

Kitchen mechanical supply and extract ventilation system (AHU 02)
The proposed kitchen area shall be provided with a mechanical supply and extract air ventilation system. Distribution systems shall be routed through the building.

The kitchen extract ductwork shall be fire rated outside of the fire compartment it serves in accordance with DW171

The kitchen extract system shall be provided with a speed controller to provide, Off, background ventilation and boost ventilation settings. The speed control of the extract shall be interlinked with the supply ventilation to provide match operation.

The ventilation system shall be interfaced with the fire alarm system and shall shut down in alarm conditions.

Duct to be to DW171 2020 standard and also add that access panels on extract to be at 1m centres on the side of the duct to allow hand cleaning

ISG

Document Number
HEV-VES-01-01-DR-M-57201

Revision C01

Status A

Mr Ray Wheeler - ISG Ltd
Nov 17, 2023, 2:16 PM GMT+0:00

0 10 20 MILLIMETERS 100

LINEAR SCALE BAR

drawing number	rev	date	supplied by

NOTES
1. THIS DRAWING IS FOR SPATIAL CO-ORDINATION PURPOSES ONLY. ALL CONTRACTORS TO CHECK THEIR SERVICES BEFORE PROCEEDING WITH SITE INSTALLATION. ANY DISCREPANCIES OR QUERIES PLEASE CONTACT THE CAD CO-ORDINATOR.
2. THIS DRAWING SHOWS ALL HL CO-ORDINATED SERVICES ONLY. FOR FINAL CONNECTIONS TO ITEMS OF SANITARY WARE, PLANT & LOW LEVEL SERVICES SEE RELEVANT DESIGN DRAWINGS.
3. UNLESS STATED OTHERWISE ALL INVERT LEVELS ARE FROM FINISHED FLOOR LEVEL TO BOTTOM OF DUCT (L) OR CENTER OF PIPE (C) -100 TO UNDERSIDE OF LUMINAIRE (U.S.-1)
4. DO NOT SCALE FROM THIS DRAWING. ALL CRITICAL DIMENSIONS ARE SHOWN. FOR ALL OTHER DIMENSIONS PLEASE CONTACT THE CAD CO-ORDINATOR.

GENERAL
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL, STRUCTURAL AND ENGINEERING SERVICES DRAWINGS, SPECIFICATIONS AND ALL OTHER DOCUMENTS ISSUED WITH THIS CONTRACT.
2. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE WBS MECHANICAL WORKMANSHIP SPECIFICATION AND THE MECHANICAL PARTICULAR SPECIFICATION ISSUE WITH THIS PROJECT.

MECHANICAL VENTILATION INSTALLATION

- THE VENTILATION INSTALLATION SHALL BE INSTALLED IN ACCORDANCE WITH WBS MECHANICAL SPECIFICATION, MECHANICAL WORKMANSHIP SPECIFICATION AND THE CURRENT BS/BS EN STANDARDS.
- DUCTWORK SHALL GENERALLY BE GALVANISED STEEL WITH CIRCULAR PROFILE AND SPIRAL SEAMS OR RECTANGULAR.
- ACCESS SHALL BE PROVIDED TO ALL DUCTWORK AND DUCT MOUNTED EQUIPMENT TO ALLOW FOR INSPECTION, MAINTENANCE AND COMMISSIONING IN ACCORDANCE WITH THE HVAC DW CURRENT STANDARDS AND CURRENT BS/BS EN STANDARDS.
- VOLUME CONTROL DAMPERS SHALL BE INSTALLED TO ALL MAIN RUNS, BRANCHES ETC TO ALLOW FOR SYSTEM BALANCING. THE DAMPERS SHALL BE INSTALLED IN ACCORDANCE WITH THE HVAC DW CURRENT STANDARDS AND CURRENT BS/BS EN STANDARDS.
- ALL FINAL DUCTWORK CONNECTIONS TO DIFFUSERS AND GRILLES SHALL BE VIA FLEXIBLE DUCTING. MAXIMUM LENGTH FOR THIS CONNECTION SHALL BE 300MM.
- THERMAL INSULATION SHALL BE APPLIED TO ALL DUCTWORK SERVING WARM / COOLED SUPPLY AIR AND WHERE RETURN AIR IS UTILISED FOR HEAT RECOVERY THE THERMAL INSULATION SHALL BE OF A THICKNESS, TYPE AND FINISH AS OUTLINED IN THE WBS MECHANICAL WORKMANSHIP SPECIFICATION.
- ALL DUCTWORK AND EQUIPMENT SHALL BE ADEQUATELY SUPPORTED AS OUTLINED IN THE WBS MECHANICAL WORKMANSHIP SPECIFICATION. THE MECHANICAL CONTRACTOR SHALL ALLOW FOR ALL NECESSARY SECONDARY SUPPORT STEEL WORK AND BRACKETS ETC. REQUIRED TO FULLY INSTALL ALL THE DUCTWORK AND EQUIPMENT ASSOCIATED WITH THE INSTALLATION.
- DUCTWORK INSTALLATIONS SERVING THE KITCHEN ARE TO COMPLY WITH THE HVAC DW CURRENT STANDARDS AND CURRENT BS/BS EN STANDARDS.
- ALL KITCHEN EXTRACT DUCTWORK SHALL BE FIRE RATED FOR 60 MINUTES FOR INTEGRITY AND STABILITY. DUCTWORK PASSING THROUGH FIRE COMPARTMENTS SHALL BE INSTALLED WITH FIRESMOKE DAMPER. THE FIRESMOKE DAMPER SHALL BE EQUAL TO OR EXCEED THE RATING OF THE ELEMENT THE DUCTWORK PASSES THROUGH.
- UNLESS SPECIFIED OTHERWISE FIRE DAMPERS SHALL BE OF THE MORTISE TYPE WITH A LINK TO THE FIRE ALARM SYSTEM. THE DAMPERS SHALL BE INSTALLED IN ACCORDANCE WITH THE BUILDING CONTROL REQUIREMENTS. THE FIRE STRATEGY FOR THE BUILDING, WITH THE HVAC DW CURRENT STANDARDS AND CURRENT BS/BS EN STANDARDS.
- THE USE OF DOOR TRANSFER GRILLES WITHIN FIRE PARTITIONS SHALL BE CONFIRMED WITH BUILDING CONTROL PRIOR TO THE ORDERING OF MATERIALS AND THEIR INSTALLATION.
- UNLESS OTHERWISE INDICATED IN NONE FIRE RATED ELEMENTS GENERALLY DOORS TO LOBBY AND STORE ROOM SHALL BE UNDERCUT TO ALLOW FOR THE PASSAGE OF MAKE-UP AIR INTO THE ROOM.
- ALL FRESH AIR INLETS ARE TO BE COMPLETE WITH A REMOVABLE INSET MESH.
- THE MECHANICAL CONTRACTOR SHALL INCLUDE FOR FULLY COMMISSIONING THE COMPLETE VENTILATION SERVICES INSTALLATION AS OUTLINED IN THE WBS MECHANICAL WORKMANSHIP SPECIFICATION. THIS SHALL INCLUDE BUT NOT LIMITED TO THE LEAK TESTING OF ALL DUCTWORK AND BALANCING OF THE COMPLETED INSTALLATION, INCLUDING A SEASONAL RE COMMISSIONING.
- WHERE ATTENUATORS ARE SHOWN THESE SHALL BE SIZED TO MEET THE REQUIRED NR VALUES OUTLINED IN THE MECHANICAL PARTICULAR SPECIFICATION.
- ALL DUCT MOUNTED FANS SHALL BE INSTALLED WITH FLEXIBLE CONNECTIONS ON THE INLET AND DISCHARGE SIDES.
- ALL DUCT FANS SHALL BE INSTALLED WITH AAV MOUNTINGS.
- CONTRACTOR SHALL INCLUDE FOR ALL TRANSITION PIECES FROM DUCTWORK TO THE LOUVRES

Rev	Issued by	Description	Date
C01	TD	Construction Issue	15.11.23
P05	TD	AHU Naming Amendment	24.10.23
P04	MB	AHU Amendments as per comments	06.10.23
P03	TD	STAGE 5 ISSUE	03.10.23
P02	TD	STAGE 5 ISSUE	19.09.23
P01	TD	STAGE 5 ISSUE	24.08.23

STAGE 5



VAUGHAN ENGINEERING SERVICES LTD.
MERCURY WORKS, 55A ANTRIM ROAD
NEWTONHASSETT, Co. ANTRIM, BT16 4AF
Tel: 028 9052 7447 Fax: 028 9054 4469
Email: info@vaughan-group.co.uk
Website: www.vaughan-group.co.uk

client Manchester City Council

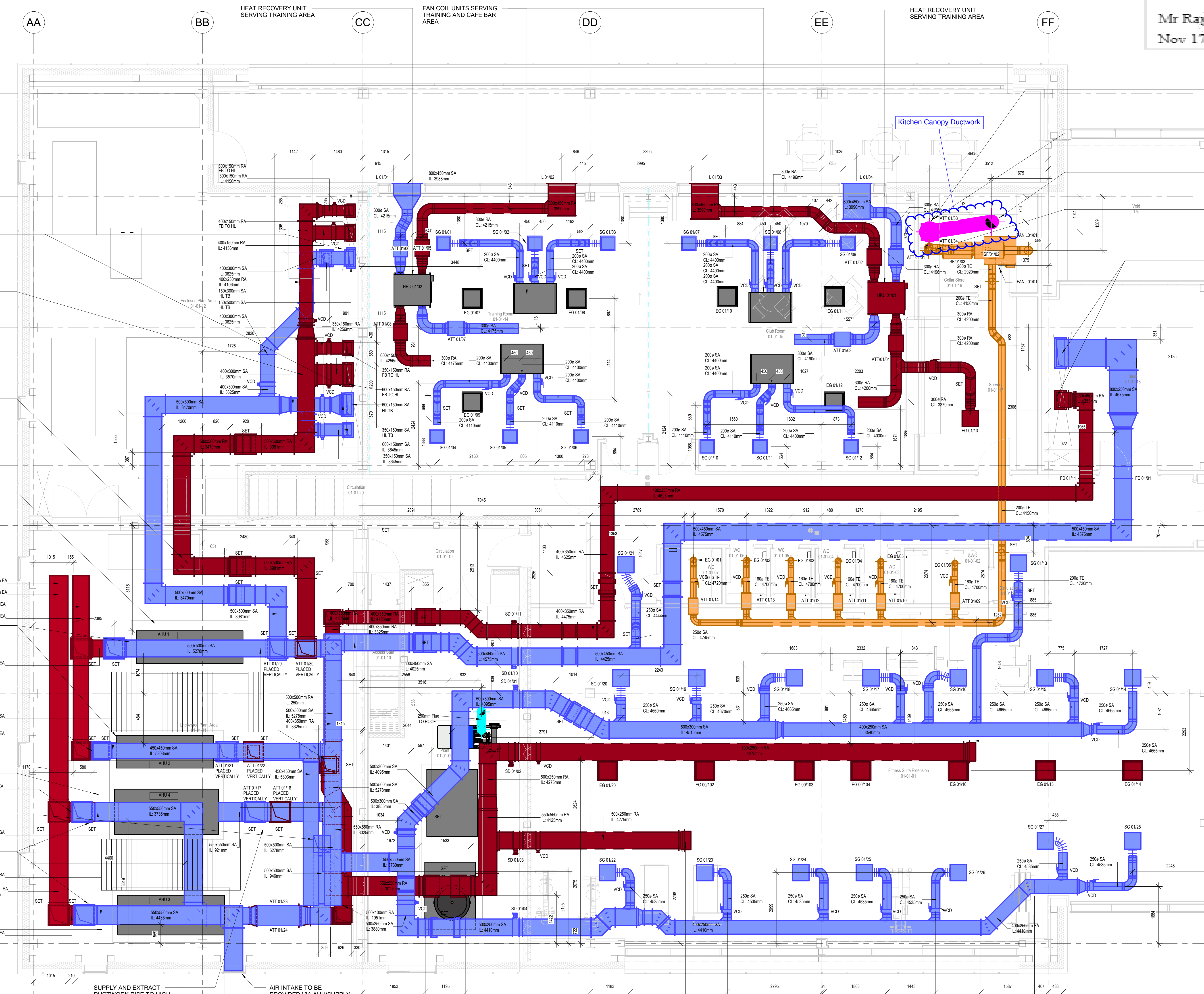
project Hough End Sports Village

013 880 Ventilation Layout
Level 1

013 880 HEV-VES-01-01-DR-M-57201

drawn	BZ	date	24/08/23	rev	
checked	TD	date	24/08/23		
scale	1 : 50	contract	14290		

C01



EXTRACT DUCT TO BE FIRE CLAD AND FIRE RATED FOR 60MINUTES. STABILITY AND INTEGRITY TO THE EXTENT OF THE EXTERNAL PLANT AREA.
KITCHEN EXTRACT FB OFFSET AT HL WITH ATTENUATORS, FAN AND ACCESS HATCHES IN VERTICAL
KITCHEN EXTRACT HL TA

TOILET EXTRACT FROM BELOW TO LPT WITH ATTENUATORS AND FAN. THEN EXTRACT TO ROOF
CAFÉ SUPPLY AND SERVERY EXTRACT DUCTWORK DROP TO LOW LEVEL TO FLOOR BELOW WITHIN STORE ROOM

EXTRACT BELLMOUTH FOR RETURN AIR TRANSFER

SUPPLY AND EXTRACT DUCTWORK RISE TO HIGH LEVEL WITH ATTENUATORS IN THE VERTICAL TO ROUTE TO SERVE FITNESS SUITE EXTENSION
AIR INTAKE TO BE PROVIDED VIA AHU/SUPPLY DUCT CONNECTION TO HIGH LEVEL LOUVRES
EXTRACT BELLMOUTH FOR RETURN AIR TRANSFER