

RADIATOR & EQUIPMENT SCHEDULES



Myson Premier HE Radiators & Mysen Topaz Silver Towel Rails				
(Radiators Sized At 45/40 F&R Temps)				
Room	Temp	Watts	Catalogue	Len Hgt
Lounge	21	400	12 DC 47	1200 300
Lounge	21	445	21 SC 61	1556 530
Kitchen/Dining	21	1173	27 DC 69	1759 690
Cloakroom	21	190	27 DC 11	286 690
Hall	21	548	27 DPX 41	1047 690
Bedroom-1	21	386	21 SC 53	1352 530
Bedroom-2	21	328	21 SC 45	1149 530
Bedroom-3	21	299	21 SC 41	1047 530
Bedroom-4	21	299	21 SC 41	1047 530
Bathroom *	22	240	TPZD/770600 Silver towel rail	600 770
Note : * A Minimum Clearance Of 125mm Is Needed Between Wall & Door To Accommodate Towel Rail Position In Bathroom.				

Heat Pump Minimum Clearances			
Minimum Clearances	Unit	Heating mode	Heating & Cooling mode
Left Side	mm	100	100
Above	mm	1000	1000
Behind	mm	200	250
Right Side	mm	500	500
In Front	mm	600	600

Heat Pump Sound Levels				
Model	Sound Power Level A7/W55	Sound Pressure Levels		
		1M distance	3M distance	5M distance
aroTHERM plus 3.5kW	54 dB	46 dB (A)	36 dB (A)	32 dB (A)
aroTHERM plus 5kW	54 dB	46 dB (A)	36 dB (A)	32 dB (A)
aroTHERM plus 7kW	55 dB	47 dB (A)	37 dB (A)	33 dB (A)
aroTHERM plus 10kW	60 dB	52 dB (A)	42 dB (A)	38 dB (A)
aroTHERM plus 12kW	60 dB	52 dB (A)	42 dB (A)	38 dB (A)

ASHP	Vaillant aroTherm Plus 7.0 kW
ASHP	RATED OUTPUT 8.2 kW
RADIATORS	Mysen Premier HE Roundtop Radiators
RADIATOR VALVES	TRV's & LSV's to all Radiators except room containing room stat. Radiator/s in this room to have 2No. LSV's.
HEAT PUMP CONTROLLER / HW TIMER & THERMOSTAT	Heat Pump Interface Vaillant SensiCOMFDR1
3-Port Valve / Diverter Valve	Diverter Valve
ADDITIONAL KITS	Ball Filter Valve 28mm
ADDITIONAL KITS	Fernox HP-15C
ADDITIONAL KITS	System Cleaned With Adey Chemical MC3+ Then Inhibited with Adey Chemical MC1+ Y Stainer
ADDITIONAL KITS	Honeywell Automatic By-Pass Valve
SEALED SYSTEM EQUIP	Flamco Flexcon Premium 12/01
SEALED SYSTEM EQUIP	Flamco Flexcon Pressure Gauge
SEALED SYSTEM EQUIP	Flamco Flexcon Safety Valve/Discharge
CYLINDER	Vaillant Unistor Heat Pump Cylinder 250 Litre
ADDITIONAL KITS	Glycol discharge vessel
ADDITIONAL KITS	750mm flexihose for air to water heat pump (pair)
ADDITIONAL KITS	Anti-vibration feet (large)
SECONDARY HOT WATER RETURN PUMP	Grundfos Stainless Steel Model Alpha 1 15-50N To Be Timed Off SensiCOMFDR1 Controller



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PIPEWORK BELOW FLOOR LEVEL	F.A. = FROM ABOVE	F.B. = FROM BELOW
PIPEWORK AT LOW LEVEL	T.A. = TO ABOVE	T.B. = TO BELOW
PIPEWORK AT HIGH LEVEL	RS = ROOM THERMOSTAT	
PIPEWORK IN ROOF SPACE		

REV.	DATE.	REVISION.
CLIENT :	C O U N T R Y S I D E	P A R T N E R S H I P S
HOUSE TYPE :	M A C A R T H U R	
SITE :	H O L L I N G A T E , L I T T L E B O R O U G H	
SHEET :	1 OF 4	DRAWING No. : V240015-12
DRAWN BY :	P G	DATE : 0 6 / 0 2 / 2 4

INSTALLATION NOTES.



- 1

THIS SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH THE PARAMETERS GIVEN IN BS 12828-2012 + A1:2014 AND TO THE TEMPERATURES SPECIFIED UNDER CONTINUOUS OPERATION WITH AN EXTERNAL TEMPERATURE OF -4 C. HOWEVER, TO MAINTAIN THESE TEMPERATURES DURING EXTREME WEATHER CONDITIONS IT MAY BE NECESSARY TO USE A SUPPLEMENTARY HEAT SOURCE.

11

HEATING DESIGN SOLUTIONS REQUIRE THAT JOINTS WHICH ARE TO BE SOLDERED SHOULD BE MADE USING A FLUX THAT IS SPARINGLY APPLIED AND ANY RESIDUE TO BE FLUSHED OUT OF THE SYSTEM BEFORE COMMISSIONING USING A CHEMICAL CLEANSER IF NECESSARY.
- 2

IT IS THE RESPONSIBILITY OF THE INSTALLER TO INSTALL AND BALANCE THE SYSTEM IN ACCORDANCE WITH BS 12828-2012 + A1:2014

12

THE DESIGN OF THE DHW IS BASED UPON A MINIMUM DYNAMIC INCOMING MCWS PRESSURE OF 1.5 BAR BEING AVAILABLE AT HIGHEST POINT IN THE SYSTEM. IF THIS IS INSUFFICIENT THEN A SUITABLE ACCUMULATOR AND PRESSURE BOOSTER PUMP MAY NEED TO BE FITTED.
- 3

THE INSTALLATION MUST COMPLY WITH THE CURRENT BRITISH STANDARDS, CODES OF PRACTICE, THE CURRENT INSTALLATION INSTRUCTIONS & MCS MICROGENERATION INSTALLATION STANDARD MIS 3005 V5.0.

13

WHERE TRADITIONAL JOISTS ARE USED, THEY ARE TO BE NOTCHED / DRILLED IN ACCORDANCE WITH BS 12828:2003 AND NHBC RECOMMENDATIONS. WHERE T/J OR ENGINEERED JOISTS ARE USED CARE TOI BE GIVEN TO PIPEWORK CLIPPING TO ENSURE A NEAT AND TIDY INSTALLATION WITH NO HIGH POINTS.
- 4

ALL PIPEWORK TO BE LAID TO PERMIT EASE OF DRAINING AND VENTING WITH AIR VENTS AT ALL HIGH POINTS AND DRAIN COCKS AT ALL LOW POINTS.

14

ALL CENTRAL HEATING SYSTEMS MUST BE CLEANED WITH ADEY MC3+ (CH1-03-01669) THEN INHIBITED WITH ADEY MC1+ (CH1-03-01670). ADEY PROCHECK (ADEY PART NUMBER CP1-03-05132) TO BE COMPLETED AFTER ADEY MC1+ PROTECTOR HAS BEEN DOSED INTO THE HEATING SYSTEM.
- 5

IT IS ESSENTIAL THAT THE HEAT PUMP HAS ADEQUATE WATER FLOW RATE AND SYSTEM VOLUME AT ALL TIMES. WATER FLOW RATE CAN BE ACHIEVED USING AUTO RELIEF BYPASS VALVES OR LOW LOSS HEADER / BUFFER VESSEL. ADEQUATE SYSTEM VOLUME FOR PURPOSE OF REDUCING CYCLING DURING LOW LOAD / OR TO ASSIST IN THE DEFROST OF ASHP SYSTEMS SHOULD BE CHECKED AND IF REQUIRED, A CORRECTLY SIZED BUFFER OR SYSTEM VOLUMISER SHOULD BE INSTALLED. CHECK MANUFACTURERS RECOMMENDATIONS.

15

THERMOSTATIC RADIATOR VALVES MUST BE MOUNTED HORIZONTALLY AND IN ACCORDANCE WITH THEIR MANUFACTURERS INSTALLATION REQUIREMENTS. THEIR MANUFACTURERS INSTALLATION REQUIREMENTS. (ROOMS) CONTAINING THE ROOM THERMOSTATS) ARE TO HAVE 1 NO WHEELHEAD VALVE & 1 NO LSV.
- 6

BALLOFIX INSULATING VALVES INCORPORATING FLOW RESTRICTORS SHALL BE PROVIDED TO ALL SANITARY FITTINGS. FLOW RATES TO BE AS DETERMINED TO COMPLY WITH CODE FOR SUSTAINABLE HOMES OR BUILDING REGULATIONS AS APPLICABLE. NOTE THAT WITH LOW FLOW RATE TAPS FITTED THERE WILL BE A DELAY IN HOT WATER REACHING OUTLETS AND CONSIDERATION SHOULD BE GIVEN FOR A PUMPED SECONDARY RETURN.

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THIS DRAWING HAS BEEN PREPARED BY HEATING DESIGN SOLUTIONS & REMAINS THEIR SOLE COPYRIGHT. IT IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT WILL BE TREATED AS CONFIDENTIAL , AND WILL ONLY BE USED BY OUR CLIENT OR THEIR NOMINEES FOR THE PURPOSE OF INSTALLING SYSTEMS USING THE EQUIPMENT AS SPECIFIED THEREIN.
- 7

ALL PIPEWORK TO BE INSULATED IN ACCORDANCE WITH BUILDING REGULATIONS, THE TMSA GUIDE FOR ACHIEVING COMPLIANCE WITH PART L OF THE BUILDING REGULATIONS, BS 5422:2009, BS EN 14336:2004 BS8558, BS EN 806 AND THE WATER REGULATIONS GUIDE. ALL PRIMARY PIPEWORK TO INSULATED. WHERE A SECONDARY RETURN IS USED ALL HOT WATER PIPEWORK TO BE INSULATED. SPECIFIC ATTENTION SHOULD BE GIVEN TO PIPEWORK IN UNHEATED AREAS SUCH AS ROOF SPACES AND GARAGES.

17

THIS DRAWING MUST NOT BE ALTERED OR AMENDED IN ANY FORM WITHOUT THE WRITTEN CONSENT OF HEATING DESIGN SOLUTIONS OR THEIR ASSOCIATED PARTNERS.
- 8

THE DOMESTIC HOT AND COLD WATER STORAGE SYSTEMS MUST BE INSTALLED IN ACCORDANCE WITH THEIR MANUFACTURERS REQUIREMENTS AND ALL RELEVANT CODES OF PRACTICE. ALL STATED STORAGE CAPACITIES ARE ADVISORY ONLY. THE ACTUAL CAPACITY MUST BE CONFIRMED WITH THE STORAGE SYSTEM MANUFACTURER.

18

THE DESIGN IS BASED UPON DRAWINGS AND INFORMATION RECEIVED AND THEREFORE IT'S ACCURACY AND PERFORMANCE IS DEPENDANT ON THAT INFORMATION BEING CORRECT. IF ANY PROBLEMS THAT ARISE DUE TO LACK OF INFORMATION PROVIDED OR INCORRECT DRAWINGS BEING SUPPLIED HEATING DESIGN SOLUTIONS CANNOT BE HELD RESPONSIBLE.
- 9

CARE MUST BE TAKEN IN THE DESIGN AND CONSTRUCTION OF FLUES AND CHIMNEYS TO ENSURE THAT A SATISFACTORY FLUE / CHIMNEY TO THAT SPECIFIED IN THE INSTALLATION INSTRUCTIONS. THESE FLUES / CHIMNEYS MUST COMPLY WITH BS 5440 : PART 1 : 2008, AND ALL NATIONAL AND LOCAL REGULATIONS.

19

TYPICAL AREAS WHICH NEED ATTENTION ARE SPACE REQUIREMENTS & SITING OF THE UNITS. THE INSTALLER SHOULD ENSURE ADEQUATE SPACE FOR ACCESS FOR MAINTENANCE, SERVICING, ADJUSTING SET POINTS AND / OR FLOW VALVES, READING METERS ETC. CARE MUST BE TAKEN IN SITING OF THE OUTDOOR UNIT OF AN ASHP TO ENSURE ADEQUATE AIR FLOW AND THAT THE UNIT DOES NOT CAUSE A NOISE PROBLEM TO OCCUPANTS OR NEIGHBOURS. MCS 020 GIVES GUIDANCE IN THE NOISE LEVELS ACCEPTABLE IN THE IN THE PERMITTED DEVELOPMENT PLANNING RULES.
- 10

ALL THE ANCILLARY EQUIPMENT LISTED TO BE INSTALLED TO THE MANUFACTURERS INSTALLATION INSTRUCTIONS.



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PIPEWORK AT LOW LEVEL	_____	T.A. = TO ABOVE	T.B. = TO BELOW
PIPEWORK AT HIGH LEVEL	_____	RS = ROOM THERMOSTAT	
PIPEWORK IN ROOF SPACE	_____		

CLIENT :	C O U N T R Y S I D E	P A R T N E R S H I P S
HOUSE TYPE :	M A C A R T H U R	
SITE :	H O L L I N G A T E , L I T T L E B O R O U G H	
SHEET :	2 OF 4	DRAWING No. : V240015-12
DRAWN BY :	P G	DATE : 0 6 / 0 2 / 2 4

Commissioning Note:
Emitters and pipework sized for
ASHP Flow Temperature: 45 C
ASHP Return Temperature: 40 C

All pipework in unheated areas
to be insulated in accordance
with local and national regulations

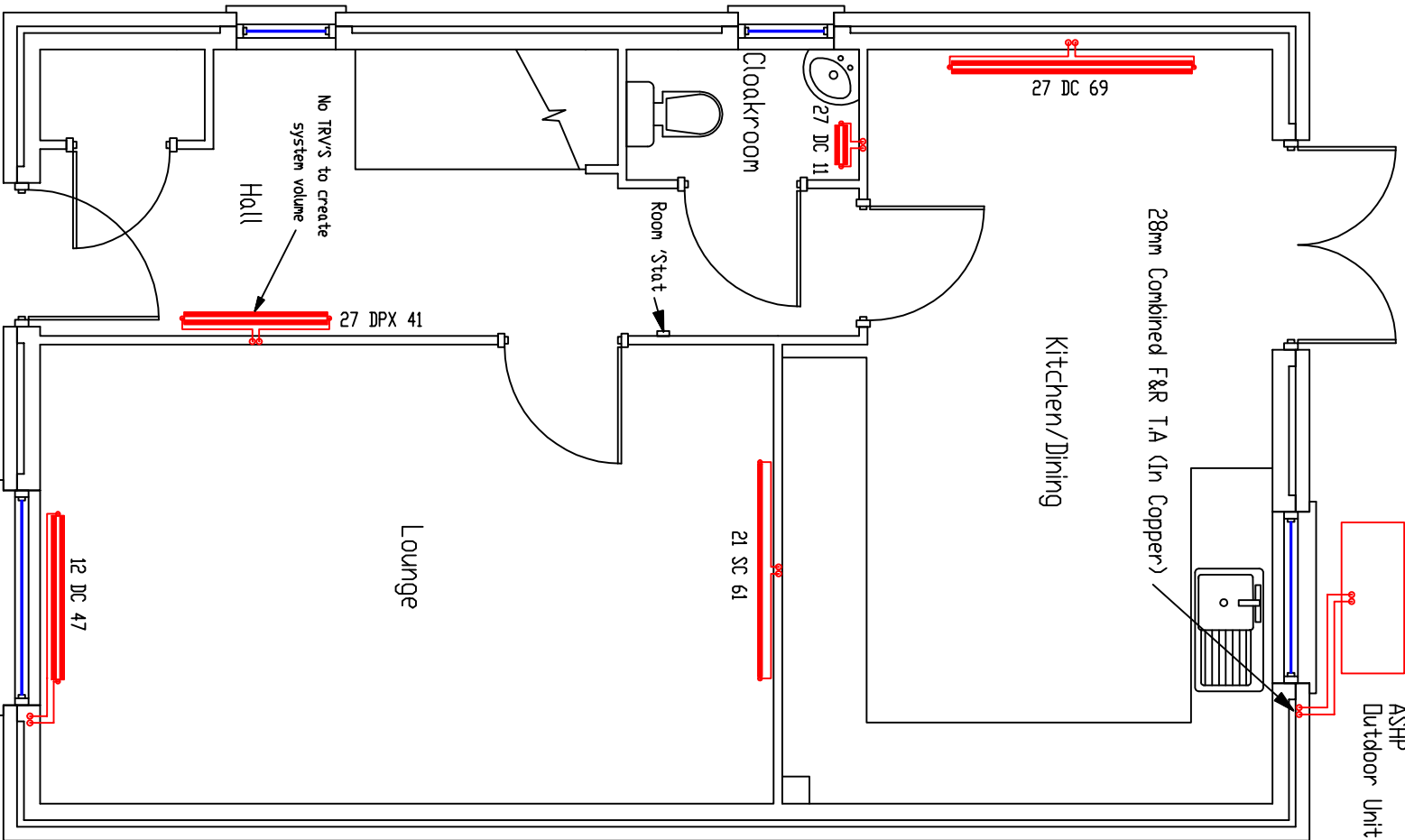
Note: Automatic air vents to be installed
on high point of all flow and return
pipework rising into roof/ceiling void.
Where this is not possible, an automatic
air separator is to be installed on the system
ideally located in the airing cupboard

NOTE: All drops from first floor joist space to ground floor radiators to
be 15mm, Except where shown.



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NOTE:
Heat pump position suitability to be
determined on site prior to installation.

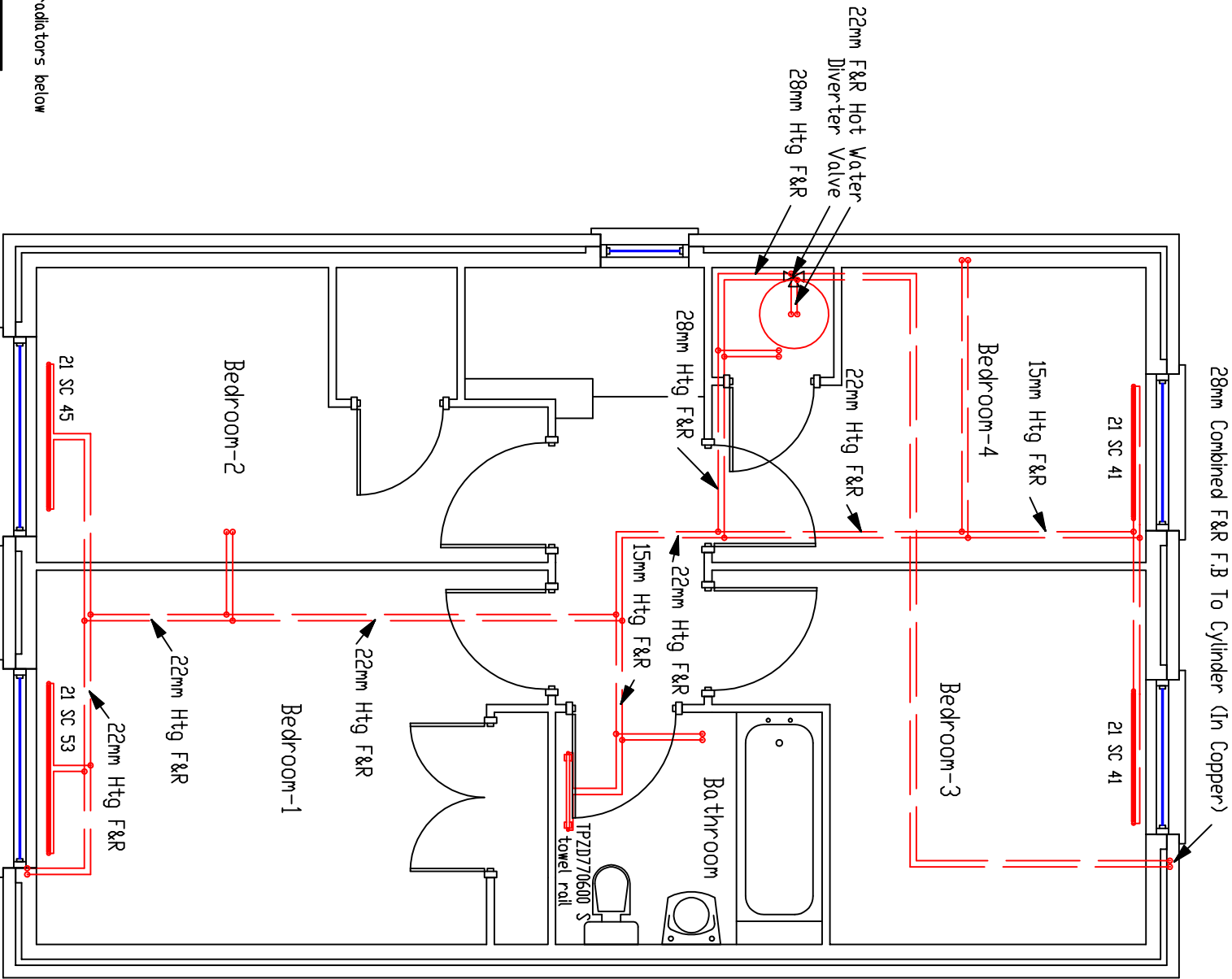
ALL RADIATOR PIPEWORK TO BE PLASTIC PIPE, WITH COPPER
FROM THE HEAT PUMP TO CYLINDER & ALL PIPEWORK
WITHIN CYLINDER CUPBOARD.
ALL PIPEWORK TO RADIATORS TO BE RUN IN CONTINUOUS
LENGTHS WITH FORMED BENDS AT CHANGES OF DIRECTION
WITH MINIMUM OF ELBOWS & FITTINGS.

CLIENT	:	COUNTRYSIDE PARTNERSHIPS
HOUSE TYPE	:	MACARTHUR
TITLE	:	GROUND FLOOR HEATING LAYOUT
SHEET	:	3 OF 4
SCALE	:	1 : 50
	DATE	: 06 / 02 / 24
	DRAWING No.	: V240015-12

Comissioning Note:
Emitters and pipework sized for
ASHP Flow Temperature: 45 C
ASHP Return Temperature: 40 C

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NOTE:

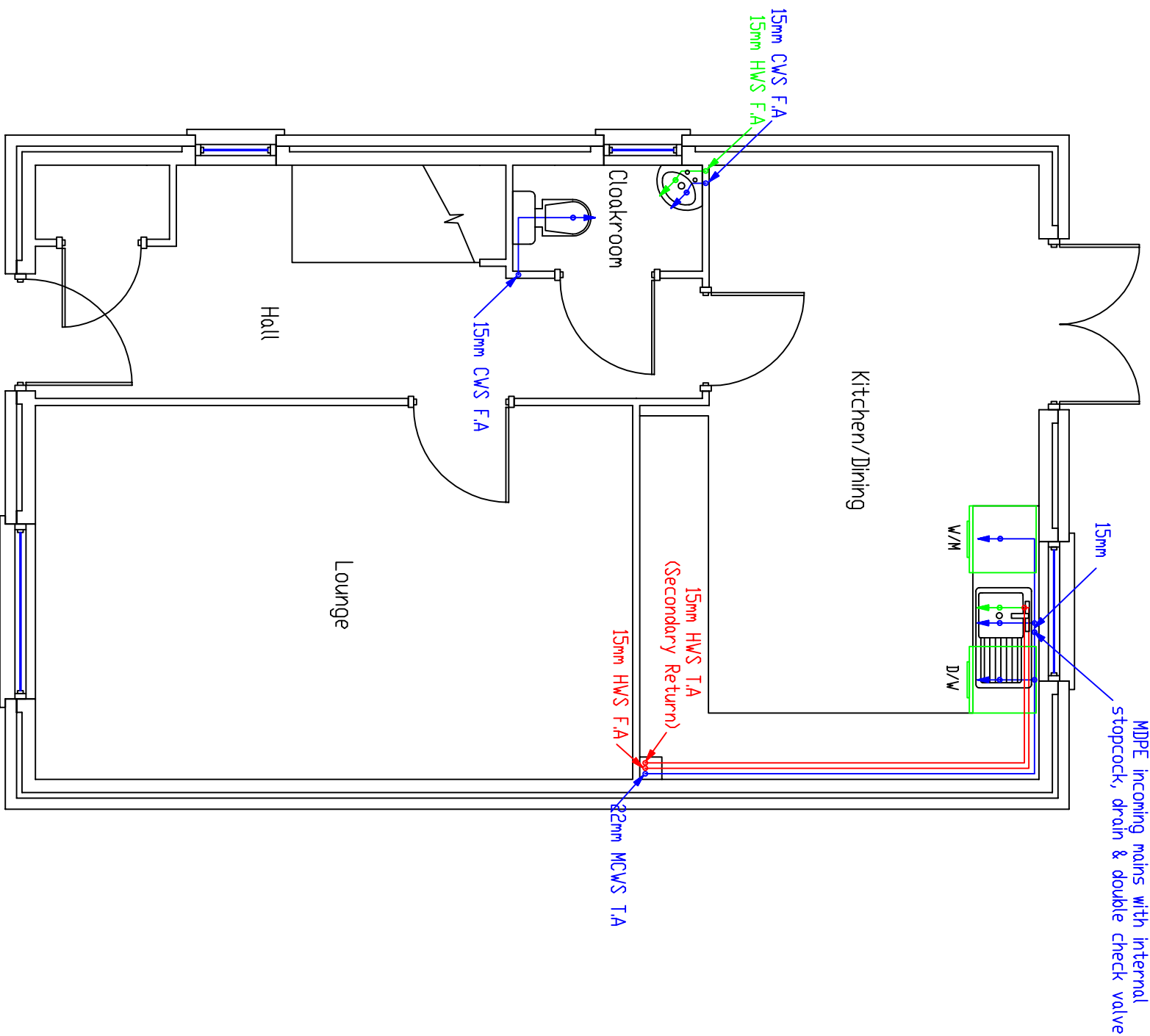
- 1/ All 1st floor radiators to have 15mm F&R.
- 2/ All drops from first floor joist space to ground floor radiators below to be 15mm from point of drop, except where shown.



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CLIENT	:	COUNTRYSIDE PARTNERSHIPS
HOUSE TYPE	:	MACARTHUR
TITLE	:	FIRST FLOOR HEATING LAYOUT
SHEET	:	4 OF 4
SCALE	:	1 : 50
DRAWING No.	:	V240015-12
DATE	:	06 / 02 / 24



Note: Combination isolation and flow restrictor valves compliant with current regulations must be installed on all services to sanitaryware with particular emphasis to the bath and shower to ensure balanced supplies and adequate simultaneous performance. Note: 15mm connections to all outlets unless otherwise indicated

TMV2 rated blending valve to be fitted at bath connection. Must comply with local authority requirements.

All pipework in unheated areas to be insulated in accordance with local and national regulations

ALL PLUMBING PIPEWORK TO BE PLASTIC PIPE, APART FROM THE MAIN HOT WATER PIPERUN AND SECONDARY RETURN PIPEWORK MUST BE RAN IN COPPER. ALL PIPEWORK TO BE RUN IN CONTINUOUS LENGTHS WITH FORMED BENDS AT CHANCES OF DIRECTION WITH MINIMUM OF ELBOWS & FITTINGS.

Note : All Secondary Return Pipework Marked Red Must Be Ran In Copper.

NOTE: The Diameter Of The Last Metre Of Pipework To Fittings To Suit The Size Of The Tols Provided By The Manufacturer.

	Heating Design Solutions Limited The Axis Building, Mangate, Kingsway North, Team Valley, NE11 0NQ Tel No 0191 404 6843	
	PIPEWORK BELOW FLOOR LEVEL	PIPEWORK ABOVE FLOOR LEVEL
	PIPEWORK AT LOW LEVEL	PIPEWORK AT HIGH LEVEL
	PIPEWORK IN ROOF SPACE	PIPEWORK IN WALL
	PIPEWORK IN CLOAKROOM	PIPEWORK IN BATHROOM
CLIENT : COUNTRY SIDE PARTNERSHIPS		HOUSE TYPE : MACARTHUR
TITLE : GROUND FLOOR PLUMBING LAYOUT		SHEET : 2 OF 2
DRAWN BY : P G		DATE : 06 / 02 / 24

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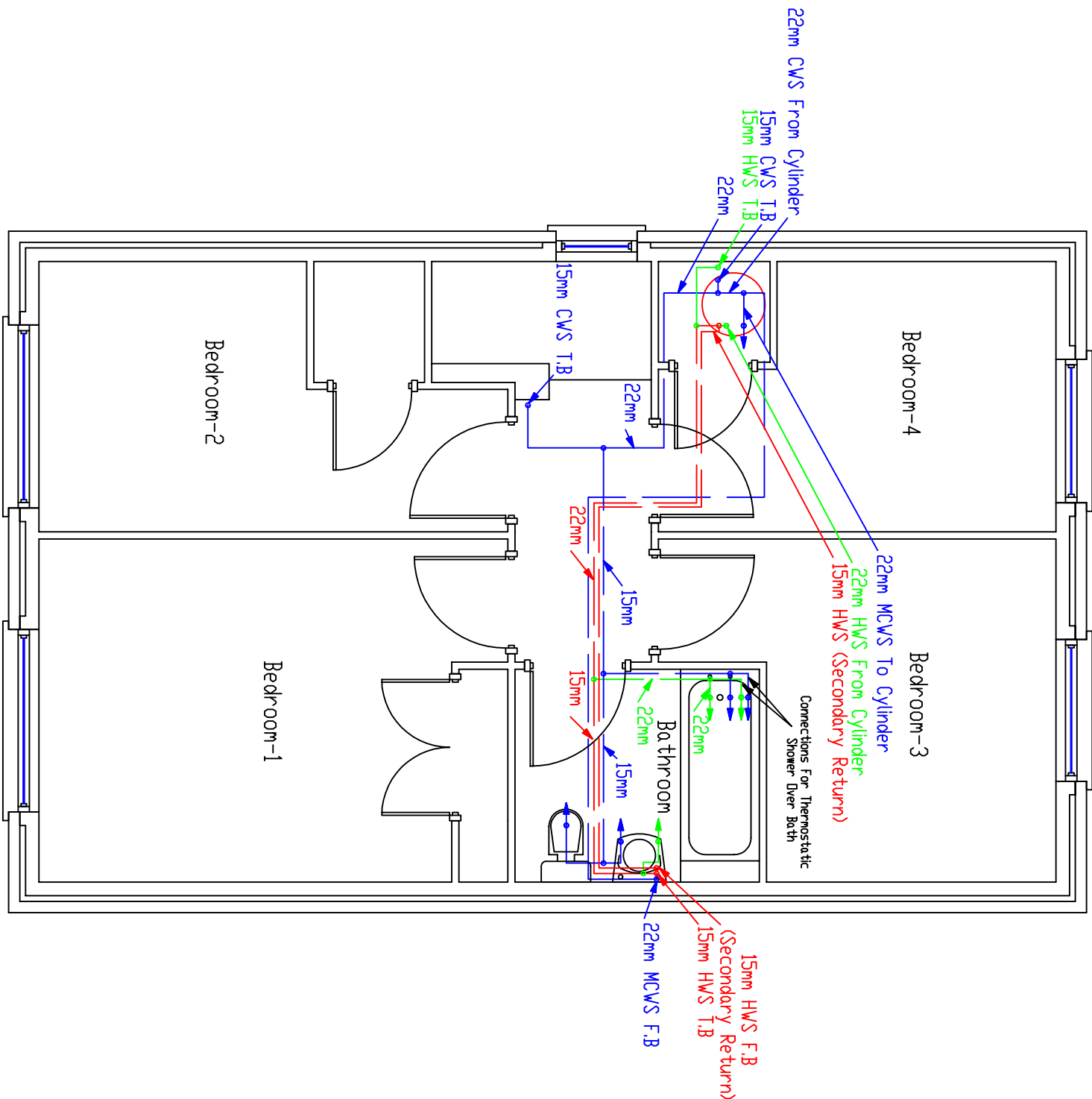
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PIPEWORK	BELOW FLOOR LEVEL	F.A. = FROM ABOVE	F.B. = FROM BELOW
PIPEWORK	AT LOW LEVEL	T.A. = TO ABOVE	T.B. = TO BELOW
PIPEWORK	AT HIGH LEVEL	M.C.W. = MAINS COLD WATER	
PIPEWORK	IN ROOF SPACE	C.W.S. = COLD WATER SUPPLY	
		H.W.S. = HOT WATER SUPPLY	
CLIENT :		C O U N T R Y S I D E P A R T N E R S H I P S	
HOUSE TYPE :		M A C A R T H U R	
TITLE :		F I R S T F L O O R P L U M B I N G L A Y O U T	
SHEET :		2 OF 2	DRAWING No. : V240015-12
DRAWN BY :		P G	DATE : 0 6 / 0 2 / 2 4

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