2019	Existing ducts added. Minor mods
P1	21.06.2019	FOR COMMENTS
Revision	Date	Details

Status **FOR INFORMATION**

Ash Sakula Architects

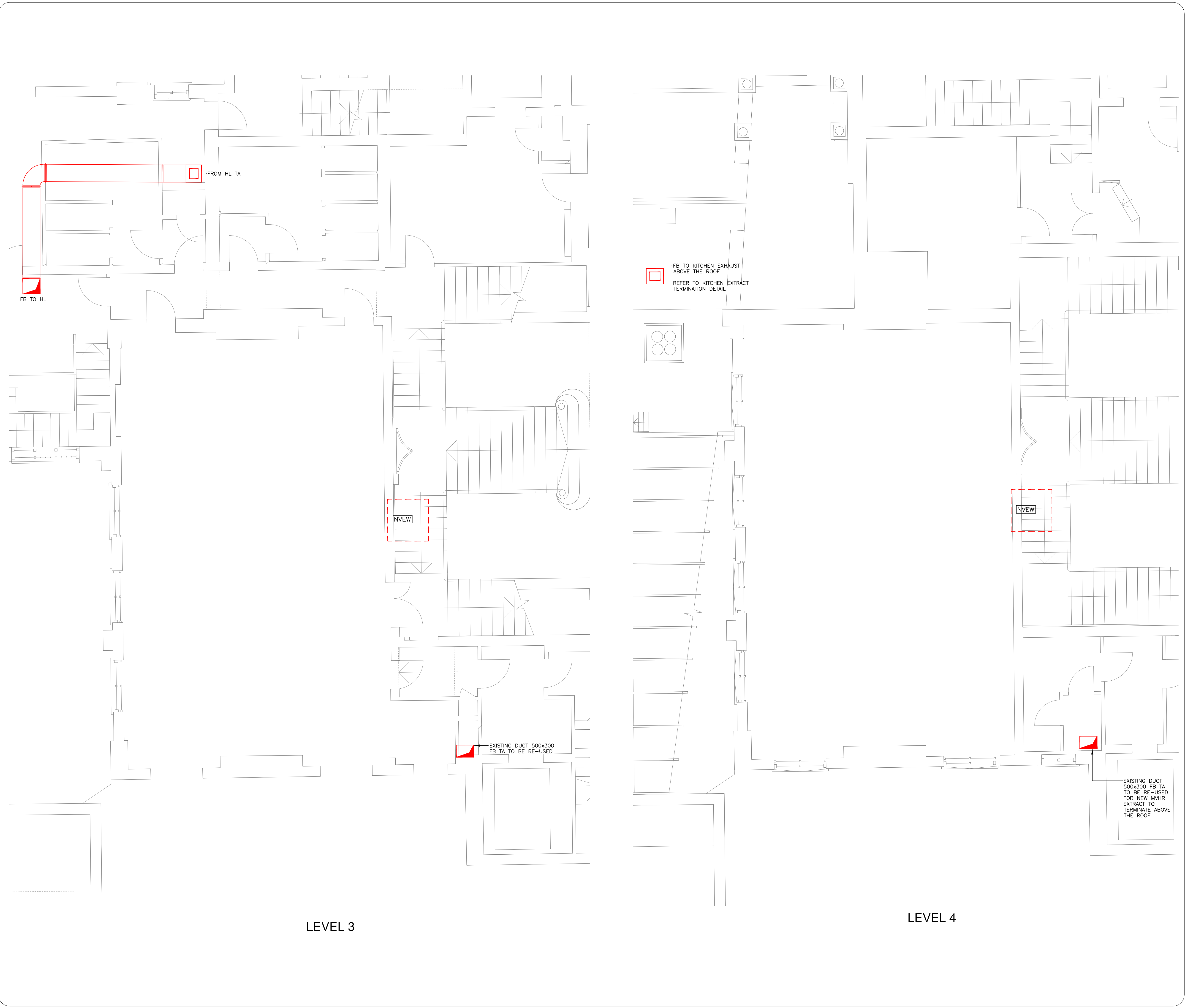
**P3r Engineers Ltd**  
Consulting Building Services Engineers  
70 Cowcross Street  
London EC1M 6EJ  
  
Telephone 020 7490 7848  
[www.p3r-engineers.co.uk](http://www.p3r-engineers.co.uk)

Project	WAC ARTS
Drawing Title	LEVEL 1 - MEP SERVICES

Scale:	Drawn by:	Checked by:
1:50@A1	RP	MP
1:100@A3		
Date:	Drawing No.	Revision:
12.08.2019	1905-MEP9100	P4

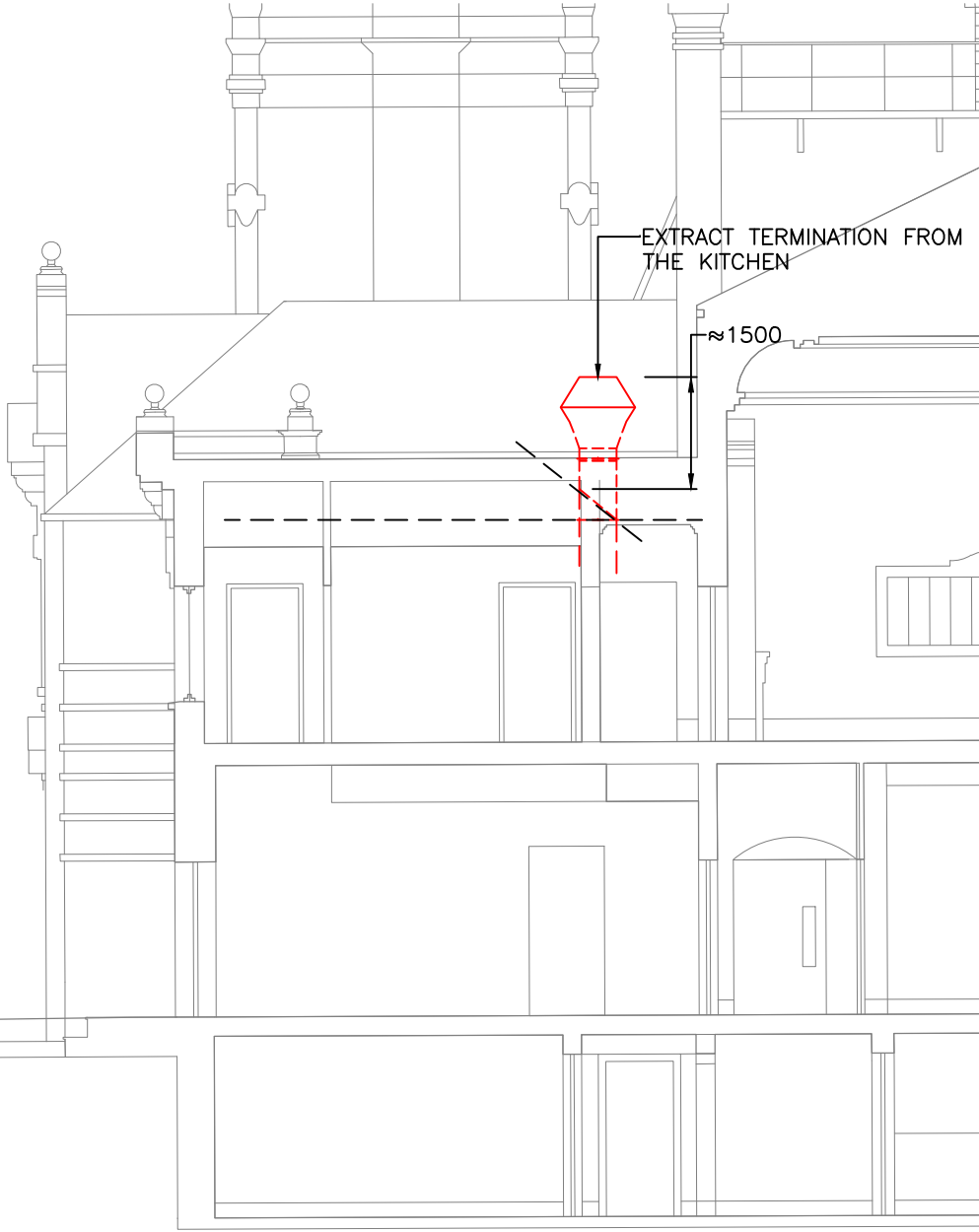






**NOTES:**  
1. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION PURPOSES  
2. DO NOT SCALE FROM THIS DRAWING EITHER PAPEROR DIGITAL FORM

- MECHANICAL SERVICES LEGEND**
- VENTILATION SUPPLY DUCT
  - VENTILATION EXTRACT DUCT
  - EXISTING EXTRACT DUCT TO BE RE-USED AS SUPPLY
  - ✕✕ EXISTING SERVICES TO BE STRIP-OUT
  - OW02 - OPENABLE WINDOWS AT HL FOR NATURAL VENTILATION SUPPLY
  - OW03 - OPENABLE WINDOWS AT HL FOR NATURAL VENTILATION SUPPLY
  - NVIEW - NATURAL VENTILATION EXTRACT WINDCATCHER
  - FCU03 - FAN COIL UNIT WALL MOUNTED
  - FCU02 - FAN COIL UNIT FLOOR MOUNTED
  - CON - CONDENSER FOR AIR CONDITIONING OF CC & MULTI PURPOSE SPACES
  - SC - VENTILATION SUPPLY FLOOR GRILLES
  - MVHR - MECHANICAL VENTILATION HEAT RECOVERY
  - HVU - HYBRID VENTILATION UNIT
  - KSE - KITCHEN SUPPLY FAN
  - KFE - KITCHEN EXTRACT FAN
  - RE - EXISTING RADIATOR TO BE STRIP OUT
  - R - NEW RADIATOR
  - NVL - NATURAL VENTILATION EXHAUST LOUVRE WITH BACKDRAUGHT DAMPER



### KITCHEN EXTRACT TERMINATION DETAIL

P3	12.08.2019	PRELIMINARY ISSUE
P2	18.07.2019	WIP PRELIMINARY ISSUE
P1	21.06.2019	FOR COMMENTS
Revision	Date	Details

Status

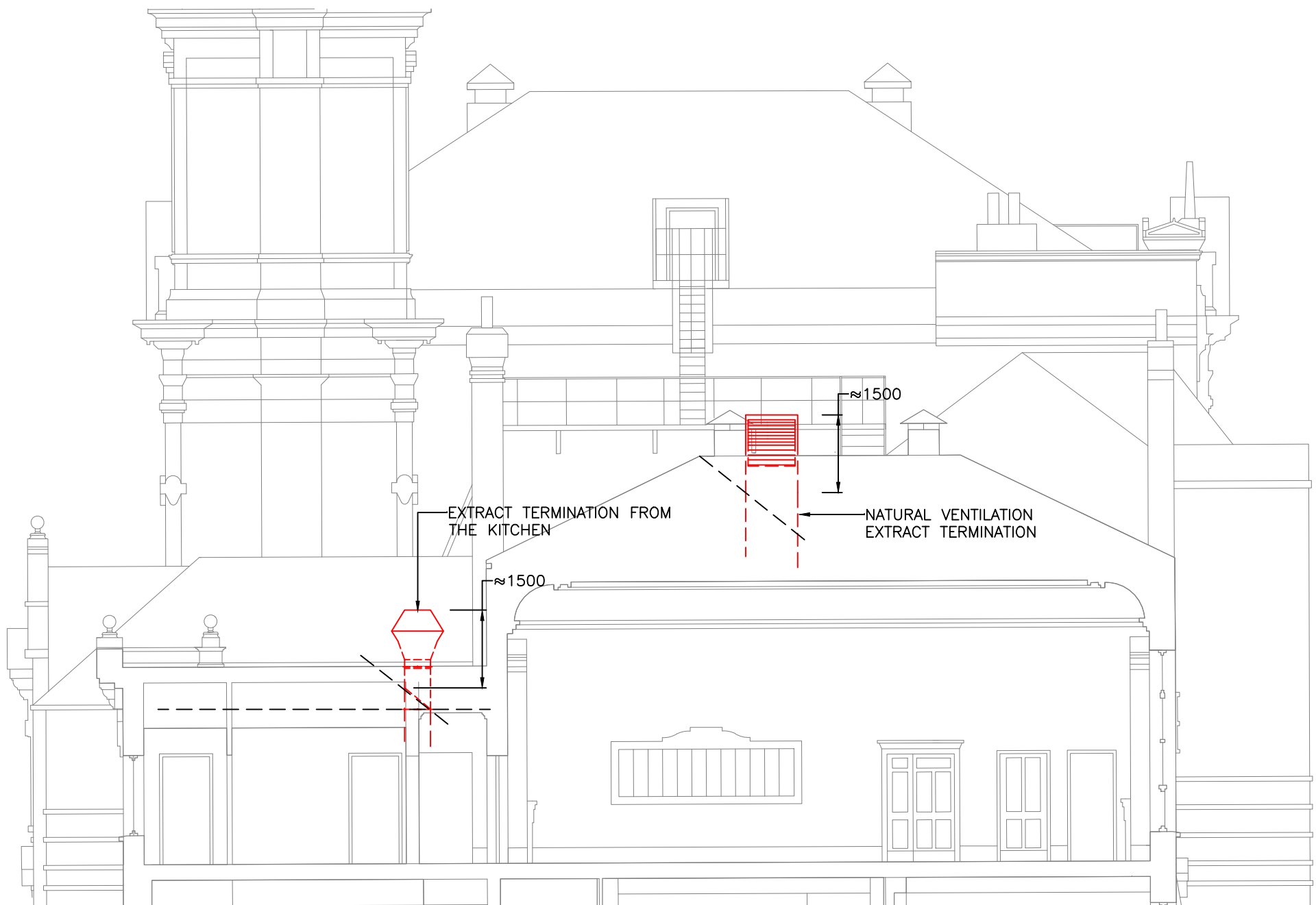
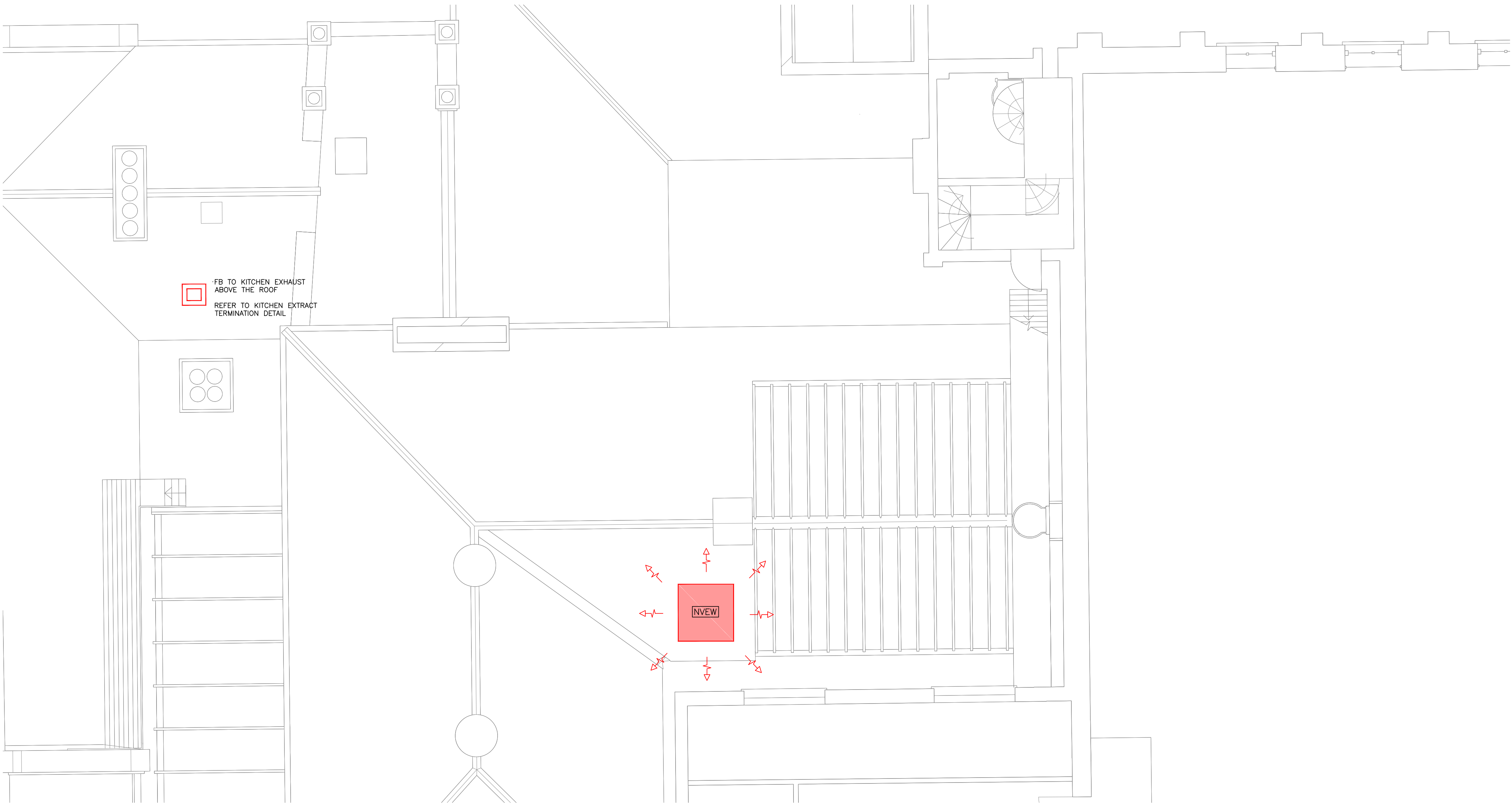
**FOR INFORMATION**

Ash Sakula Architects

**P3r Engineers Ltd**  
Consulting Building Services Engineers  
70 Cowcross Street  
London EC1M 6EJ  
  
Telephone 020 7490 7848  
www.p3r-engineers.co.uk

Project  
**WAC ARTS**  
  
Drawing Title  
**LEVELS 3 & 4 - MEP SERVICES**

Scale:	Drawn by:	Checked by:
1:50@A1	RP	MP
1:100@A3		
Date:	Drawing No.	Revision:
12.08.2019	1905-MEP9120	P3



KITCHEN EXTRACT AND GROUND FLOOR DINING EXTRACT  
TERMINATION DETAIL

NOTES:  
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- MECHANICAL SERVICES LEGEND
- VENTILATION SUPPLY DUCT
  - VENTILATION EXTRACT DUCT
  - EXISTING EXTRACT DUCT TO BE RE-USED AS SUPPLY
  - EXISTING SERVICES TO BE STRIP-OUT
- OW02 - OPENABLE WINDOWS AT HL FOR NATURAL VENTILATION SUPPLY  
OW03 - OPENABLE WINDOWS AT HL FOR NATURAL VENTILATION SUPPLY  
NVEW - NATURAL VENTILATION EXTRACT WINDCATCHER  
FCU03 - FAN COIL UNIT WALL MOUNTED  
FCU02 - FAN COIL UNIT FLOOR MOUNTED  
CON - CONDENSER FOR AIR CONDITIONING OF CC & MULTI PURPOSE SPACES  
SG - VENTILATION SUPPLY FLOOR GRILLES  
MVHR - MECHANICAL VENTILATION HEAT RECOVERY  
HVL - HYBRID VENTILATION UNIT  
KSF - KITCHEN SUPPLY FAN  
KEF - KITCHEN EXTRACT FAN  
KR - EXISTING RADIATOR TO BE STRIP OUT  
R - NEW RADIATOR  
NVL - NATURAL VENTILATION EXHAUST LOUVRE WITH BACKDRAUGHT DAMPER

P2	12.08.2019	PRELIMINARY ISSUE
P1	18.07.2019	WIP PRELIMINARY ISSUE
Revision	Date	Details

Status

FOR INFORMATION

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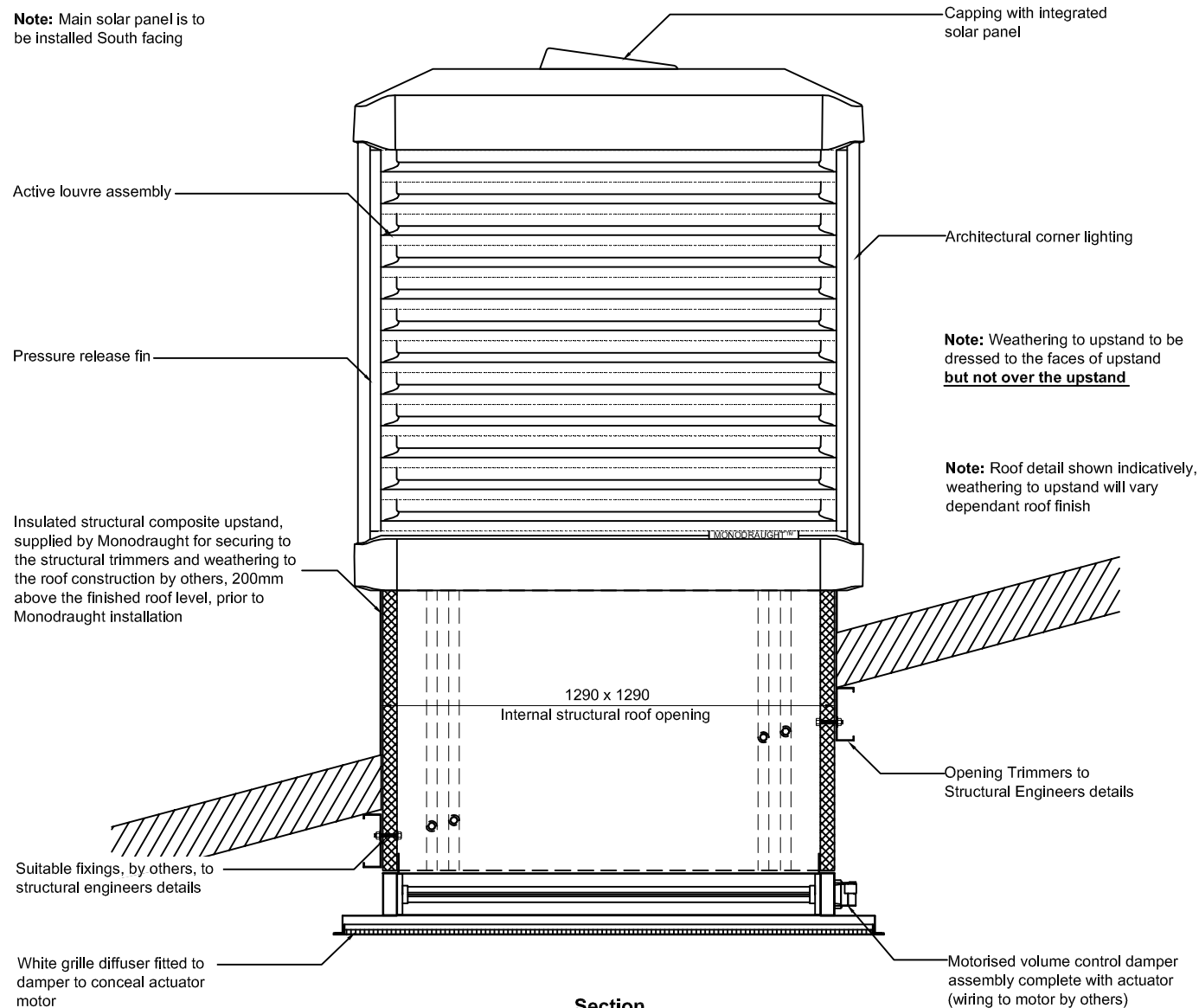
**P3r Engineers Ltd**  
Consulting Building Services Engineers  
70 Cowcross Street  
London EC1M 6EJ  
Telephone 020 7490 7848  
www.p3r-engineers.co.uk

Project  
WAC ARTS  
Drawing Title  
ROOF LEVEL - MEP SERVICES

Scale:	Drawn by:	Checked by:
1:50@A1 1:100@A3	RP	MP
Date:	Drawing No.	Revision:
12.08.2019	1905-MEP9120	P2

# Monodraught Square WINDCATCHER® X-Air 200 natural ventilation system to suit a pitched roof arrangement with no ceiling

**Note:** Main solar panel is to be installed South facing

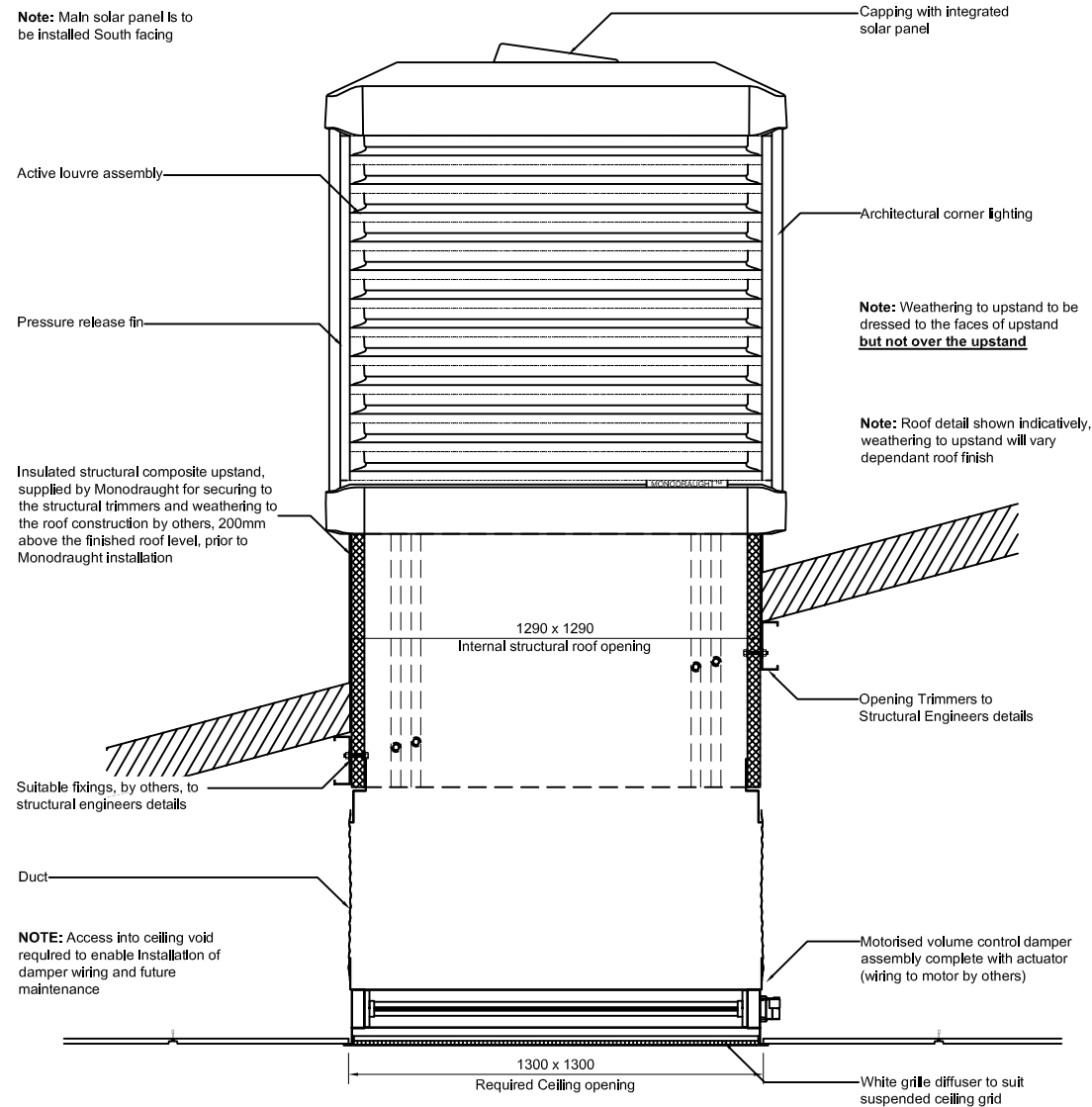


Section

Typical detail. For further information, please contact Monodraught on +44 (0)1494 897700

Drg No: WC\_XAIR\_200\_SQ\_PITCH\_EXT

# Monodraught Square WINDCATCHER® X-Air 200 natural ventilation system to suit a pitched roof arrangement with a void to a suspended ceiling



Section

Typical detail. For further information, please contact Monodraught on +44 (0)1494 897700

Drg No: WC\_XAIR\_200\_SQ\_PITCH\_STD