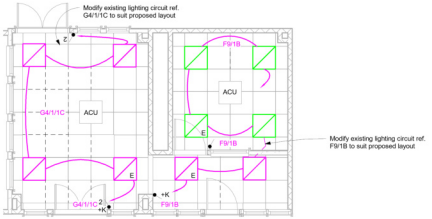
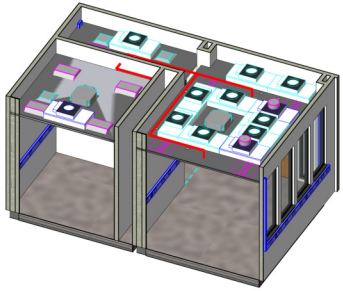


1 Proposed lighting layout
1 : 50



4 3D coordination view

Electrical Legend

2-gang 13A switched socket outlet finished in grey c/w all ancillaries as required for installation within dado trunking	- MK Electric Logic Plus range
20A, DP, lockable fire alarm isolator key switch	- MK Logic Plus range
Surface mounted switched fused connection unit	- MK Logic Plus range
Surface mounted gridswitch assembly finished in grey plastic c/w 1x 1-way 20A rocker switch module. *+K denotes emergency lighting key switch	- MK Electric Gridswitch / Logic Plus range
Surface mounted gridswitch assembly finished in grey plastic c/w 1x 2-way 20A rocker switch module. *+K denotes emergency lighting key switch	- MK Electric Gridswitch / Logic Plus range
Cat 5e RJ45 socket finished in grey plastic c/w all ancillaries as required for installation within dado trunking	- MK Electric Logic Plus range
600x600 recessed LED luminaire c/w IP65 rating 'E' denotes self-contained, maintained emergency version	- Dextra IMPR 65 LED (IMPR65 L45 C84)
600x600 recessed LED luminaire 'E' denotes self-contained, maintained emergency version	- Dextra MODLED Slim (MODRS L35 C84)
3-compartment white plastic dado trunking	- MK Electric Prestige
63A, three-phase (400V / 3P + N + E) IEC 60309 switched socket outlet	- MK Electric Commando or Mennekes
32A, three-phase (400V / 4 pole), IP65 rated lockable switch disconnector	- MK Electric Commando Safetyswitch
20A, single-phase (230V / 2 pole), IP65 rated lockable switch disconnector	- MK Electric Commando Safetyswitch
Aspirating type fire alarm control panel; single pipe system c/w enclosure and battery unit capable of providing 72-hour backup	- Stratos Micra 25
Addressable fire alarm interface unit c/w enclosure to monitor 'Fire/ and 'Fault' signals from the local aspirating system	- Hochiki
Red rigid aspirating sampling pipe c/w accessories, sampling holes and warning label	- For use with Stratos Micra 25 system
Sampling point assembly for mounting in ceiling tile	- For use with Stratos Micra 25 system
Emergency power shutdown switch	- to match existing

NOTE
Proposed luminaires within the laboratory areas shall have UV protective films applied. UV film shall be yellow in colour. Contractor shall procure and install as required.

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STANDARD ELECTRICAL SPECIFICATION

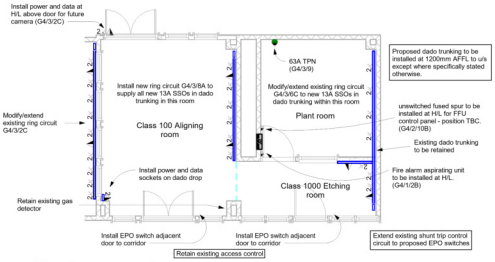
1) ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH: THE ELECTRICITY AT WORK REGULATIONS 1989; THE REGULATIONS FOR ELECTRICAL INSTALLATIONS 18TH EDITION (BS 7671:2018) AS ISSUED BY THE INSTITUTION OF ELECTRICAL ENGINEERS; STFC DESIGN GUIDE FOR MECHANICAL, ELECTRICAL & PUBLIC HEALTH SERVICES; BS 5839 PART 1 COP FOR INSTALLATION OF FIRE ALARM SYSTEMS IN BUILDINGS; AND LATEST REVISION OF RAL SPECIFIC FIRE ALARM INSTALLATION GUIDANCE NOTE.

2) FINAL POSITIONS OF ALL ELECTRICAL EQUIPMENT SHALL BE APPROVED BY THE D.O. ON SITE BEFORE INSTALLATION.

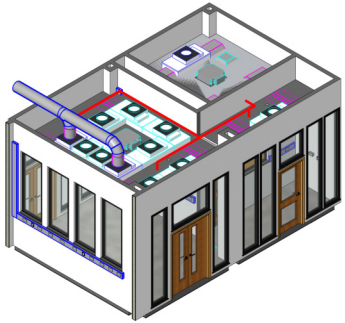
3) ALL WIRING SHALL BE LOW SMOKE ZERO HALOGEN (LSZH) INSULATED WITH STRANDED COPPER CONDUCTORS IN STEEL CONDUIT OR TRUNKING UNLESS OTHERWISE STATED. ALL FIRE ALARMS SHALL BE WIRED IN 2-CORE + EARTH RED PIRELLI GOLD FP200 CABLE UNLESS OTHERWISE STATED. MINIMUM CONDUCTOR SIZE OF 1.5mm² CSA. ALL STRUCTURED CABLING SHALL BE CAT 5E UTP UNLESS OTHERWISE STATED.

4) FIX "DYMO" TYPE LABELS, SIZE 5 TO ALL LIGHTING SWITCHES, SOCKET OUTLETS AND OTHER ACCESSORIES. FIX SIZE 12 TO ALL DISTRIBUTION BOARDS, ISOLATION SWITCHES, ETC. SHOWING ITS CIRCUIT REFERENCE ON EACH PIECE OF ELECTRICAL APPARATUS.

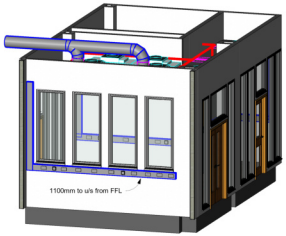
No.	Description	Date
2	Revised following DTM	07/02/19
3	Revised following DTM	03/09/19



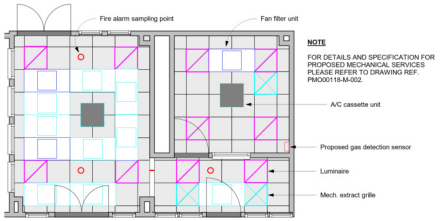
2 Small power and comms layout
1 : 50



5 3D coordination alternate view

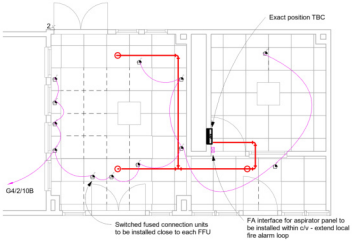


8 3D coordination view from existing lab.



NOTE
FOR DETAILS AND SPECIFICATION FOR PROPOSED MECHANICAL SERVICES PLEASE REFER TO DRAWING REF. PMO0011B-M-002.

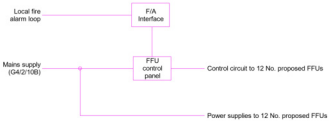
3 Mechanical & electrical services co-ordination
1 : 50



6 Proposed fire alarm system and small power within c/v
1 : 50

Provide a fire alarm interface unit (local to FFU controller) and program to shutdown FFUs in the event of a localised 'Fire' or 'Fault' signal from the proposed local aspirating fire alarm system.

Refer to mechanical specification for exact wiring details.



7 Proposed FFU control circuit schematic
NTS

R1 GROUND FLOOR

MEMS LAB

PROPOSED ELECTRICAL SERVICES LAYOUT

Project number	PMO-00118
Date	04/09/19
Drawn by	D.J. SUMMERS
Checked by	A.J. SHARP
	E01
Scale	As indicated

04/09/2019 09:46:50