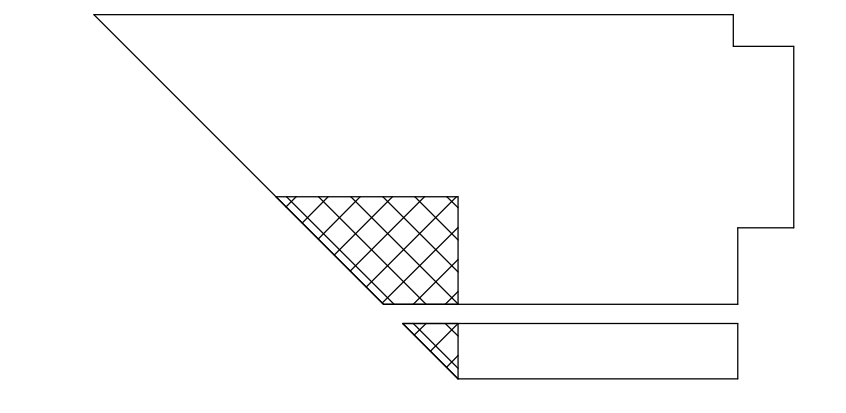
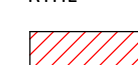


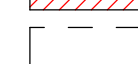


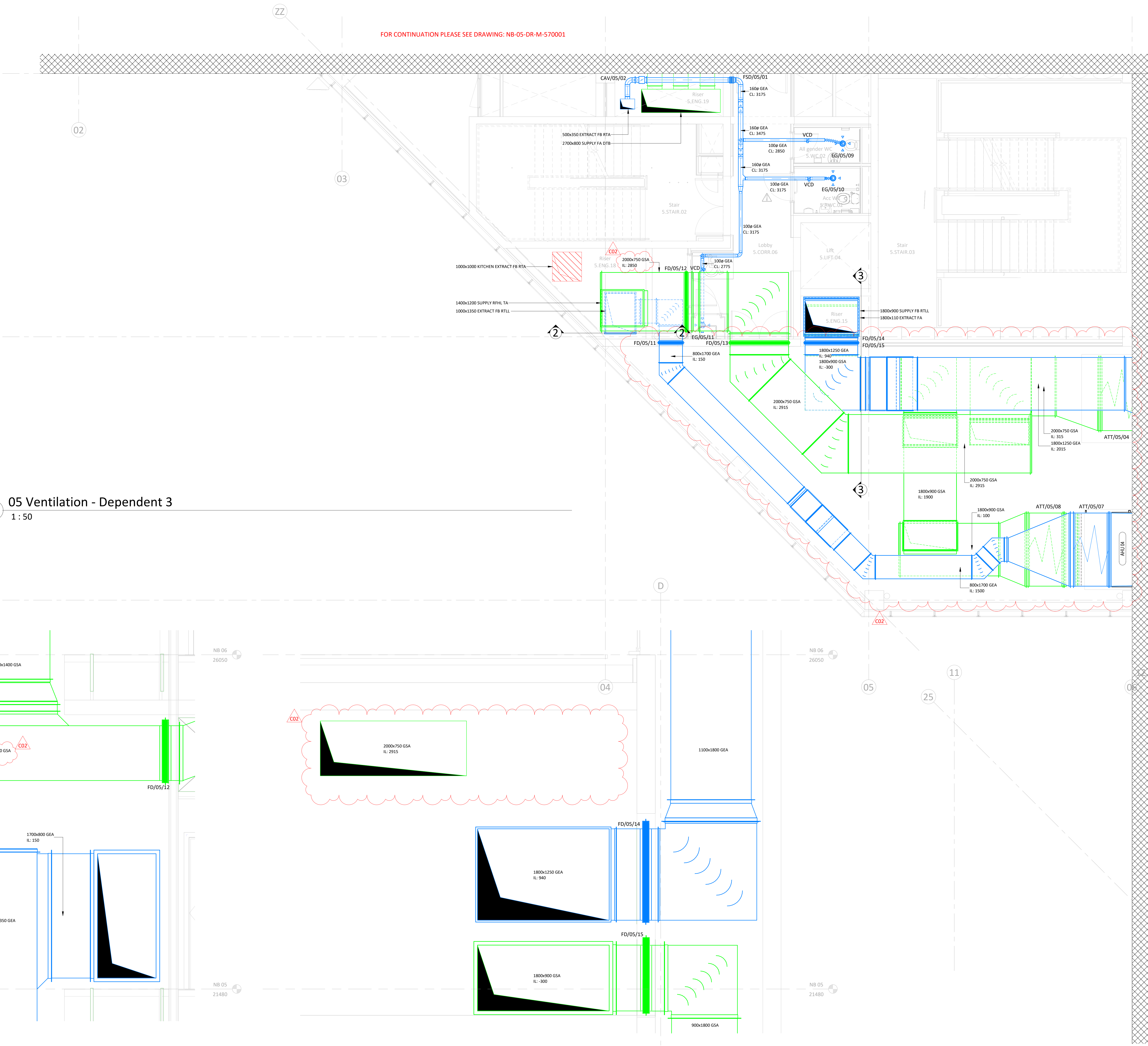
- NOTES:**
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL MECHANICAL, ELECTRICAL, ARCHITECTURAL, INTERIOR DESIGNER & STRUCTURAL DRAWINGS, MECHANICAL EQUIPMENT SCHEDULES, CONTRACT DOCUMENTATION AND SPECIFICATION ASSOCIATED WITH THE WORKS AND DETAILS OF EQUIPMENT POSITIONS, AND PROPOSED WORKS BY OTHERS.
 - THIS DRAWING FORMS PART OF THE SPECIFICATION AND CONTRACT DOCUMENTS FOR THE WORKS.
 - ANY DEVIATIONS FROM THIS DRAWING SHALL BE RECORDED AND RETURNED TO INFORM THE RECORD DRAWING.
 - ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED. UNDER NO CIRCUMSTANCES SHOULD DIMENSIONS BE SCALED FROM THIS DRAWING.
 - INSTALL IN LINE WITH MANUFACTURERS GUIDANCE FOR DUCT, FITTINGS, EQUIPMENT, AND PLANT.
 - DUCTWORK MANUFACTURED AND INSTALLED IN ACCORDANCE WITH DW144.
 - KITCHEN EXTRACT DUCTWORK MANUFACTURED AND INSTALLED IN ACCORDANCE WITH DW172.
 - ALL KITCHEN EXTRACT DUCTWORK SUPPORTS ARE TO BE FIRE RATED UNLESS STATED OTHERWISE IN THE SPECIFICATION. THE LEVEL OF CLEANLINESS SHALL BE IN LINE WITH HVCA TR/19 TABLE F2 - INTERMEDIATE F01 LEVEL.
 - UNLESS STATED OTHERWISE IN THE SPECIFICATION, THE DUCTWORK CONTRACTOR SHALL INSTALL ACCESS DOORS FITTED IN ACCORDANCE WITH HVCA TR/19 TABLES 3, 4 AND 5. ALL ACCESS DOORS TO BE INSULATED TYPE.
 - VCDs ARE INSTALLED ON ALL MAIN, SUB MAIN AND TERMINAL BRANCHES UNLESS DRAWING INDICATES SELF-BALANCED HEADER.
 - ALL METAL DUCTWORK PENETRATIONS THROUGH A FIRE COMPARTMENT OF ANY RATING SHALL HAVE FIRE DAMPERS WHICH ARE INDEPENDENTLY SUPPORTED TO THE BUILDING STRUCTURE AND COMPLETE WITH INSTALLATION FRAMES.
 - ALL PLASTIC DUCTWORK PASSING THROUGH A FIRE COMPARTMENT OF ANY RATING SHALL HAVE AN INTUMESCENT BLOCK INSTALLED TO MEET THE SAME RATING WHICH SHALL BE INDEPENDENTLY SUPPORTED TO THE BUILDING STRUCTURE.
 - ALL FIRE DAMPERS HAVE VISUAL INDICATION STATUS.
 - ALL RECTANGULAR DUCTWORK, AND CIRCULAR OVER 250 DIA SHALL HAVE MULTI-BLADE OBD TYPE VCDs.
 - SUPPLY GRILLE FLEXIBLE CONNECTIONS ARE FULLY INSULATED AND OF THE ACOUSTIC FLEX TYPE (500MM MAX).
 - FREE ISSUE FILTER MEDIA IS INSTALLED BY THE DUCTWORK CONTRACTOR PRIOR TO PROJECT COMPLETION.
 - THE DISHWASHER EXTRACT SYSTEM IS INSTALLED IN STAINLESS STEEL AS PER PROJECT SPECIFICATION.
 - SLEEVES ARE INSTALLED THROUGH ALL WALLS UNLESS STATED OTHERWISE IN THE SPECIFICATION. THE FOLLOWING MINIMUM SHALL APPLY TO DAMPER TESTING: 300% OF FIRE AND MOTORISED DAMPERS SHALL BE TESTED, WITH 50% OFFERED TO NGB AND 50% TO THE CLIENT/BUILDING CONTROL. FINAL SIGN OFF.
 - ALL DUCTWORK COMPONENTS SHALL BE INDEPENDENTLY SUPPORTED TO THE BUILDING STRUCTURE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 - DOOR UNDERCUTS SHALL BE 30MM UNLESS NOTED OTHERWISE.
 - ALL EXTRACT BELLMOUTHS TO INCLUDE WIRE MESH ON INTAKE TOP PREVENT DEBRIS ENTERING THE SYSTEM.

LEGEND:

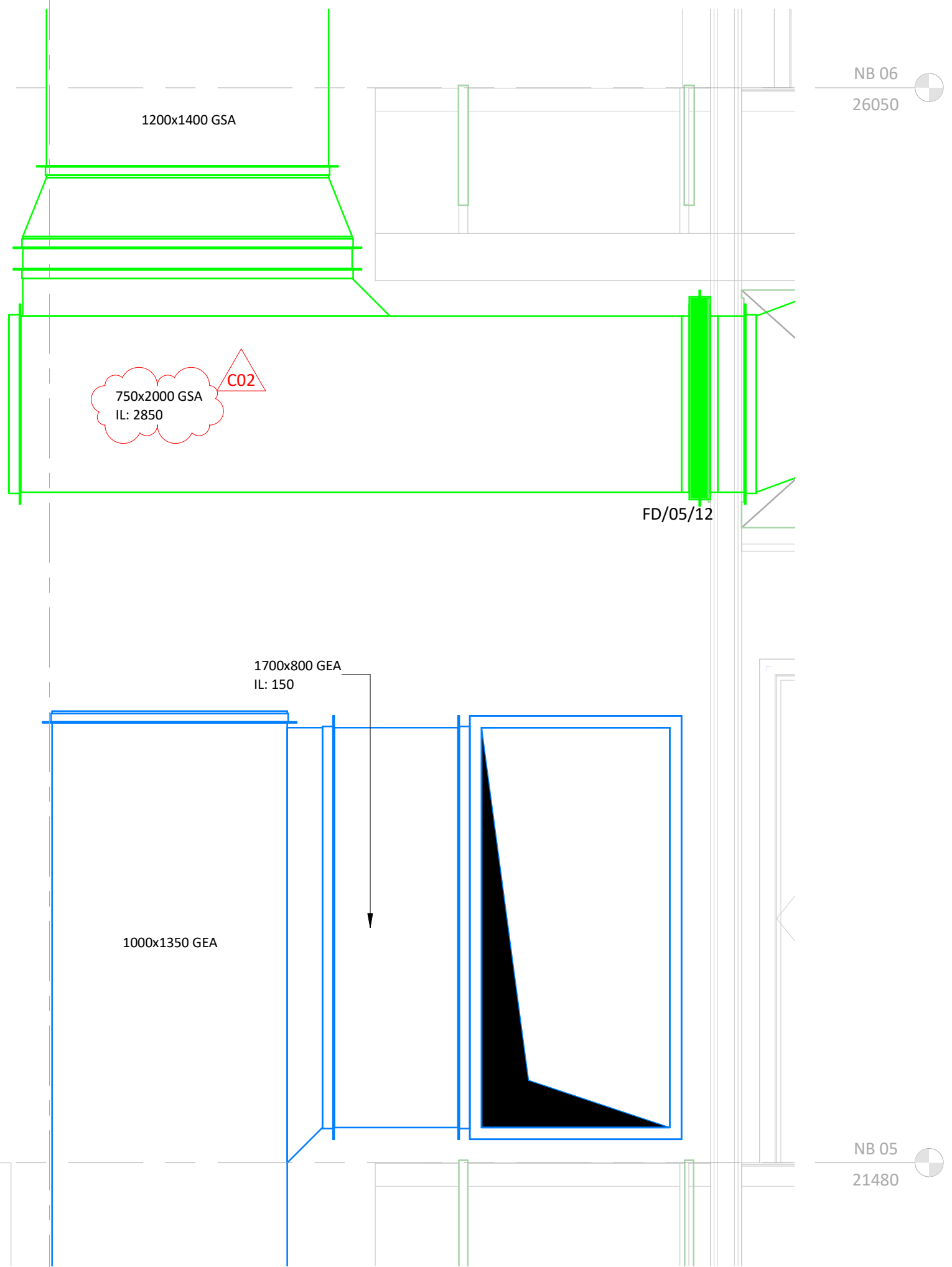
VCD	VOLUME CONTROL DAMPER
FD	FIRE DAMPER
IC	INTUMESCENT COLLAR
ATT	ATTENUATOR
CTA	CROSSTALK ATTENUATOR
VAV	VARIABLE AIR VOLUME BOX
CAV	CONSTANT AIR VOLUME BOX
FG	FLOOR GRILLE
SG	SUPPLY GRILLE
EG	EXTRACT GRILLE
EL	EXHAUST LOUVER
FCU	FAN COIL UNIT
GEA	GENERAL EXTRACT
GSA	GENERAL SUPPLY
EXH	EXHAUST AIR
FAI	FRESH AIR INTAKE
FEA	FUME EXTRACT
KEA	KITCHEN EXTRACT
GSA	KITCHEN SUPPLY
SMX	SMOKE EXTRACT
DEA	DIRTY EXTRACT
FEL	FINISHED FLOOR LEVEL
AFEL	ABOVE FINISHED FLOOR LEVEL
CL	CENTRE LINE
IL	INVERT LEVEL
FA	FROM ABOVE
TB	TO BELOW
FB	FROM BELOW
RTA	RISE TO ABOVE
LL	LOW LEVEL
HL	HIGH LEVEL
RTL	RISE TO HIGH LEVEL

 FIRE RATED DUCTWORK

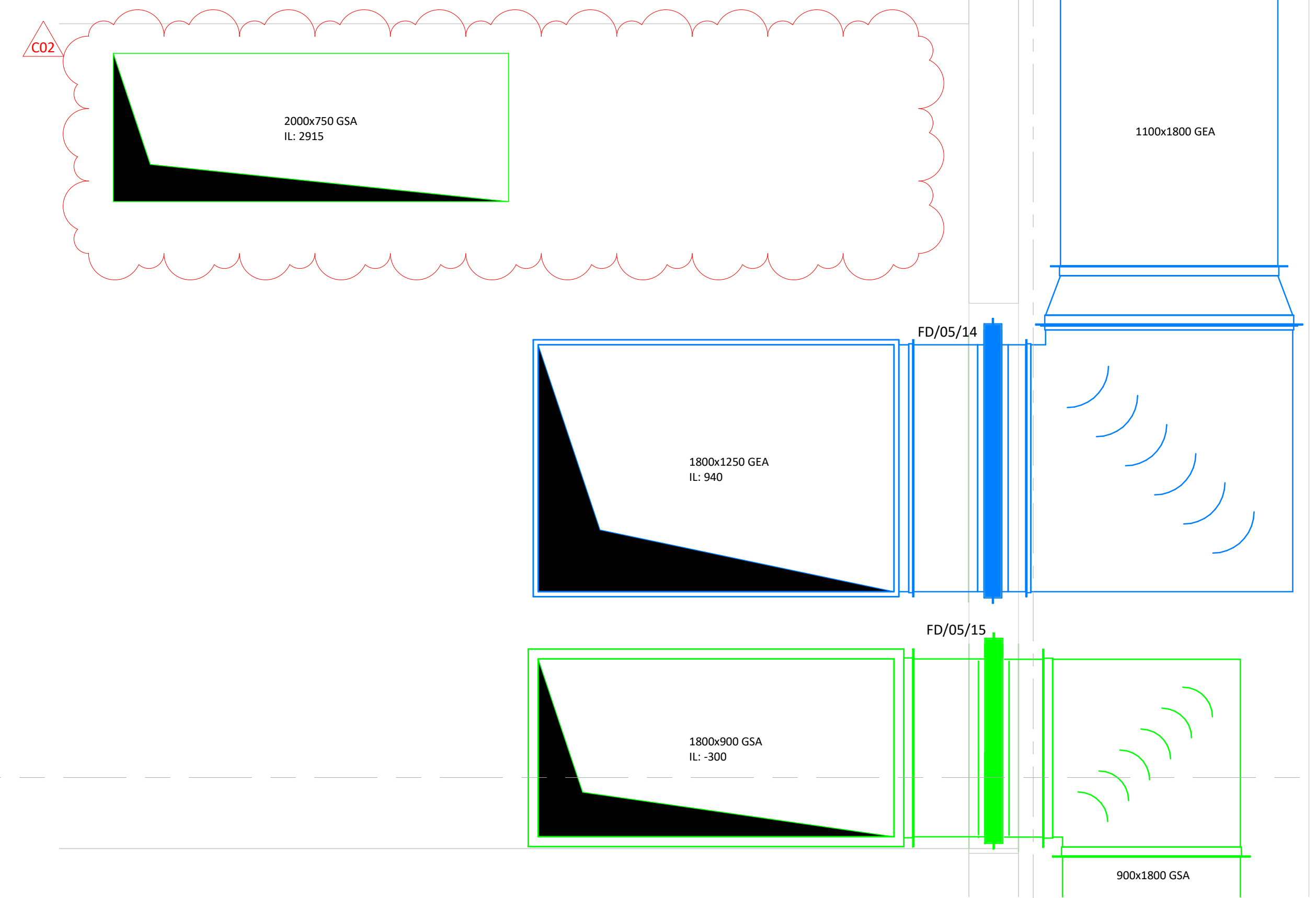
 UNDERFLOOR DUCTWORK



05 Ventilation - Dependent 3
1 : 50



Riser 18 Section
1 : 20



Riser 15 Section
1 : 20



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Tel: 0161 872 0173

Client:
Manchester Metropolitan University

Contact:
**MMU Science & Engineering
99 Oxford RD
Manchester
M1 7EL**

Title:
Ventilation Fifth Floor Sheet 3 of 4

Design Manager:
NGB

Checked By:
J Bejsluk

Drawn By:
J Parker

Issue Date:
04/11/22

Status:
A1 - Approved & Accepted

Scale:
As indicated A0

Rev:
C02

1338B-NGB-NB-05-DR-M-570003