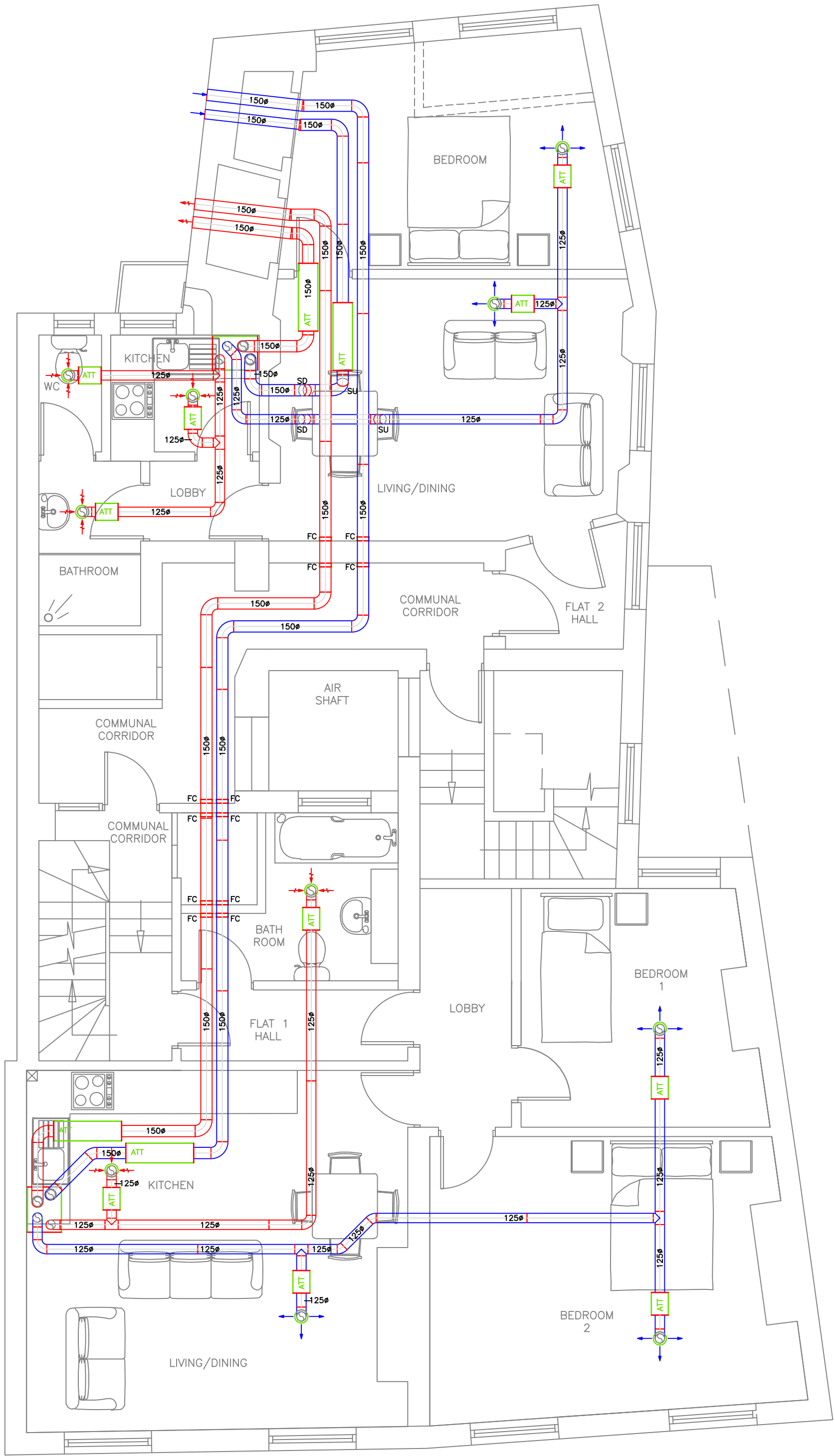
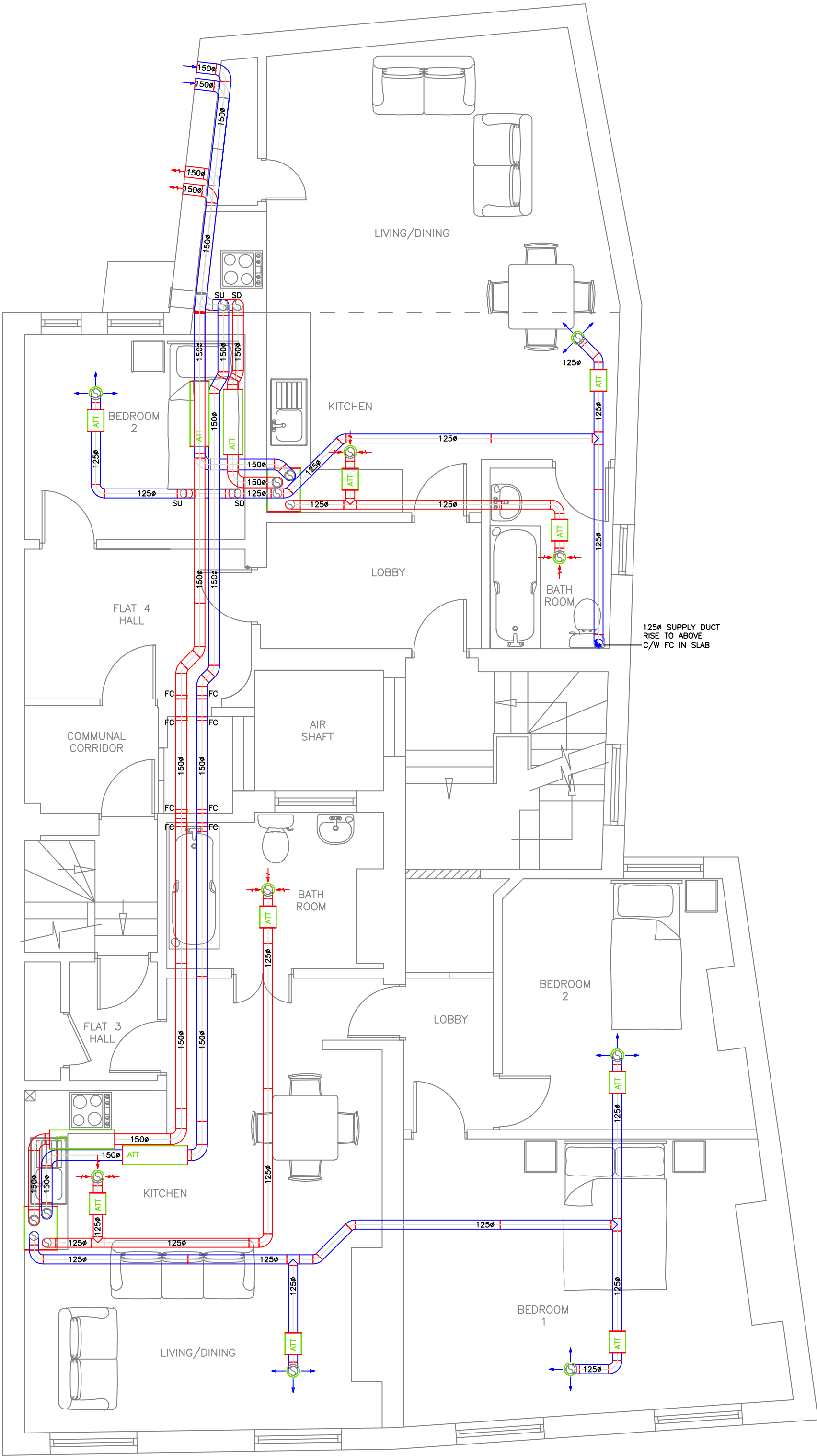
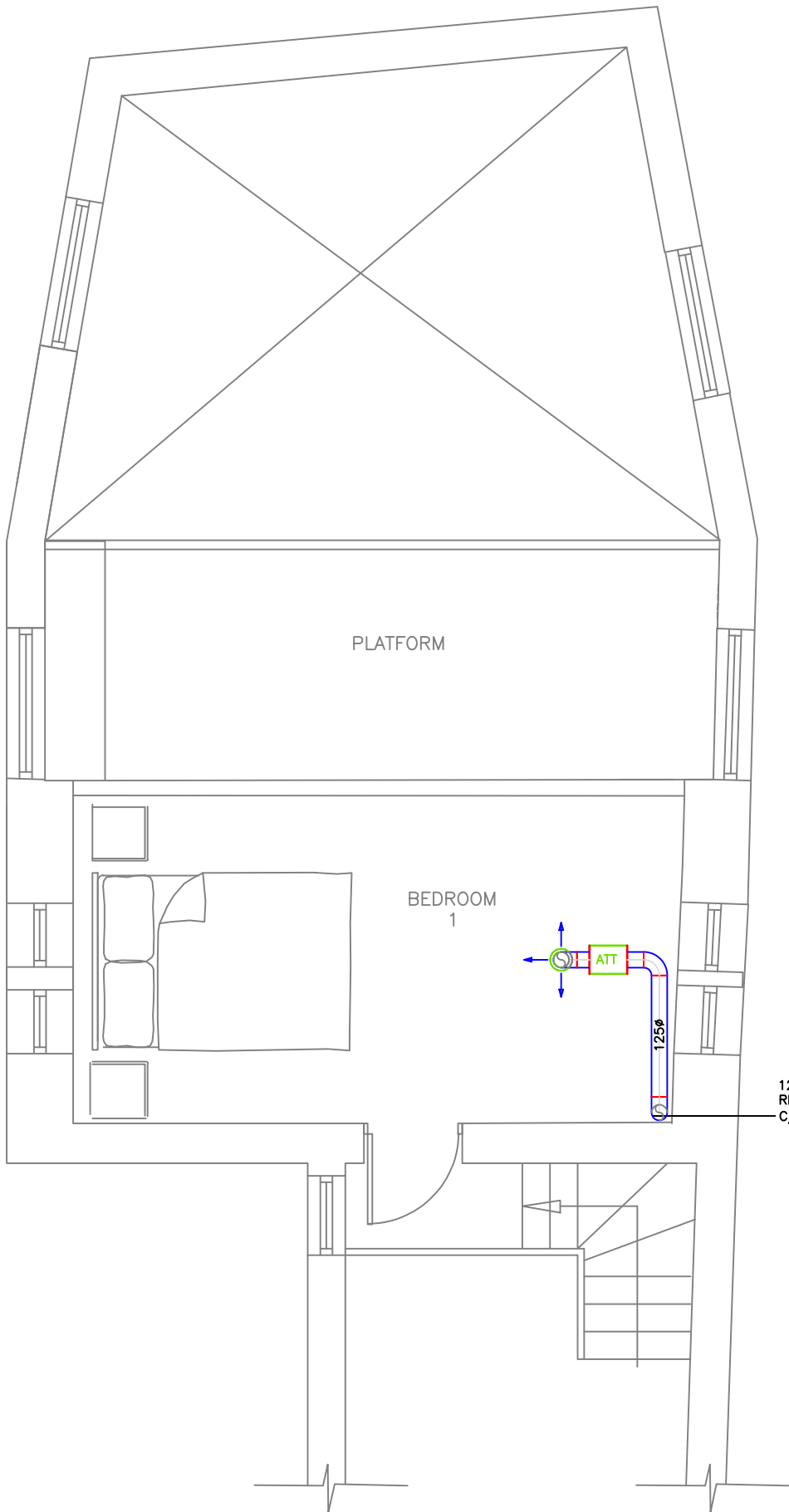




LEVEL 01



LEVEL 02



LEVEL 03 (MEZZANINE)

FLAT 1			
EXTRACT	Required	Boost	Required Trickle
	(m)	(m)	(m)
Kitchen	13.0	11.4	
Bathroom	8.0	7.0	
Total	21.0	18.4	
SUPPLY			
	Required	Boost	Required Trickle
	(m)	(m)	(m)
Living/Dining	7.8	6.9	
Bedroom 1	4.7	4.1	
Bedroom 2	8.5	7.4	
Total	21.0	18.4	

(Values for rates based on dwelling design for permeability less than 9x10m² @ 5Pa. From then 5Pa, the rates above will be lower)

FLAT 2			
EXTRACT	Required	Boost	Required Trickle
	(m)	(m)	(m)
Kitchen	13.0	6.3	
Bathroom	8.0	3.9	
WC	4.0	2.9	
Total	25.0	13.0	
SUPPLY			
	Required	Boost	Required Trickle
	(m)	(m)	(m)
Living/Dining	15.2	7.3	
Bedroom	11.0	5.7	
Total	26.2	13.0	

(Values for rates based on dwelling design for permeability less than 9x10m² @ 5Pa. From then 5Pa, the rates above will be lower)

FLAT 3			
EXTRACT	Required	Boost	Required Trickle
	(m)	(m)	(m)
Kitchen	14.3	10.0	
Bathroom	8.8	7.4	
Total	23.1	19.4	
SUPPLY			
	Required	Boost	Required Trickle
	(m)	(m)	(m)
Living/Dining	8.7	7.3	
Bedroom 1	9.1	7.8	
Bedroom 2	5.3	4.5	
Total	23.1	19.4	

(Values for rates based on dwelling design for permeability less than 9x10m² @ 5Pa. From then 5Pa, the rates above will be lower)

FLAT 4			
EXTRACT	Required	Boost	Required Trickle
	(m)	(m)	(m)
Kitchen	16.4	14.9	
Bathroom	10.1	8.2	
Total	26.5	24.1	
SUPPLY			
	Required	Boost	Required Trickle
	(m)	(m)	(m)
Living/Dining	13.0	11.8	
Bedroom 1	9.8	9.0	
Bedroom 2	3.7	3.3	
Total	26.5	24.1	

(Values for rates based on dwelling design for permeability less than 9x10m² @ 5Pa. From then 5Pa, the rates above will be lower)

THIS DRAWING IS COPYRIGHT AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE OTHER THAN THAT INTENDED WITHOUT PRIOR WRITTEN AGREEMENT OF THE CAD HUB
info@theadhub.co.uk

General Notes:
THIS SYSTEM HAS BEEN DESIGNED TO COMPLY WITH 2015 BUILDING REGULATIONS PART F MEANS OF VENTILATION.
THE SYSTEM MUST BE INSTALLED AND COMMISSIONED AS PER THE DESIGN SPECIFICATION TO ENSURE COMPLIANCE WITH THE ABOVE MENTIONED.
THE COMMISSIONED SYSTEM MUST COMPLY WITH THE 18th EDITION IEE BS7671 PART 7 (ADDITIONAL WORKS)

Legend:
Standard Air Extract: RED MAGNETA DUCT
Pre-Warmed Fresh Air Supply: BLUE CYAN DUCT
Fire Collar: FC (One fitted to each side of the wall/ceiling)
Fire Stopping: FS (Through the wall)
Set Down: SD (In direction of airflow)
Set Up: SU (In direction of airflow)
Volume Control Damper: VCD
Complete MVR: CMV
Alternator: ATT

Project Notes:
UNIT TYPE:
Ductless MVR 300 (MVR) unit.
UNIT LOCATION:
Vertically wall mounted in the kitchen.
UNIT OPERATION:
Unit operation: integral humidifier & CO₂ sensor.
Wash controller, integral humidifier & CO₂ sensor.
DUCTING & DIFFUSERS:
Un-insulated 125mm² galvanneal spiral ducting connecting to 125mm² white metal adjustable 1 hour fire rated off-takes.
EXTERNAL TERMINATIONS:
Insulated 125mm² (just 200mm²) galvanneal spiral ducting to external terrace grilles.
GENERAL:
Pre-insulated ducting is required if the ducting is installed in a cold, un-insulated void.
Fire collars required from the MVR unit up to ceiling and when the ducting passes through the external corridors and floor slabs.
Exhaust & intake terminals to have a minimum separation distance of 1m.
The MVR unit requires a condensate drain to run to the nearest internal waste system (Pipework waste velocity trap or similar is recommended).

FLAT 1
Required Boost: Required Trickle
(m) (m)
Kitchen: 13.0 11.4
Bathroom: 8.0 7.0
Total: 21.0 18.4
SUPPLY
Required Boost: Required Trickle
(m) (m)
Living/Dining: 7.8 6.9
Bedroom 1: 4.7 4.1
Bedroom 2: 8.5 7.4
Total: 21.0 18.4
(Values for rates based on dwelling design for permeability less than 9x10m² @ 5Pa. From then 5Pa, the rates above will be lower)

FLAT 2
Required Boost: Required Trickle
(m) (m)
Kitchen: 13.0 6.3
Bathroom: 8.0 3.9
WC: 4.0 2.9
Total: 25.0 13.0
SUPPLY
Required Boost: Required Trickle
(m) (m)
Living/Dining: 15.2 7.3
Bedroom: 11.0 5.7
Total: 26.2 13.0
(Values for rates based on dwelling design for permeability less than 9x10m² @ 5Pa. From then 5Pa, the rates above will be lower)

FLAT 3
Required Boost: Required Trickle
(m) (m)
Kitchen: 14.3 10.0
Bathroom: 8.8 7.4
Total: 23.1 19.4
SUPPLY
Required Boost: Required Trickle
(m) (m)
Living/Dining: 8.7 7.3
Bedroom 1: 9.1 7.8
Bedroom 2: 5.3 4.5
Total: 23.1 19.4
(Values for rates based on dwelling design for permeability less than 9x10m² @ 5Pa. From then 5Pa, the rates above will be lower)

FLAT 4
Required Boost: Required Trickle
(m) (m)
Kitchen: 16.4 14.9
Bathroom: 10.1 8.2
Total: 26.5 24.1
SUPPLY
Required Boost: Required Trickle
(m) (m)
Living/Dining: 13.0 11.8
Bedroom 1: 9.8 9.0
Bedroom 2: 3.7 3.3
Total: 26.5 24.1
(Values for rates based on dwelling design for permeability less than 9x10m² @ 5Pa. From then 5Pa, the rates above will be lower)

Rev	Description	Author	Date
P01	PRELIMINARY ISSUE	GR	12-04-25
P02	FLAT 4 INTAKE DUCT REVISED	GR	19-09-25

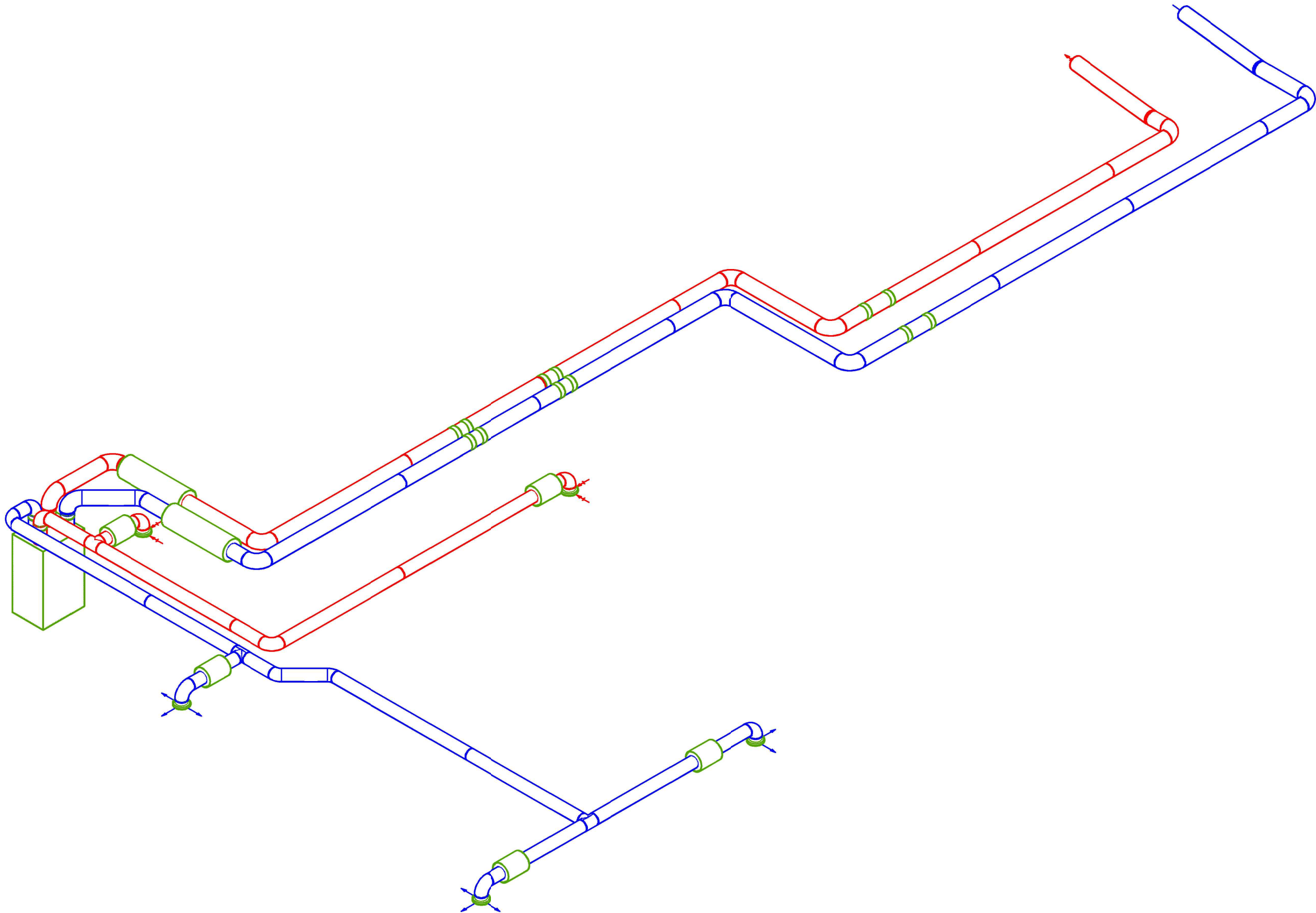
Status: PRELIMINARY ISSUE



Project Title
157 MILTON ROAD
GRAVESEND
KENT

Drawing Title
TYPICAL FLAT LAYOUTS
MECHANICAL VENTILATION
GENERAL ARRANGEMENT

Project No.	Discipline	Engineer
0580	Mechanical	GR
Author	Date	Scale
GR	APR-25	1:50@A1
Drawing Number		Revision
0580-CH-XX-XX-M-DR-1001		P02



INDICATIVE DESIGN FOR ILLUSTRATION PURPOSES ONLY

THIS DRAWING IS COPYRIGHT AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE OTHER THAN THAT INTENDED WITHOUT PRIOR WRITTEN AGREEMENT OF THE CAD HUB

info@thecadhub.co.uk

General Notes:

THIS SYSTEM HAS BEEN DESIGNED TO COMPLY WITH 2010 BUILDING REGULATIONS PART F MEANS OF VENTILATION.

THE SYSTEM MUST BE INSTALLED AND COMMISSIONED AS PER THE DESIGN SPECIFICATION TO ENSURE COMPLIANCE WITH THE ABOVE MENTIONED.

THE COMMISSIONED SYSTEM MUST COMPLY WITH THE 18th EDITION IEE BS7671 PART 7 (ADDITIONAL WORKS).

Legend:

Stale/Moist Air Extract: RED/MAGENTA DUCT
Pre-Warmed Fresh Air Supply: BLUE/CYAN DUCT
Fire Collar: FC (One fitted to each side of the wall/slab)
Fire Sleeve: FS (Through the wall)
Set Down: SD (in direction of airflow)
Set Up: SU (in direction of airflow)
Volume Control Damper: VCD
Complete With: C/W
Attenuator: ATT

Project Notes:

UNIT TYPE:
Dantherm HCV 300 MVHR unit.

UNIT LOCATION:
Vertically wall mounted in the kitchen.

UNIT OPERATION:
Wired controller, integral humidistat & CO² sensor.

DUCTING & DIFFUSERS:
Un-insulated 125mmØ galvanised spiral ducting connecting to 125mmØ white metal adjustable 1 hour fire rated diffusers.

EXTERNAL TERMINATIONS:
Insulated 150mmØ (old: 200mmØ) galvanised spiral ducting to external louvre grilles.

GENERAL:
Pre-insulated ducting is required if the ducting is installed in a cold, un-insulated void.

Fire collars required from the MVHR unit spigot to ceiling and when the ducting passes through the communal corridors and floor slab.

Exhaust & intake terminals to have a minimum separation distance of 1m.

The MVHR unit requires a condensate drain to run to the nearest internal waste system (HepVo waste valve/dry trap or similar is recommended).

P01	PRELIMINARY ISSUE	GR	22-04-25
Rev.	Description	Author	Date

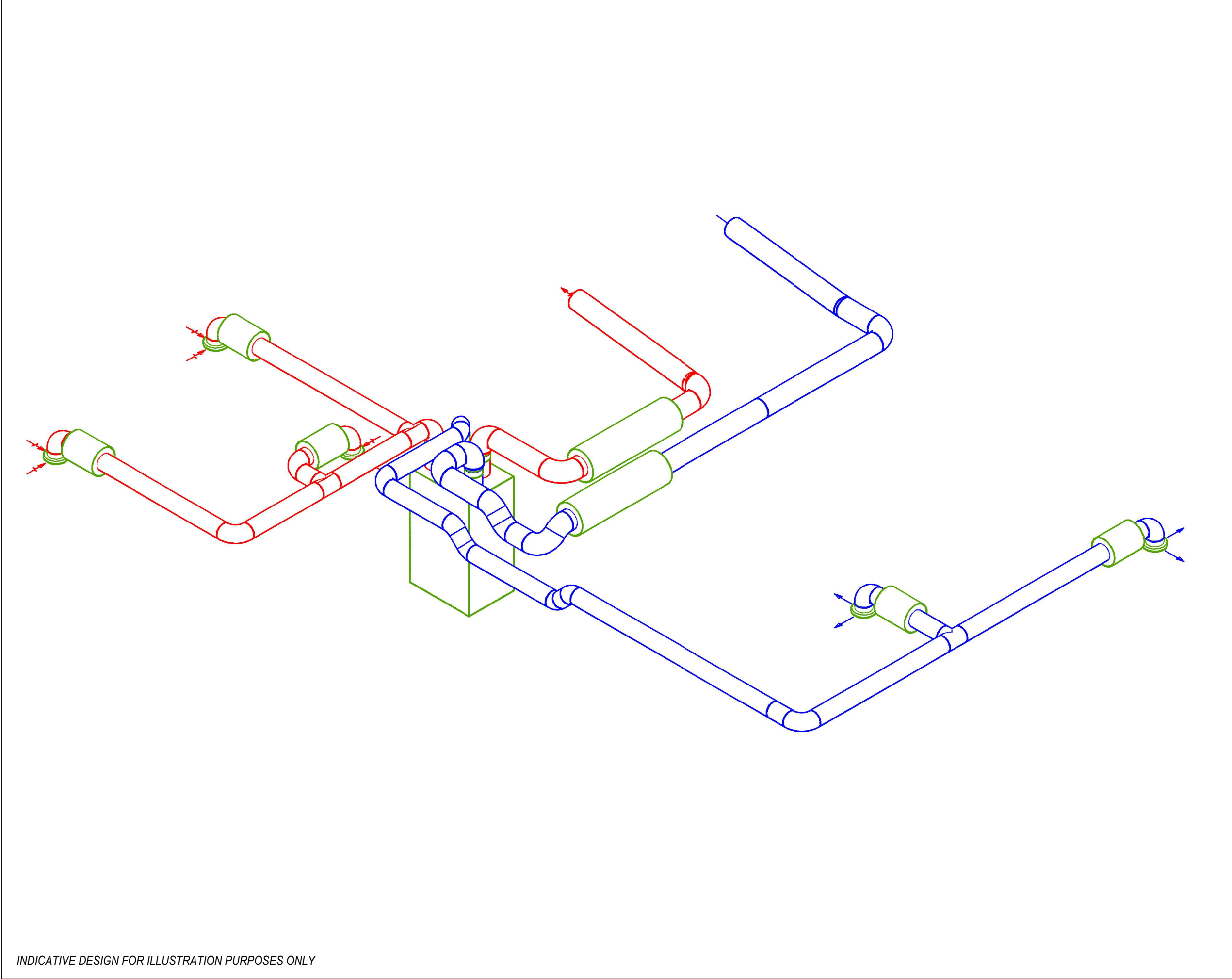
Status **PRELIMINARY ISSUE**



Project Title
**157 MILTON ROAD
GRAVESEND
KENT**

Drawing Title
**FLAT 1
MECHANICAL VENTILATION
ISOMETRIC VIEW**

<i>Project No.</i>	<i>Discipline</i>	<i>Engineer</i>
0580	Mechanical	GR
<i>Author</i>	<i>Date</i>	<i>Scale</i>
GR	APR-25	NTS@A3
<i>Drawing Number</i>		<i>Revision</i>
0580-CH-XX-XX-M-ISO-1002		P01



THIS DRAWING IS COPYRIGHT AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE OTHER THAN THAT INTENDED WITHOUT PRIOR WRITTEN AGREEMENT OF THE CAD HUB

info@thecadhub.co.uk

General Notes:

THIS SYSTEM HAS BEEN DESIGNED TO COMPLY WITH 2010 BUILDING REGULATIONS PART F MEANS OF VENTILATION.

THE SYSTEM MUST BE INSTALLED AND COMMISSIONED AS PER THE DESIGN SPECIFICATION TO ENSURE COMPLIANCE WITH THE ABOVE MENTIONED.

THE COMMISSIONED SYSTEM MUST COMPLY WITH THE 18th EDITION IEE BS7671 PART 7 (ADDITIONAL WORKS).

Legend:

Stale/Moist Air Extract: RED/MAGENTA DUCT
Pre-Warmed Fresh Air Supply: BLUE/CYAN DUCT
Fire Collar: FC (One fitted to each side of the wall/slab)
Fire Sleeve: FS (Through the wall)
Set Down: SD (in direction of airflow)
Set Up: SU (in direction of airflow)
Volume Control Damper: VCD
Complete With: C/W
Attenuator: ATT

Project Notes:

UNIT TYPE:
Dantherm HCV 300 MVHR unit.

UNIT LOCATION:
Vertically wall mounted in the kitchen.

UNIT OPERATION:
Wired controller, integral humidistat & CO² sensor.

DUCTING & DIFFUSERS:
Un-insulated 125mmØ galvanised spiral ducting connecting to 125mmØ white metal adjustable 1 hour fire rated diffusers.

EXTERNAL TERMINATIONS:
Insulated 150mmØ (old: 200mmØ) galvanised spiral ducting to external louvre grilles.

GENERAL:
Pre-insulated ducting is required if the ducting is installed in a cold, un-insulated void.

Fire collars required from the MVHR unit spigot to ceiling and when the ducting passes through the communal corridors and floor slab.

Exhaust & intake terminals to have a minimum separation distance of 1m.

The MVHR unit requires a condensate drain to run to the nearest internal waste system (HepVo waste valve/dry trap or similar is recommended).

P01	PRELIMINARY ISSUE	GR	22-04-25
Rev.	Description	Author	Date

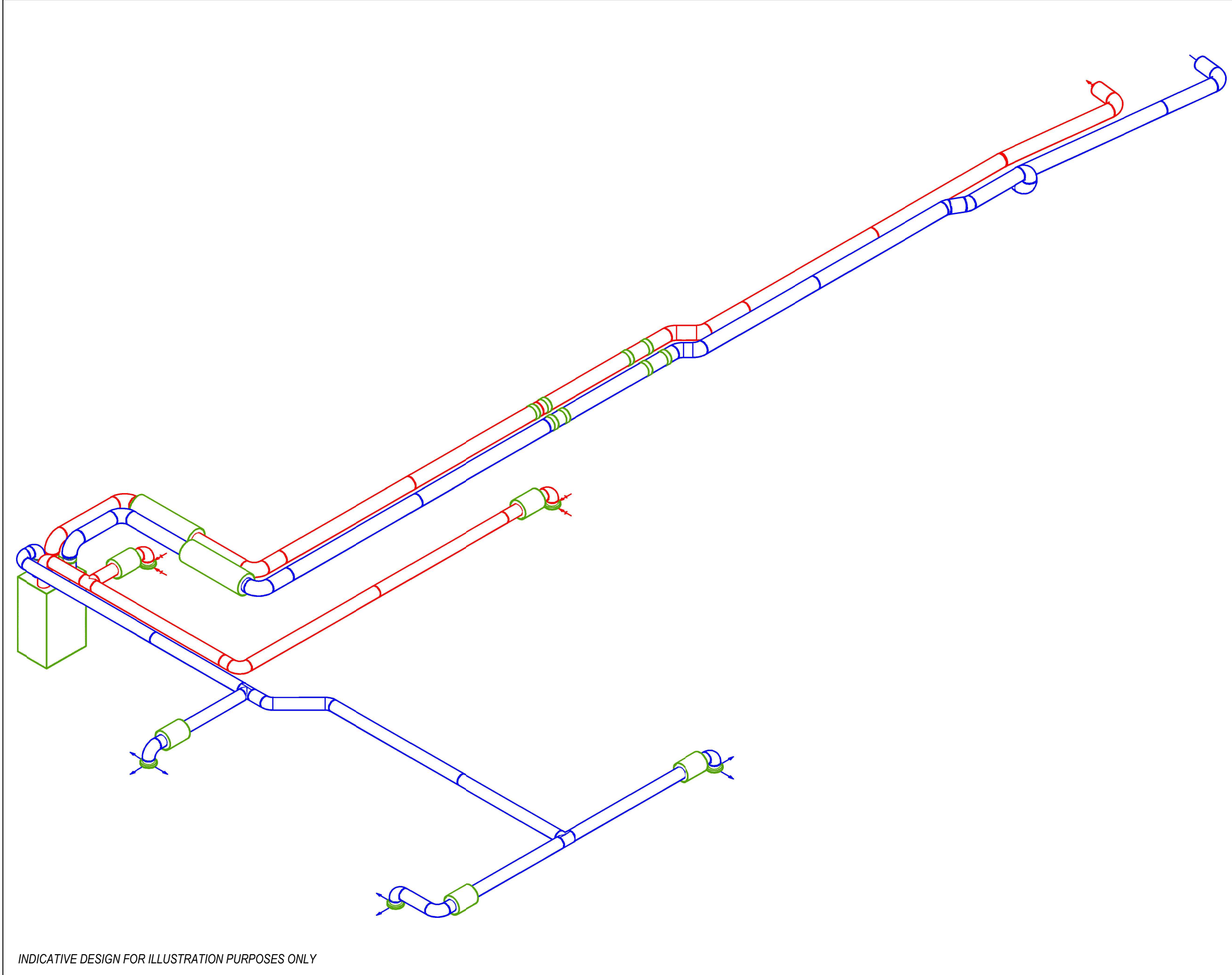
Status **PRELIMINARY ISSUE**



Project Title
157 MILTON ROAD
GRAVESEND
KENT

Drawing Title
FLAT 2
MECHANICAL VENTILATION
ISOMETRIC VIEW

Project No.	Discipline	Engineer
0580	Mechanical	GR
Author	Date	Scale
GR	APR-25	NTS@A3
Drawing Number		Revision
0580-CH-XX-XX-M-ISO-1003		P01



INDICATIVE DESIGN FOR ILLUSTRATION PURPOSES ONLY

THIS DRAWING IS COPYRIGHT AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE OTHER THAN THAT INTENDED WITHOUT PRIOR WRITTEN AGREEMENT OF THE CAD HUB

info@thecadhub.co.uk

General Notes:

THIS SYSTEM HAS BEEN DESIGNED TO COMPLY WITH 2010 BUILDING REGULATIONS PART F MEANS OF VENTILATION.

THE SYSTEM MUST BE INSTALLED AND COMMISSIONED AS PER THE DESIGN SPECIFICATION TO ENSURE COMPLIANCE WITH THE ABOVE MENTIONED.

THE COMMISSIONED SYSTEM MUST COMPLY WITH THE 18th EDITION IEE BS7671 PART 7 (ADDITIONAL WORKS).

Legend:

Stale/Moist Air Extract: RED/MAGENTA DUCT
Pre-Warmed Fresh Air Supply: BLUE/CYAN DUCT
Fire Collar: FC (One fitted to each side of the wall/slab)
Fire Sleeve: FS (Through the wall)
Set Down: SD (in direction of airflow)
Set Up: SU (in direction of airflow)
Volume Control Damper: VCD
Complete With: C/W
Attenuator: ATT

Project Notes:

UNIT TYPE:
Dantherm HCV 300 MVHR unit.

UNIT LOCATION:
Vertically wall mounted in the kitchen.

UNIT OPERATION:
Wired controller, integral humidistat & CO² sensor.

DUCTING & DIFFUSERS:
Un-insulated 125mmØ galvanised spiral ducting connecting to 125mmØ white metal adjustable 1 hour fire rated diffusers.

EXTERNAL TERMINATIONS:
Insulated 150mmØ (old: 200mmØ) galvanised spiral ducting to external louvre grilles.

GENERAL:
Pre-insulated ducting is required if the ducting is installed in a cold, un-insulated void.

Fire collars required from the MVHR unit spigot to ceiling and when the ducting passes through the communal corridors and floor slab.

Exhaust & intake terminals to have a minimum separation distance of 1m.

The MVHR unit requires a condensate drain to run to the nearest internal waste system (HepVo waste valve/dry trap or similar is recommended).

P01	PRELIMINARY ISSUE	GR	22-04-25
Rev.	Description	Author	Date

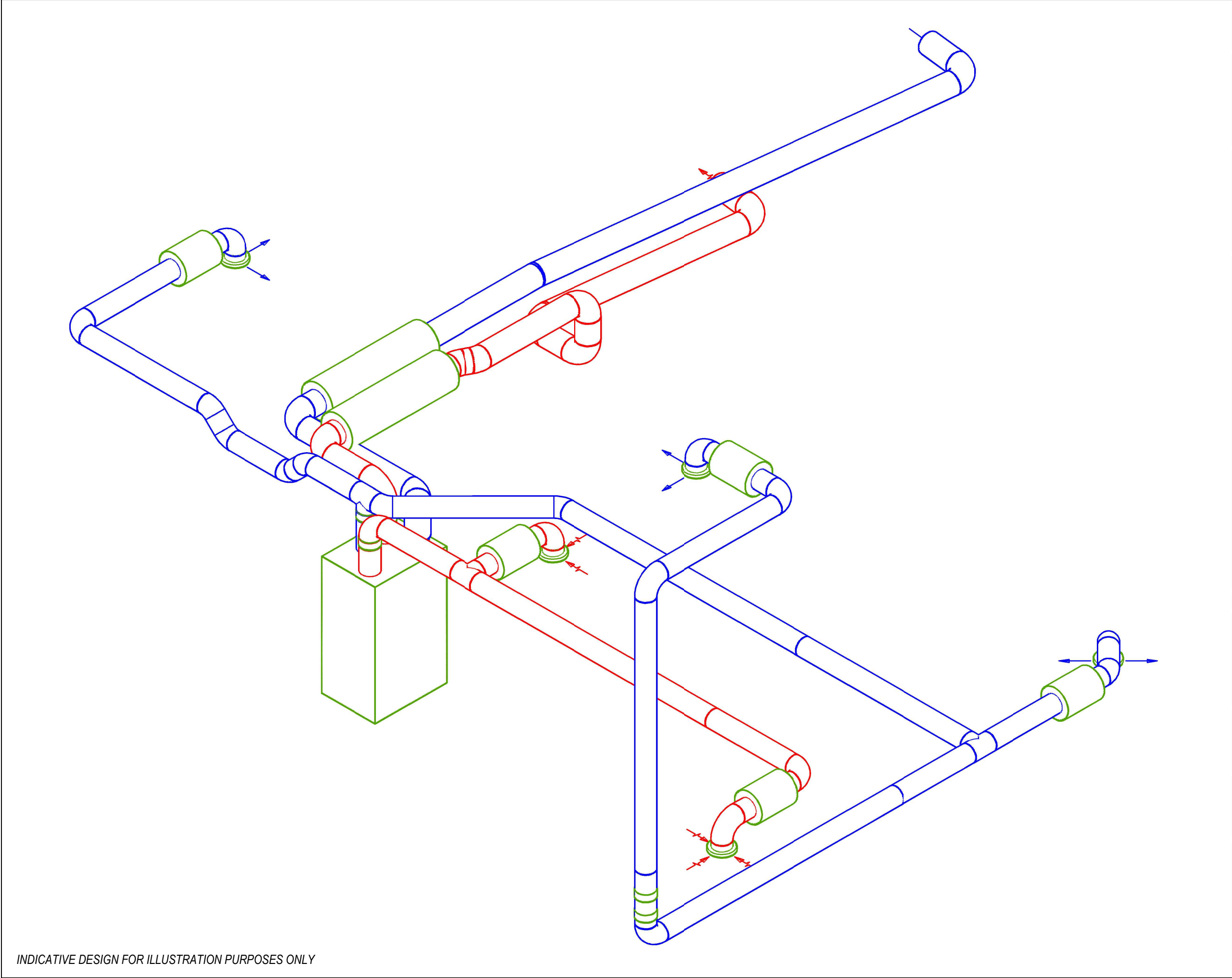
Status **PRELIMINARY ISSUE**



Project Title
157 MILTON ROAD
GRAVESEND
KENT

Drawing Title
FLAT 3
MECHANICAL VENTILATION
ISOMETRIC VIEW

Project No.	Discipline	Engineer
0580	Mechanical	GR
Author	Date	Scale
GR	APR-25	NTS@A3
Drawing Number		Revision
0580-CH-XX-XX-M-ISO-1004		P01



INDICATIVE DESIGN FOR ILLUSTRATION PURPOSES ONLY

THIS DRAWING IS COPYRIGHT AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE OTHER THAN THAT INTENDED WITHOUT PRIOR WRITTEN AGREEMENT OF THE CAD HUB

info@thecadhub.co.uk

General Notes:

THIS SYSTEM HAS BEEN DESIGNED TO COMPLY WITH 2010 BUILDING REGULATIONS PART F MEANS OF VENTILATION.

THE SYSTEM MUST BE INSTALLED AND COMMISSIONED AS PER THE DESIGN SPECIFICATION TO ENSURE COMPLIANCE WITH THE ABOVE MENTIONED.

THE COMMISSIONED SYSTEM MUST COMPLY WITH THE 18th EDITION IEE BS7671 PART 7 (ADDITIONAL WORKS).

Legend:

Stale/Moist Air Extract: RED/MAGENTA DUCT
Pre-Warmed Fresh Air Supply: BLUE/CYAN DUCT
Fire Collar: FC (One fitted to each side of the wall/slab)
Fire Sleeve: FS (Through the wall)
Set Down: SD (in direction of airflow)
Set Up: SU (in direction of airflow)
Volume Control Damper: VCD
Complete With: C/W
Attenuator: ATT

Project Notes:

UNIT TYPE:
Dantherm HCV 300 MVHR unit.

UNIT LOCATION:
Vertically wall mounted in the kitchen.

UNIT OPERATION:
Wired controller, integral humidistat & CO² sensor.

DUCTING & DIFFUSERS:
Un-insulated 125mmØ galvanised spiral ducting connecting to 125mmØ white metal adjustable 1 hour fire rated diffusers.

EXTERNAL TERMINATIONS:
Insulated 150mmØ (old: 200mmØ) galvanised spiral ducting to external louvre grilles.

GENERAL:
Pre-insulated ducting is required if the ducting is installed in a cold, un-insulated void.

Fire collars required from the MVHR unit spigot to ceiling and when the ducting passes through the communal corridors and floor slab.

Exhaust & intake terminals to have a minimum separation distance of 1m.

The MVHR unit requires a condensate drain to run to the nearest internal waste system (HepVo waste valve/dry trap or similar is recommended).

P02	INTAKE DUCT REVISED	GR	19-09-25
P01	PRELIMINARY ISSUE	GR	22-04-25
Rev.	Description	Author	Date

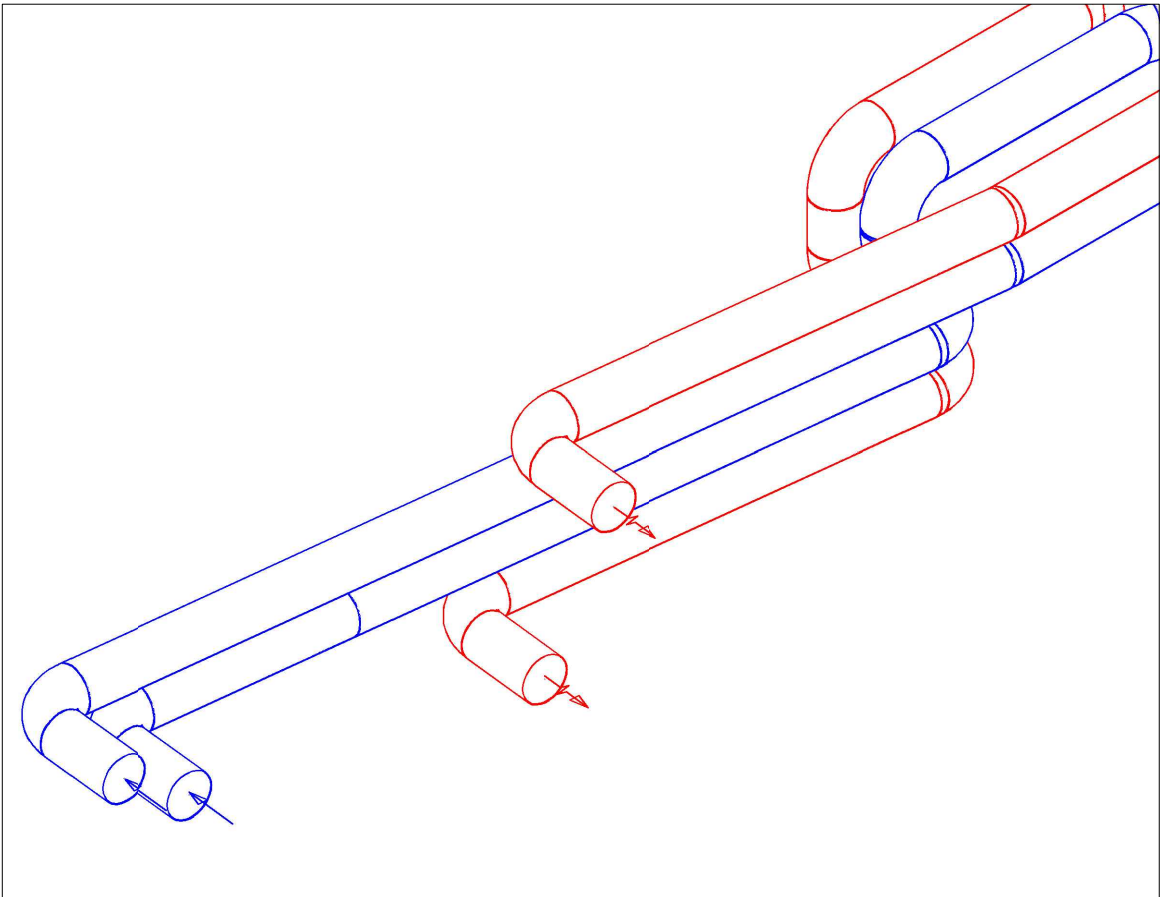
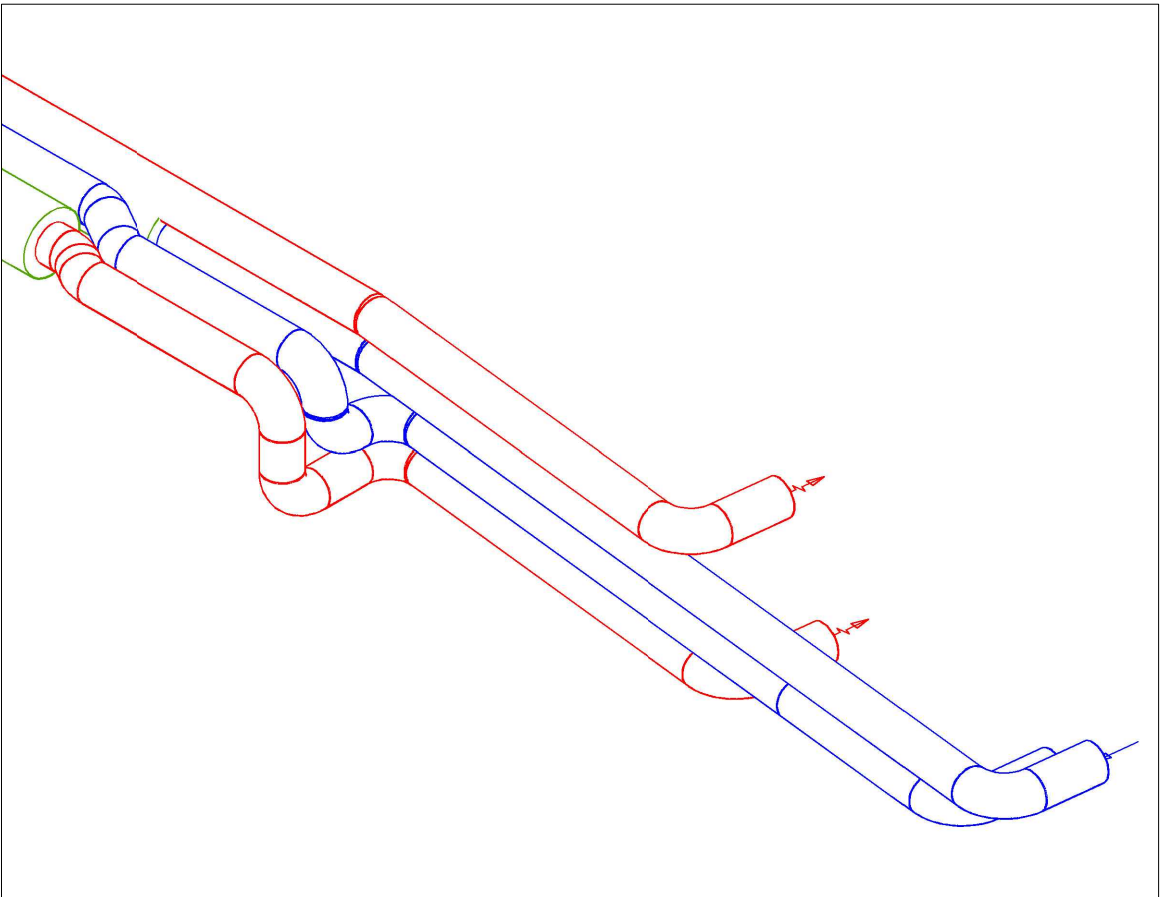
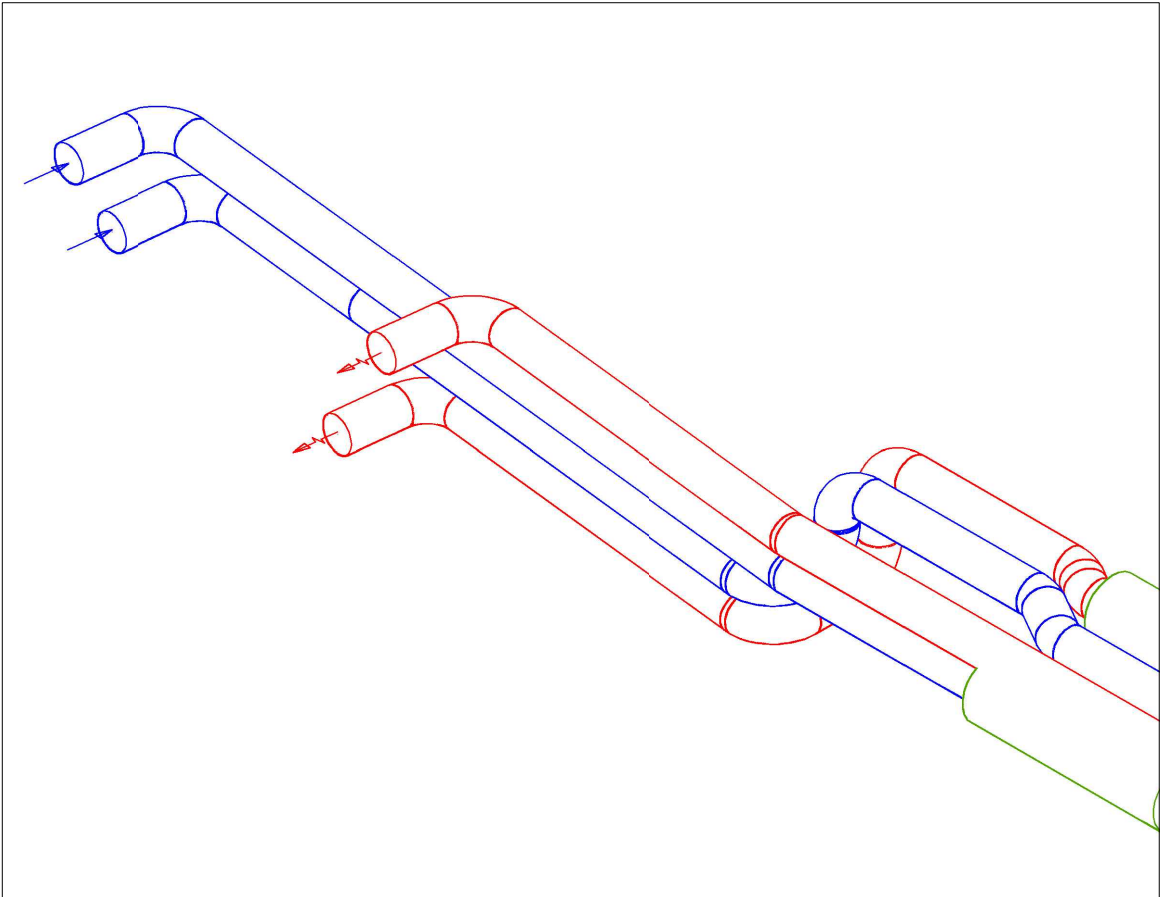
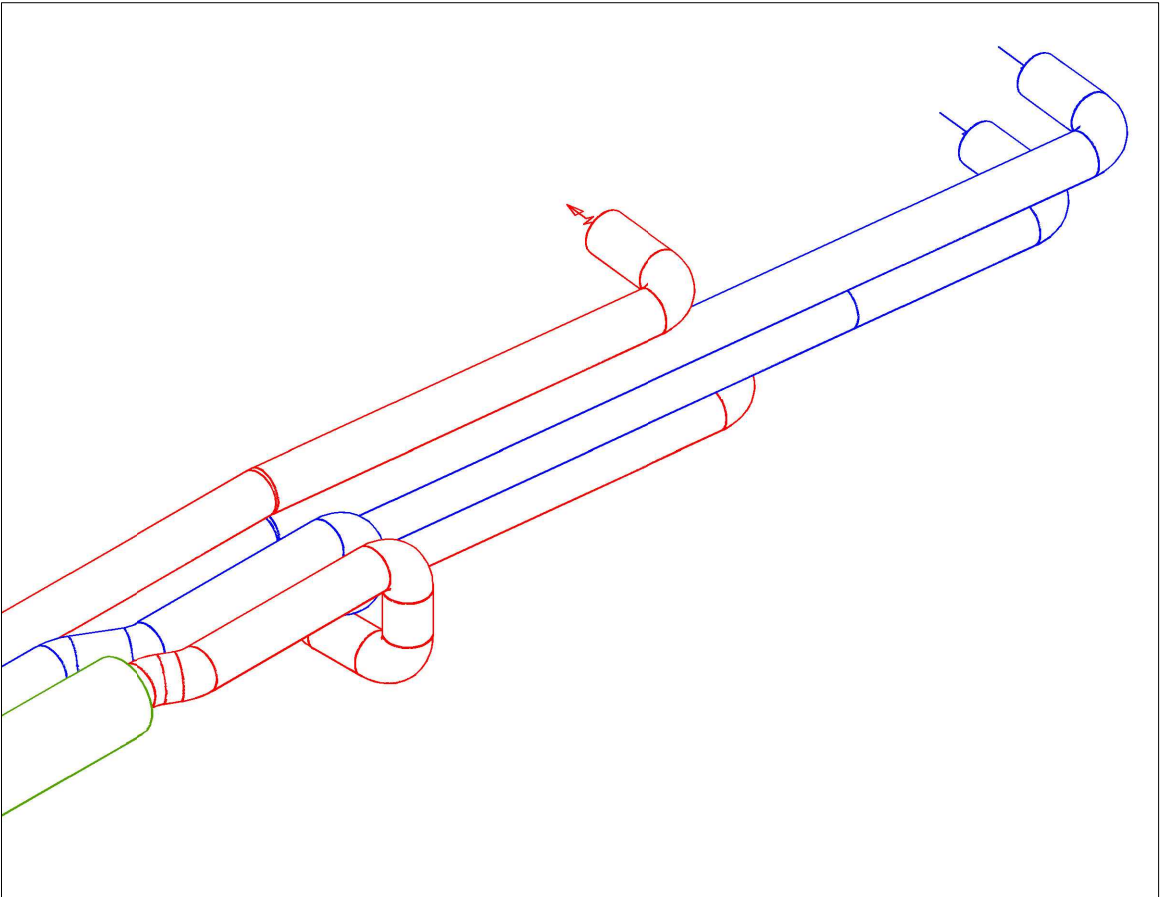
Status **PRELIMINARY ISSUE**



Project Title
157 MILTON ROAD
GRAVESEND
KENT

Drawing Title
FLAT 4
MECHANICAL VENTILATION
ISOMETRIC VIEW

Project No.	Discipline	Engineer
0580	Mechanical	GR
Author	Date	Scale
GR	APR-25	NTS@A3
Drawing Number		Revision
0580-CH-XX-XX-M-ISO-1005		P02



INDICATIVE DESIGN FOR ILLUSTRATION PURPOSES ONLY

THIS DRAWING IS COPYRIGHT AND MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE OTHER THAN THAT INTENDED WITHOUT PRIOR WRITTEN AGREEMENT OF THE CAD HUB
info@thecadhub.co.uk

General Notes:
THIS SYSTEM HAS BEEN DESIGNED TO COMPLY WITH 2010 BUILDING REGULATIONS PART F MEANS OF VENTILATION.
THE SYSTEM MUST BE INSTALLED AND COMMISSIONED AS PER THE DESIGN SPECIFICATION TO ENSURE COMPLIANCE WITH THE ABOVE MENTIONED.
THE COMMISSIONED SYSTEM MUST COMPLY WITH THE 18th EDITION IEE BS7671 PART 7 (ADDITIONAL WORKS).

Legend:
Stale/Moist Air Extract: RED/MAGENTA DUCT
Pre-Warmed Fresh Air Supply: BLUE/CYAN DUCT
Fire Collar: FC (One fitted to each side of the wall/slab)
Fire Sleeve: FS (Through the wall)
Set Down: SD (in direction of airflow)
Set Up: SU (in direction of airflow)
Volume Control Damper: VCD
Complete With: C/W
Attenuator: ATT

Project Notes:
UNIT TYPE:
Dantherm HCV 300 MVHR unit.
UNIT LOCATION:
Vertically wall mounted in the kitchen.
UNIT OPERATION:
Wired controller, integral humidistat & CO₂ sensor.
DUCTING & DIFFUSERS:
Un-insulated 125mmØ galvanised spiral ducting connecting to 125mmØ white metal adjustable 1 hour fire rated diffusers.
EXTERNAL TERMINATIONS:
Insulated 150mmØ (old: 200mmØ) galvanised spiral ducting to external louvre grilles.
GENERAL:
Pre-insulated ducting is required if the ducting is installed in a cold, un-insulated void.

Fire collars required from the MVHR unit spigot to ceiling and when the ducting passes through the communal corridors and floor slab.

Exhaust & intake terminals to have a minimum separation distance of 1m.
The MVHR unit requires a condensate drain to run to the nearest internal waste system (HepVo waste valve/dry trap or similar is recommended).

P02	FLAT 4 INTAKE DUCT REVISED	GR	19-09-25
P01	PRELIMINARY ISSUE	GR	22-04-25
Rev.	Description	Author	Date

Status: **PRELIMINARY ISSUE**



Project Title
157 MILTON ROAD
GRAVESEND
KENT

Drawing Title
EXTERNAL DUCT DETAIL (FLAT 3 & 4)
MECHANICAL VENTILATION
ISOMETRIC VIEW

Project No.	Discipline	Engineer
0580	Mechanical	GR
Author	Date	Scale
GR	APR-25	NTS@A3
Drawing Number		Revision
0580-CH-XX-XX-M-ISO-1006		P02