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December 2023

MEU Wythenshawe
Planning Submission
Ventilation Strategy Statement Revision 01

Introduction

This statement has been prepared to provide outline details of the ventilation proposals for the new extension at the Medicine Evaluations Unit (MEU) Wythenshawe.

The new MEU extension will be located next to the existing MEU building at Wythenshawe Hospital; The Langley Bldg, Southmoor Rd, Roundthorn Industrial Estate, Wythenshawe, Manchester M23 9QZ. The development consists of specialist laboratories and general ward areas with supporting offices, seminar rooms, lounges, storerooms, etc.

The proposed development includes the following uses:

- Specialist Laboratories
- General Ward Areas
- Offices, seminar space, lounges, storerooms, utility rooms, toilets, shower facilities, overnight rooms and a kitchenette

The design and installation of ventilation systems will be developed in line with, but not limited to, the following:

- HTM 03-01 - Specialised ventilation for healthcare buildings
- Control of Substances Hazardous to Health Regulations (COSHH)
- Current Building Regulations Approved Documents
- All CIBSE Codes of Practice and Design Guidance Notes
- British Standard BS EN 14175 – Fume Cupboard Standards
- All relevant British Standards and Codes of Practices

This statement shall be read in conjunction with the following drawings:

- 3153-CWC-XX-00-DR-M-5710 – Ground Floor Ventilation Treatment Drawing
- 3153-CWC-XX-01-DR-M-5711 – First Floor Ventilation Treatment Drawing
- 3153-CWC-XX-02-DR-M-5712 – Second Floor Ventilation Treatment Drawing

Specialist Laboratories

The Laboratories will have mechanical ventilation systems serving the spaces. Air Handling Units (AHUs) for general supply and extract ventilation, with specialist fume extract systems in some locations.

The general ventilation will be by AHUs, these units will provide supply & extract air in accordance with HTM 03-01, they shall be variable volume units so the extract side will ramp up or down depending on the number of specialist exhaust units that are in use at any given time.

The Biomarker Laboratory, Sample Handling Laboratory and the two supporting rooms will be served from the same AHU and second AHU will serve the Aseptic suite. The AHUs shall be located on the second floor in the dedicated plant room, with ductwork distributing to supply and extract swirl type air diffusers / grilles. The intake connection to the AHU will be routed to atmosphere via a standard louvre local to the unit, the exhaust connection to the AHU will be routed to atmosphere via a chimney stack that are required to discharge 3m above the roof level of the building.

The Aseptic suite ventilation services will be designed as a cascade system, this means that air will be supplied to the key clean areas and air will then pass through pressure stabilisers to rooms of a lower classification or where there are multiple clean rooms, a balanced supply and stable cascade out.

Attenuation will be provided on all connections of the AHU to prevent excessive levels of noise emission. Crosstalk attenuators will be used where ductwork passes across spaces where break out noise could be an issue.

Due to the specialist laboratory equipment extract air will be provided by extract fans serving fume cupboards and specialist extraction equipment. These units shall be variable volume units which can ramp up or down depending on the number of active areas/branches.

The systems serving the fume cupboards and specialist extraction equipment shall be discharged to atmosphere via the exhaust chimney stack that is required to discharge 3m above the roof level of the building. Each exhaust chimney will have a duct reducer at the termination point to increase the discharge velocity.

General Ward Areas

The main ward area will have two Mechanical Ventilation Heat Recovery units (MVHRs) providing supply and extract air to the space. The MVHRs shall be located locally to the ward space within the ceiling void of the room, with ductwork distributing to supply and extract swirl type air diffusers / grilles. The intake and exhaust connections to the MVHRs will be routed to atmosphere via a standard louvre local to the unit. The louvre systems will be designed to maintain a distance between the intake and exhaust louvres to reduce the chance of crossflow contamination.

Attenuation will be provided on all connections of the MVHRs to prevent excessive levels of noise emission. Crosstalk attenuators are not required as these MVHRs are only serving one room, so break-out noise is not an issue.

Offices, Seminar Space, lounges, Storerooms, Utility Rooms, Toilets and Kitchenette

Natural ventilation via openable windows will be utilised in areas where possible. The Open Plan Offices, Consultation/Examination rooms and Overnight rooms will use natural ventilation, reducing the installation and running costs of mechanical systems.

Due to the higher number and density of people the Seminar area will be served via a local MVHR providing supply and extract air to the space. The MVHR shall be located locally to the seminar space within the ceiling void of the room, with ductwork distributing to supply and extract swirl type air diffusers / grilles. The intake and exhaust connections to the MVHRs will be routed to atmosphere via a standard louvre local to the unit. The louvre systems will be designed to maintain a distance between the intake and exhaust louvres to reduce the chance of crossflow contamination.

The support spaces, including but not limited to, lounges, storerooms, utility rooms, toilets and the kitchen will be grouped together based on their location within the building and will be served via a local MVHRs providing supply and extract air to the spaces. The MVHRs shall be located locally to the areas served within the ceiling void, with ductwork distributing to supply and extract swirl type air diffusers / grilles. The intake and exhaust connections to the MVHRs will be routed to atmosphere via a standard louvre local to the unit. The louvre systems will be designed to maintain a distance between the intake and exhaust louvres to reduce the chance of crossflow contamination.

The overnight rooms have ensembles attached to them, to serve these spaces extract fans will be used. Each group of two ensembles will be served from a variable flow extract fan located within the ensemble's IPS space, with ductwork distributing to extract swirl type grilles. The exhaust connections to the fans will be routed to atmosphere locally via a roof cowl.

Attenuation will be provided on all connections of the mechanical ventilation equipment to prevent excessive levels of noise emission. Crosstalk attenuators will be used where ductwork passes across spaces where break out noise could be an issue.

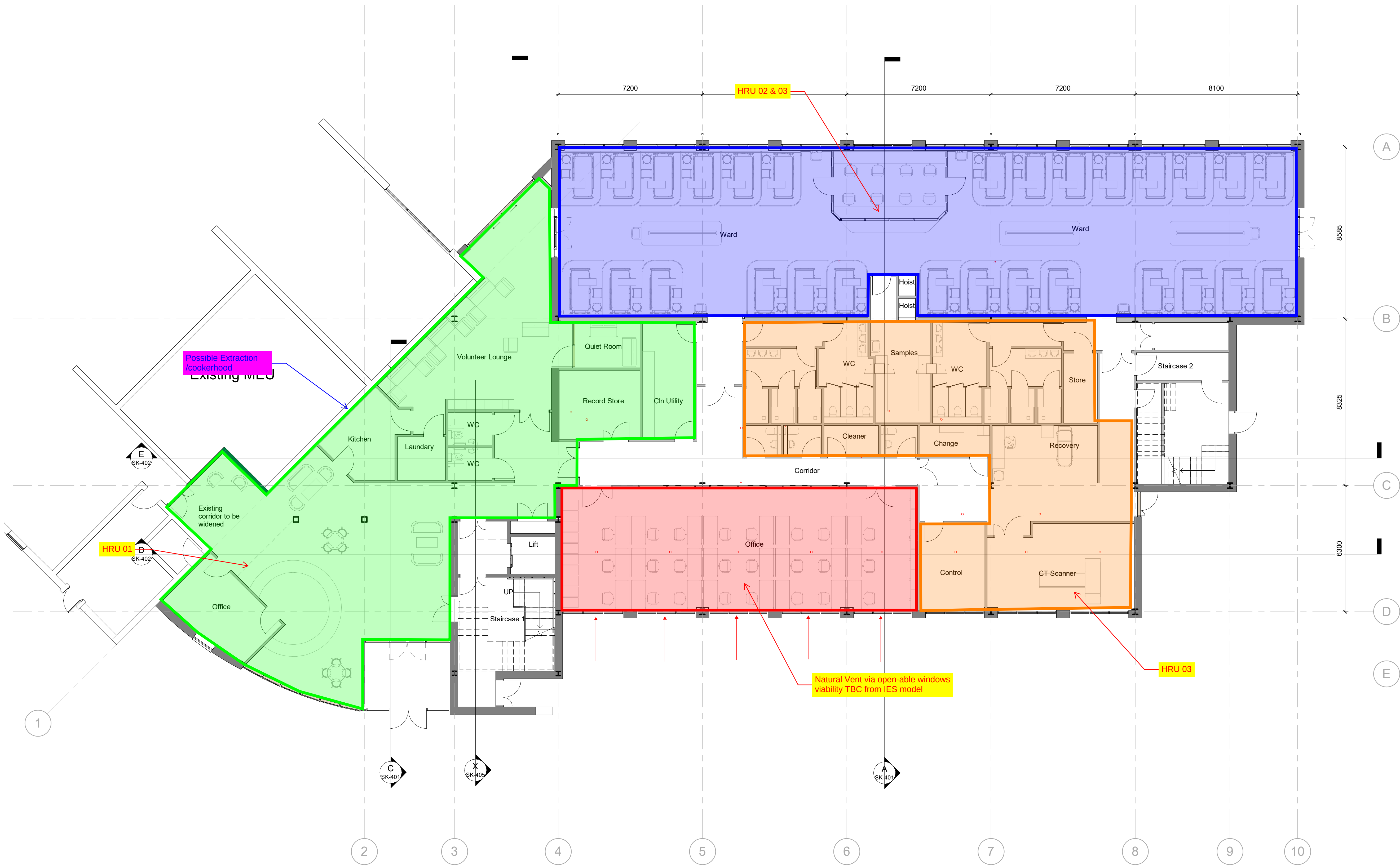
Fire Engineering Services

A full fire strategy has not been created for this project, but for all mechanical ventilation services where ductwork crosses fire walls, fire compartments and escape corridor walls, smoke/fire dampers or fire dampers will be installed. These locations will be indicative and will need to be confirmed by a fire specialist.

All ventilation systems to be interlinked with the fire alarm system to allow for automatic shut-off upon activation of the fire alarm.

Appendix – Mechanical Services Drawings:

- 3153-CWC-XX-00-SK-M-5710
 - Ground Floor Ventilation Treatment Drawing
- 3153-CWC-XX-01-SK-M-5711
 - First Floor Ventilation Treatment Drawing
- 3153-CWC-XX-02-SK-M-5712
 - Second Floor Ventilation Treatment Drawing



Ground Floor Plan
1 : 100

Natural Vent via
Open-able Windows

Mechanical Ventilation
Heat Recovery units or
AHU Zones

Natural Vent Via
Open-able Windows

P3	2023/10/25	Layout updated to suit client's comments	CS	JL
P2	2023/09/19	General Update	CS	JL
P1	2023/08/10	Initial Issue	CS	JL
REV	DATE	DESCRIPTION	DRN	CHK

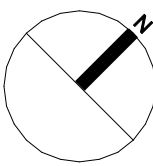
CLIENT

The Medicines Evaluation Unit Ltd

PROJECT TITLE
MEU Extension Phase 3

TITLE
Ground Floor Plan

3153-CWC-XX-00-SK-M-5710
CWC - Mark-up
Ventilation Treatment Sketch
Ground Floor
29/11/2023 - SH

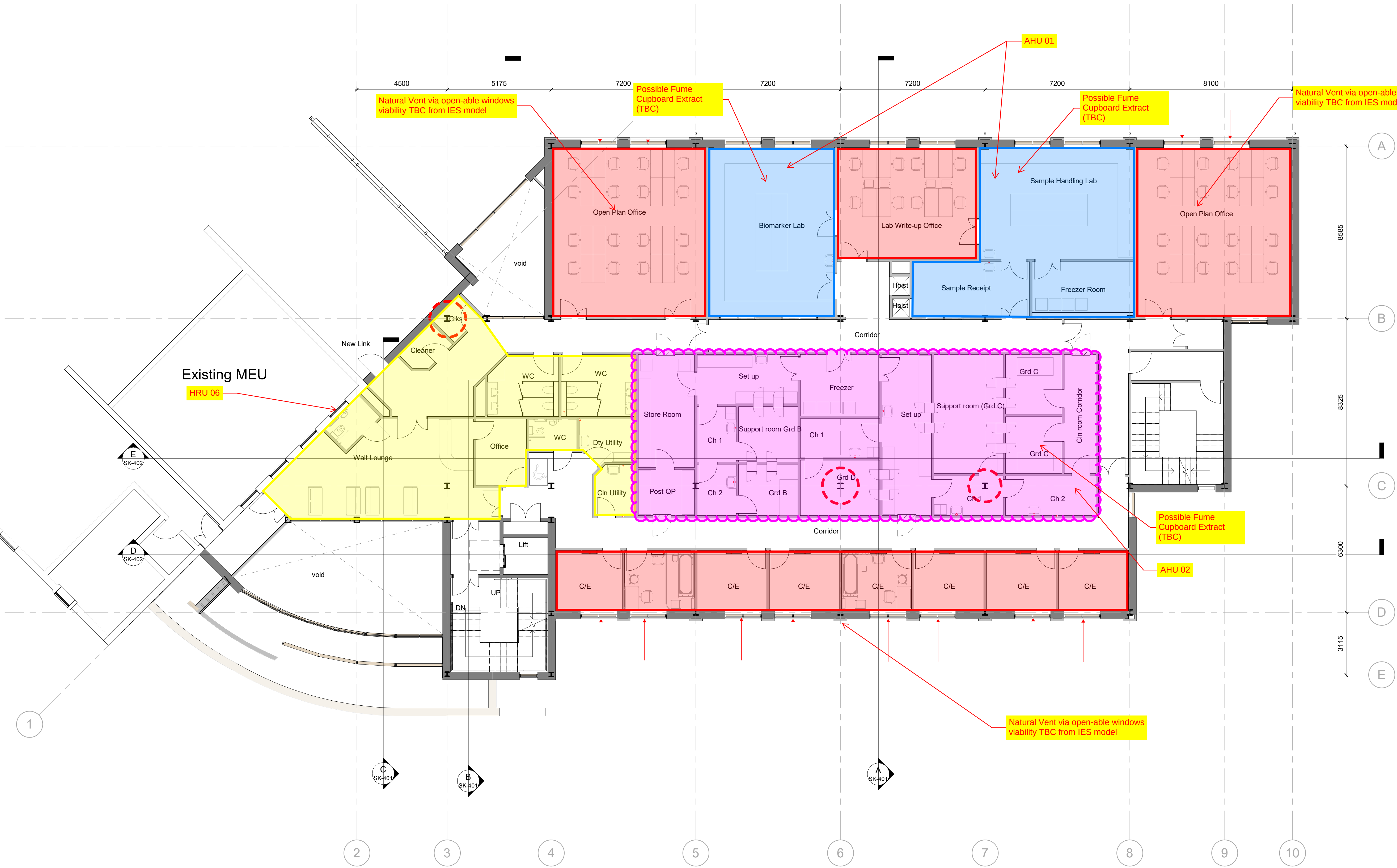


Do not scale from this drawing.
The contractor is to check all dimensions on site and report any discrepancies to MHA.
This drawing has been produced for The Medicines Evaluation Unit Ltd for MEU Extension Phase 3 and is not intended for use by any other person or any other purpose.
MHA Architects is a trading name of Michael Hyde and Associates, a limited company registered in England and Wales under company number 1178091 whose registered office is at Suite 1B, 70 Spring Gardens, Manchester, M2 2BQ.

Natural Vent via Open-able Windows

Mechanical Ventilation Heat Recovery units or AHU Zones

Natural Vent Via Open-able Windows



First Floor Plan
1 : 100

P3	2023/10/25	Layout updated to suit client's comments	CS	JL
P2	2023/09/19	General Update	CS	JL
P1	2023/08/10	Initial Issue	CS	JL
REV	DATE	DESCRIPTION	DRN	CHK
CLIENT				
The Medicines Evaluation Unit Ltd				

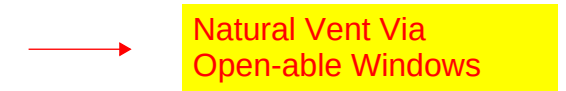
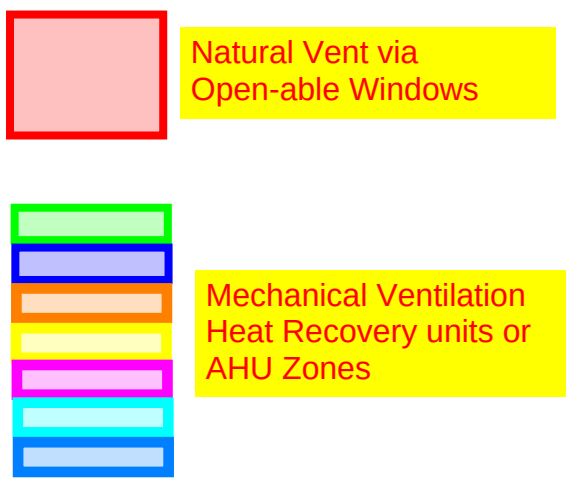
PROJECT TITLE
MEU Extension Phase 3

TITLE
First Floor Plan

SUITABILITY
For Information

MHA PROJECT REFERENCE

3153-CWC-XX-00-SK-M-5711
CWC - Mark-up
Ventilation Treatment Sketch
Ground Floor
29/11/2023 - SH



P3	2023/10/25	Reposition of WCs so drainage runs clear of Aseptic suite footprint	CS	JL
P2	2023/09/19	General Update	CS	JL
P1	2023/08/10	Initial Issue	CS	JL
REV	DATE	DESCRIPTION	DRN	CHK

CLIENT
The Medicines Evaluation Unit Ltd

PROJECT TITLE
MEU Extension Phase 3

TITLE
Second Floor Plan

3153-CWC-XX-00-SK-M-5712
CWC - Mark-up
Ventilation Treatment Sketch
Second Floor
29/11/2023 - SH

Second Floor Plan
1 : 100

Level 2 Upper Celestory Window Level Plan
1 : 100