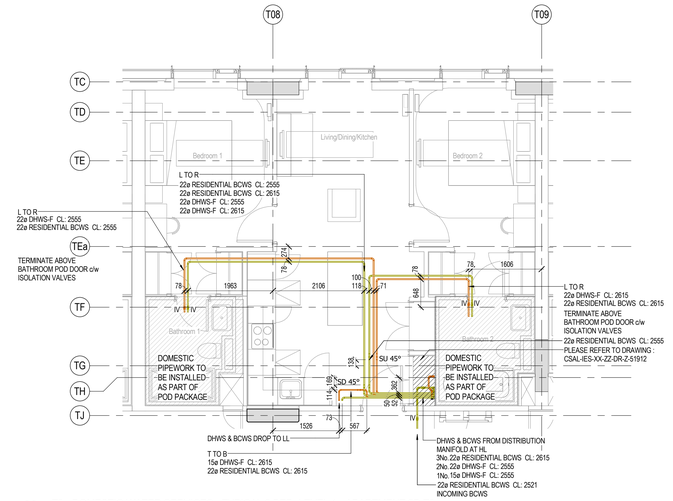
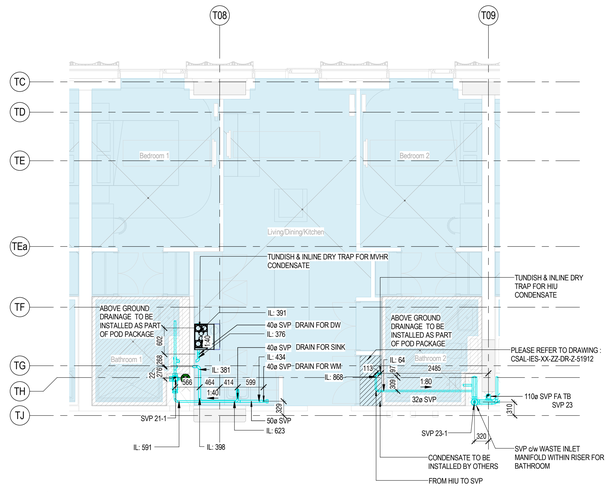
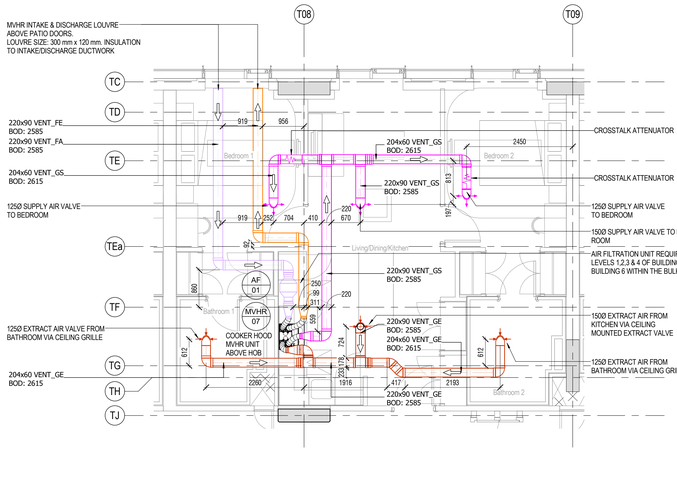


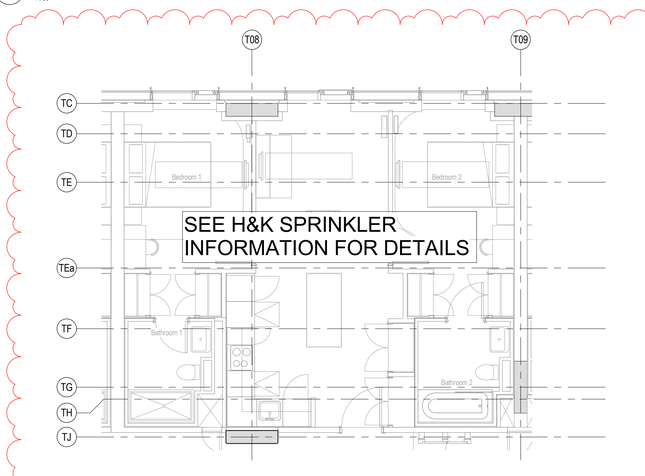
1 T3 - DOMESTIC WATER SERVICES - TYPICAL 2 BED LEVEL 1 - APARTMENT 2B-T3
1 : 50



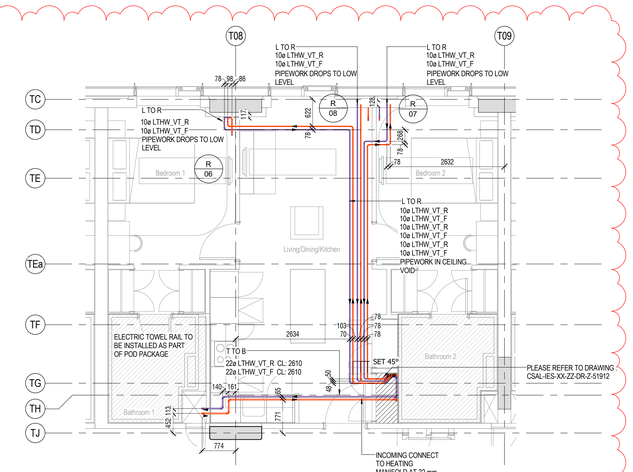
2 T3 - ABOVE GROUND DRAINAGE - TYPICAL 2 BED LEVEL 1 - APARTMENT 2B-T3
1 : 50



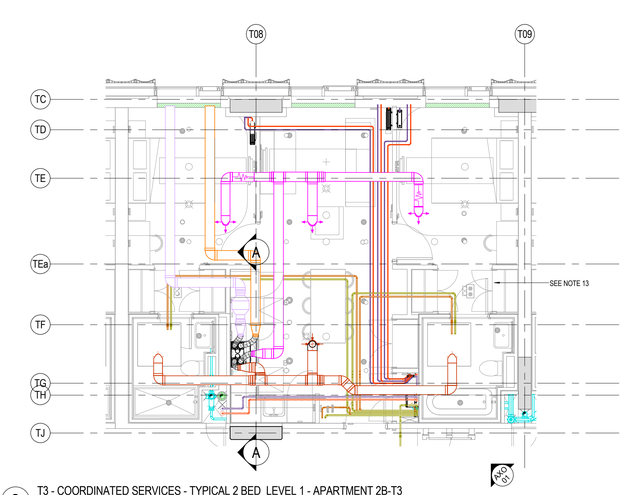
3 T3 - VENTILATION - TYPICAL 2 BED LEVEL 1 - APARTMENT 2B-T3
1 : 50



4 T3 - SPRINKLERS - TYPICAL 2 BED LEVEL 1 - APARTMENT 2B-T3
1 : 50



5 T3 - HEATING - TYPICAL 2 BED LEVEL 1 - APARTMENT 2B-T3
1 : 50



6 T3 - COORDINATED SERVICES - TYPICAL 2 BED LEVEL 1 - APARTMENT 2B-T3
1 : 50

LEGEND

- AIR VALVE
- CROSS TALK ATTENUATOR
- DOUBLE CHECK VALVE
- DRAIN COCK
- FLUSHING VALVE
- HEAT INTERFACE UNIT
- HEAT METER
- ISOLATING VALVE
- METER
- METER STATION
- ON/OFF VALVE
- PRESSURE ABSORBER c/w NRV
- PRESSURE GAUGE
- PRESSURE RELIEF VALVE
- RODDING EYE
- STRAINER
- TEMPERATURE GAUGE
- TEST POINT
- THERMOSTATIC VALVE

VENTILATION:

GS	GENERAL SUPPLY
GE	GENERAL EXTRACT
FA	FRESH AIR
FE	EXHAUST
SE	SMOKE EXTRACT
FC	FAN COIL
KE	KITCHEN EXTRACT
CCED	CIRCULAR CEILING EXTRACT DIFFUSER
CSEV	CEILING SUPPLY & EXTRACT VALVE
F	FILTER
ATT	ATTENUATOR
MOBD	MOTORISED OPPOSED BLADE DAMPER
VCD	VOLUME CONTROL DAMPER
MD	MOTORISED CONTROL DAMPER
SD	FIRE & SMOKE DAMPER
HC	HEAT COIL
FAN	FAN
CPEX	CROSS-FLOW PLATE HEAT EXCHANGER
	DIRECTION OF FLOW
LSD	LINEAR SLOT DIFFUSER
CTA	CROSS TALK ATTENUATOR
EX LSD	PASSIVE LINEAR SLOT FOR RETURN AIR PATH

NOTES:

1. ALL INSULATED DOMESTIC COLD WATER PIPEWORK SHALL BE PROVIDED WITH VAPOUR SEAL.

2. DRAINCOCKS TO BE INSTALLED AT ALL LOW POINTS AND AIR VENTS AT ALL HIGH POINTS.

3. ALL PIPEWORK PASSING THROUGH FIRE BARRIERS AND WALLS TO PASS THROUGH FIRE SLEEVES.

4. EXACT LOCATIONS OF SANITARY WARE SHALL BE AGREED WITH THE ARCHITECTS PRIOR TO INSTALLATION

5. DEAD LEGS ON HOT WATER SERVICES SHALL BE KEPT TO A MINIMUM

6. FIRE COLLARS SHALL BE INSTALLED WHERE DRAINAGE PIPE CROSS FIRE COMPARTMENTS

7. THE INSTALLATION OF THE DRAINAGE SYSTEM SHALL COMPLY WITH BUILDING REGULATIONS PART H AND BS 12056

8. RODDING EYES SHALL BE INSTALLED AT THE BASE OF ALL STACKS AND ALL CHANGES IN DIRECTION.

9. EXPANSION JOINTS TO BE ADDED IN VERTICAL & HORIZONTAL PIPEWORK INLINE WITH MANUFACTURERS RECOMMENDATIONS

10. ALL DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH HVAC DW144 & DW172

11. AIR GRILLES WITHIN APARTMENTS TO BE AIR VALVE TYPE

12. FLEXI DUCTS SHALL BE A MAXIMUM OF 500mm AND SHALL NOT BE USED TO TAKE OUT BENDS AND DEVIATIONS

13. VENTILATION WITHIN APARTMENTS TO COMPLY WITH BUILDING REGULATION PART F

14. SPRINKLER LAYOUT/ SIZES TBC BY SPRINKLER INSTALLER/ SPECIALIST DESIGN

REFERENCE DRAWINGS & MODELS		REV
ARCHITECTURAL	CSAL-FCBS-ZT-ZZ-M3-A-001 CSAL-FCBS-ZT-ZZ-M3-A-002 FACADE	P19 P04
STRUCTURAL	CSAL-CUR-ZT-XX-M3-S-0001	P18

GENERAL:

FA	FROM ABOVE
TA	TO ABOVE
FB	FROM BELOW
TB	TO BELOW
HL	HIGH LEVEL
LL	LOW LEVEL
ML	MID LEVEL
DTLL	DROP TO LOW LEVEL
RTHL	RISE TO HIGH LEVEL
SU	SET UP
SD	SET DOWN
FFL	FINISHED FLOOR LEVEL
SSL	STRUCTURAL SLAB LEVEL
AFFL	ABOVE FINISHED FLOOR LEVEL
IL	LEVEL TO UNDERSIDE FROM FFL
CL	LEVEL TO CENTRE FROM FFL
BOD	BOTTOM OF DUCT FROM FFL

MECHANICAL:

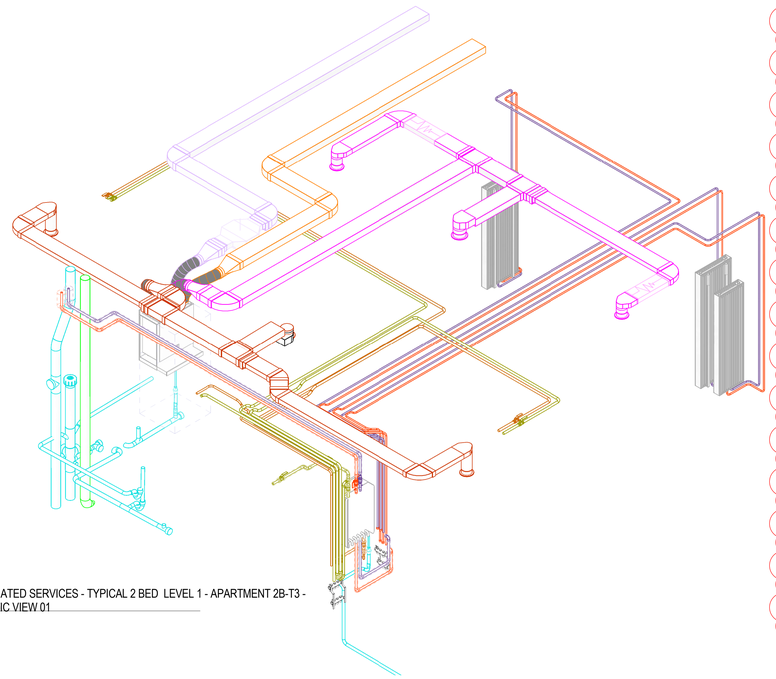
LTHW F	LOW TEMPERATURE HOT WATER FLOW
LTHW R	LOW TEMPERATURE HOT WATER RETURN
VRF	VARIABLE REFRIGERANT FLOW
IV	ISOLATION VALVE
NRV	NON RETURN VALVE
DCV	DOUBLE CHECK VALVE
DPV	DIFFERENTIAL PRESSURE VALVE
DPCV	DIFFERENTIAL PRESSURE CONTROL VALVE
3PMV	3 PORT MOTORISED VALVE
FODRV	FIXED ORIFICE DOUBLE REGULATING VALVE
2PMV	2 PORT MOTORISED VALAVE
PICV	PRESSURE INDEPENDENT CONTROL VALVE
STR	STRAINER
OP	ORIFICE PLATE/METERING STATION
CS	COMMISSIONING STATION
TP	TEST POINT
PP	PURGE POINT
T/P	GAUGES (T-TEMPERATURE; P-PRESSURE)
S	SENSOR
M	METER
FCU	FAN COIL UNIT
DAC	DRY AIR COOLER
AB	AIR BOTTLE
N/C	NORMALLY CLOSED
FC	FLEXIBLE CONNECTION
DOC	DRAIN COCK
AV	AIR VENT
HE	HEAT EXCHANGER
RXX	RADIATOR
PCV	PRESSURE CONTROL VALVE
GV	GATE VALVE
PRV	PRESSURE REDUCING VALVE
AAV	AUTOMATIC AIR VENT
WETR	WET RISER
DRV	DOUBLE REGULATING VALVE
LSV	LOCKSHIELD VALVE

WATER:

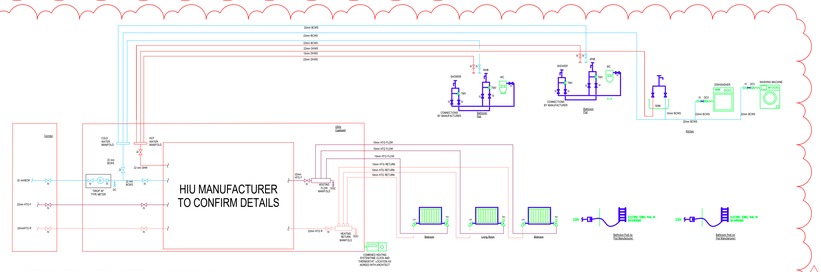
BCWS	BOOSTED COLD WATER SERVICE
CAT 5	BOOSTED COLD WATER SERVICE CAT-5
HWSF	HOT WATER SERVICE FLOW
HWSR	HOT WATER SERVICE RETURN
MWS	MAINS WATER SERVICE
IV	ISOLATING VALVE
DRV	DOUBLE REGULATING VALVE FOR HWS BALANCING (ULTRA LOW FLOW TYPE)
NRV	NON RETURN VALVE
PRV	PRESSURE REDUCING VALVE
DCV	DOUBLE CHECK VALVE
DOC	DRAIN COCK
DP	TEST & DRAIN POINT
FS	FLOW SWITCH
PG	PRESSURE GAUGE
M	WATER METER

DRAINAGE:

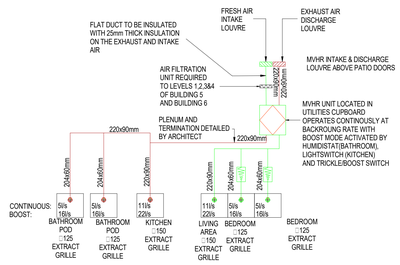
AAV	AUTOMATIC ADMITTANCE VALVE
FG	FLOOR GULLY
RE	RODDING EYE
RWP	RAINWATER PIPE
SS	STUB STACK
SVP	SOIL VENT PIPE
GSVP	GROUND SOIL VENT PIPE
MSVP	MEZZANINE SOIL VENT PIPE
RSVP	RETAIL SOIL VENT PIPE
SWP	SOIL WASTE PIPE
VP	VENT PIPE
WP	WASTE PIPE
D	DRAINAGE
BGD	BELOW GROUND DRAINAGE
AP	ACCESS POINT
SINK	SINK
KSK	KITCHEN SINK
DW	DISH WASHER
WM	WASHING MACHINE
WHB	WASH HAND BASIN
WC	WATER CLOSET
SHR	SHOWER
BTH	BATH
1:XX	FALL



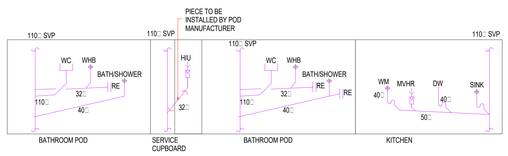
A1 T1- COORDINATED SERVICES - TYPICAL 2 BED LEVEL 1 - APARTMENT 2B-T3 - AXONOMETRIC VIEW 01



TYPICAL TWO BED APARTMENT HEATING & DOMESTIC SERVICES SCHEMATIC



TYPICAL TWO BED APARTMENT VENTILATION SCHEMATIC

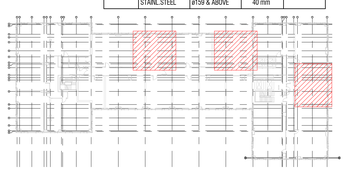


TYPICAL TWO BED APARTMENT ABOVE GROUND DRAINAGE SCHEMATIC

A T3 - COORDINATED SERVICES - TYPICAL APARTMENTS 2B-T3 - SECTION A
1 : 50

INSULATION TABLE

SERVICE	PIPE MATERIAL	PIPE DIAMETER	INSULATION THICKNESS	INSULATION MATERIAL
LTHW F&R	COPPER	ø15	25 mm	MINERAL WOOL
	STEEL	ø15	30 mm	
		ø20-ø50	40 mm	
		ø65 & ABOVE	50 mm	
BCWS	COPPER	ø15-ø35	20 mm	MINERAL WOOL
		ø42-ø54	25 mm	
		ø67-ø108	30 mm	
		ø133-ø159	40 mm	
	STAINL.STEEL	ø159 & ABOVE	40 mm	
DHWS F&R	COPPER	ø15-ø22	25 mm	MINERAL WOOL
		ø28-ø42	30 mm	
		ø54-ø159	40 mm	
	STAINL.STEEL	ø159 & ABOVE	40 mm	



Rev	Description	DRN	CHK	Date
C02	UPDATED TO DESIGN COMMENTS	SW	IES	11.06.19
C01	CONTRACT ISSUE	SW	IES	31.01.19

drawn by	drawn date	checked by	checked date	approved by	approved date
CWC	11.06.19	MM	31.08.18	MM	31.08.18

CHECK PLOT
UNCONTROLLED DRAWING

Return to

A	OK	ready for transmittal
B	Minor Comments	mods to be actioned then ready for transmittal
C	Major Comments	mods to be actioned then returned for checking

signed .....
date .....

Imtech
Imtech Engineering Services North
4 Scholar Green Road, Cobra Court
Trafford Park, Manchester M32 0TR
T +44 (0)161 866 0900
www.imtech.co.uk

client approval

A	Approved	client approval, initials and date
B	Approved with Comments	
C	Not Approved	

client/main contractor: SISK

consultant/structural: CWC

project
Circle Square
Affinity Living

drawing title
Type: XX
Service: Apartment Mechanical Services
2 Bed Type T3

drawing status	purpose of issue
For Comment	S3

scale @ paper size	project number	drawn by	date
As indicated @ A0	P070090	CWC	23.07.18

drawing no.	revision
CSAL-IES-XX-ZZ-DR-M-51010	C02

Project/Sub Originator Zone Level Type Role Classification Number

Contract Issue