

RADIATOR & EQUIPMENT SCHEDULES



Myson Premier HE Radiators (Radiators Sized At 45/40 F&R Temps)				
Room	Temp	Watts	Catalogue	Len Hgt
Living/Kitchen	21	1000	KICKSPACE 500E ECO	496 101
Living/Kitchen	21	728	21 DC 53	1352 530
Living/Kitchen	21	728	21 DC 53	1352 530
Hall	21	360	27 DC 21	540 690
Bedroom-1	21	566	21 DPX 53	1352 530
Bedroom-2	21	396	21 DPX 37	946 530
Bathroom	22	338	27 DC 21	540 690
En-Suite	22	385	27 SC 45	1149 690

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

Heat Pump Sound Levels				
Model	Sound Power Level A7/W55	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 5.0 kW
ASHP	RATED OUTPUT 5.8 kW
RADIATORS	Myson 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.
T.R.V.s	
HEAT PUMP CONTROLLER / HW TIMER & THERMOSTAT	Heat Pump Interface Vaillant SensiCOMFORT
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+
ADDITIONAL KITS	Then Inhibited with Adey Chemical MC1+
ADDITIONAL KITS	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 200 Litre
ADDITIONAL KITS	Glycol discharge vessel
ADDITIONAL KITS	750mm flexihose for air to water heat pump (pair)
ADDITIONAL KITS	Anti-vibration feet (large)



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PIPEWORK BELOW FLOOR LEVEL
PIPEWORK AT LOW LEVEL
PIPEWORK AT HIGH LEVEL
PIPEWORK IN ROOF SPACE

F.A. = FROM ABOVE
T.A. = TO ABOVE
RS = ROOM THERMOSTAT

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 :	B U T T E R W O R T H	
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 O F 4	DRAWING No. : V240015-20
DRAWN BY :	P G	DATE : 0 9 / 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 MIBC RECOMMENDATIONS. WHERE TJI 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 FALL 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+ (CHI-03-01669) THEN INHIBITED WITH ADEY MC1+ (CHI-03-01670). ADEY PROCHECK (ADEY PART NUMBER CP1-03-05132) TO BE COMPLETED AFTER ADEY MC1+ PROTECTOR HAS BEEN DOSED INTO THE HEATING SYSTEM. WHERE WATER HARDNESS EXCEEDS 200 PPM, HEATING DESIGN SOLUTIONS APPROVE ADEY MAGNASCALE 15MM (SRI-03-01978) OR ADEY ELECTROSCALE 22MM (SRI-03-01978). ALL IN ACCORDANCE WITH PART L OF BUILDING REGULATIONS ONLY ADEY PRODUCTS ARE APPROVED BY HEATING DESIGN SOLUTIONS.
- 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. ROOM(S) CONTAINING THE ROOM THERMOSTAT(S) ARE TO HAVE 1 NO WHEELHEAD VALVE & 1 NO LSV.
- 6

BALLOFIX ISOLATING 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 DUE TO INSULATION. NOTE THAT WITH LOW FLOW RATE TAPS FITTED THERE WILL BE A DELAY IN HOT WATER REACHING OUTLETS DUE TO INSULATION. NOTE THAT WITH LOW FLOW RATE TAPS FITTED THERE WILL BE A DELAY IN HOT WATER REACHING OUTLETS DUE TO INSULATION. NOTE THAT WITH LOW FLOW RATE TAPS FITTED THERE WILL BE A DELAY IN HOT WATER REACHING OUTLETS DUE TO INSULATION.

16

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 BE 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.

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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.

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THE DESIGN IS BASED UPON DRAWINGS AND INFORMATION RECEIVED AND THEREFORE ITS ACCURACY AND PERFORMANCE IS DEPENDANT ON THAT INFORMATION BEING CORRECT. IF ANY PROBLEMS THAT ARISE DUE TO LACK OF INFORMATION PROVIDED OR INDIRECT 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.

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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 :	B U T T E R W O R T H	
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. : V240015-20
DRAWN BY :	P G	DATE : 0 9 / 0 2 / 2 4

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

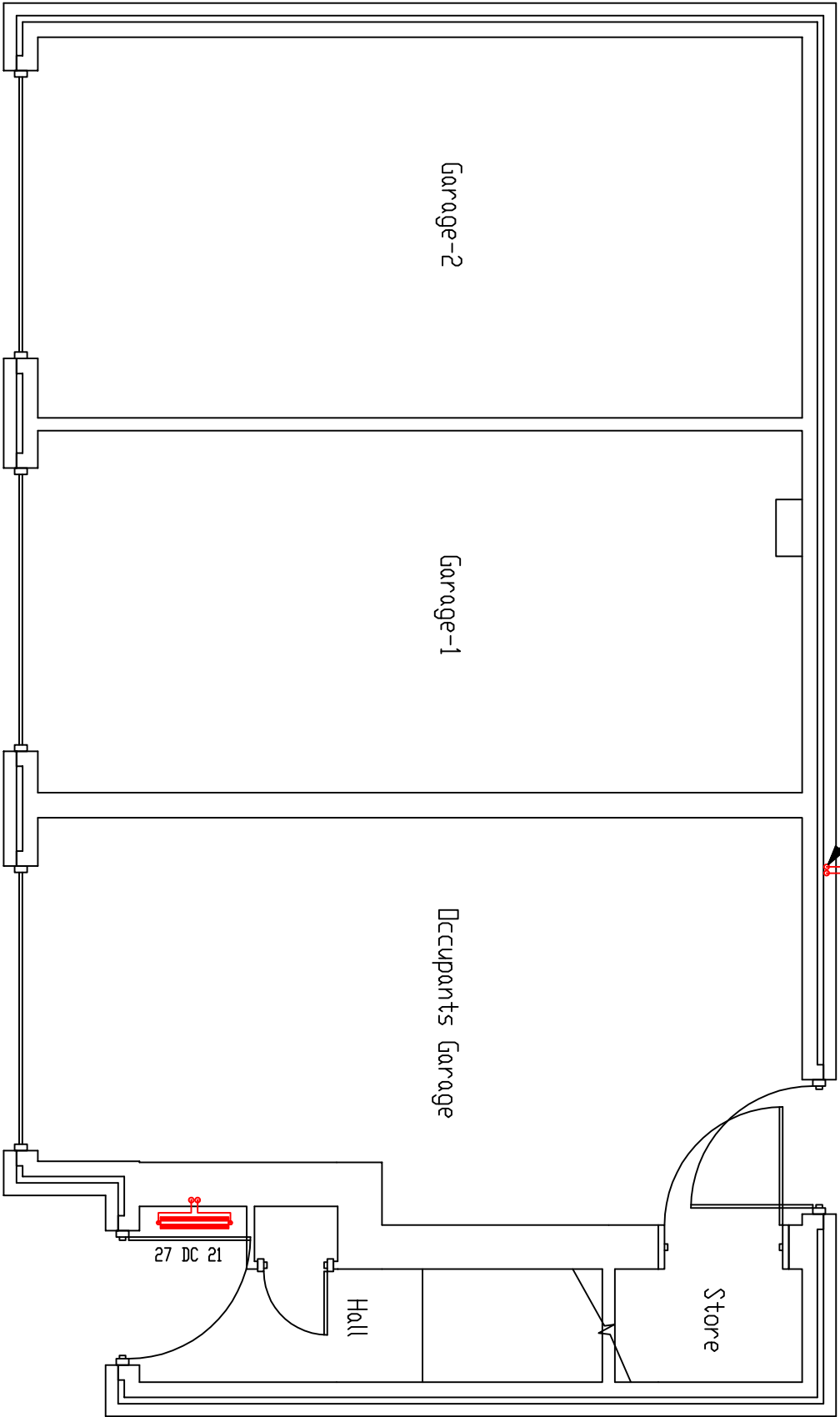
All pipework in unheated areas
to be insulated in accordance
with local and national regulations

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 seperator is to be installed on the system
ideally located in the airing cupboard

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.

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

28mm Combined F&R T/A (In Copper)
ASHP
Outdoor Unit



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



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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	:	B U T T E R W O R T H	
TITLE	:	G R O U N D F L O O R H E A T I N G L A Y O U T	
SHEET	:	3 O F 4	DRAWING No. : V240015-20
SCALE	:	1 : 5 0	DATE : 0 9 / 0 2 / 2 4

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

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.

28mm Combined F&R To Cylinder (In Copper)

En-Suite

Bathroom

Living/Kitchen

Room 'Stat

Bedroom-1

Bedroom-2

22mm F&R Hot Water Diverter Valve

28mm Htg F&R

27 SC 45

27 DC 21

22mm Htg F&R

21 DPX 53

21 DPX 37

21 DC 53

15mm Htg F&R

21 DC 53

No TRV's to create system volume

KICKSPACE 500E ECD

No TRV's to create system volume

- 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.

CLIENT :	COUNTRYSIDE PARTNERSHIPS
HOUSE TYPE :	BUTTERWORTH
TITLE :	FIRST FLOOR HEATING LAYOUT
SHEET :	4 OF 4
DRAWING No. :	V240015-20
SCALE :	1 : 50
DATE :	09 / 02 / 24

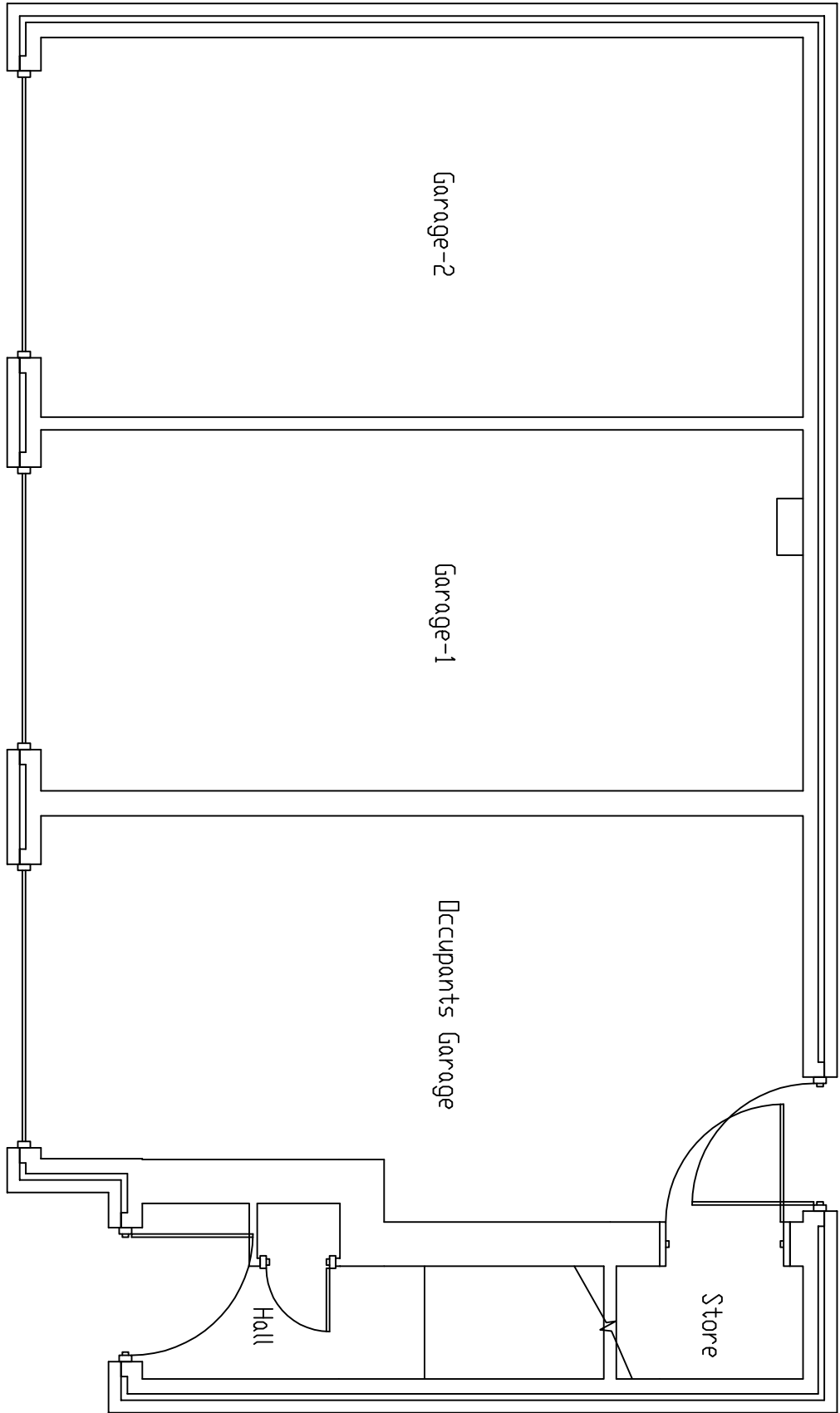
This drawing is prepared as part of HEATING DESIGN SOLUTIONS LIMITED Design & Advice Service & on its Standard Conditions applicable to such service.

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 CHANGES OF DIRECTION WITH MINIMUM OF ELBOWS & FITTINGS.



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

		Heating Design Solutions Limited The Axis Building, Malngate, Kingsway North, Team Valley, NE11 0NQ Tel No 0191 404 6843		
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 :		B U T T E R W O R T H		
TITLE :		G R O U N D 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. : V240015-20	
DRAWN BY :		P G	DATE : 0 9 / 0 2 / 2 4	

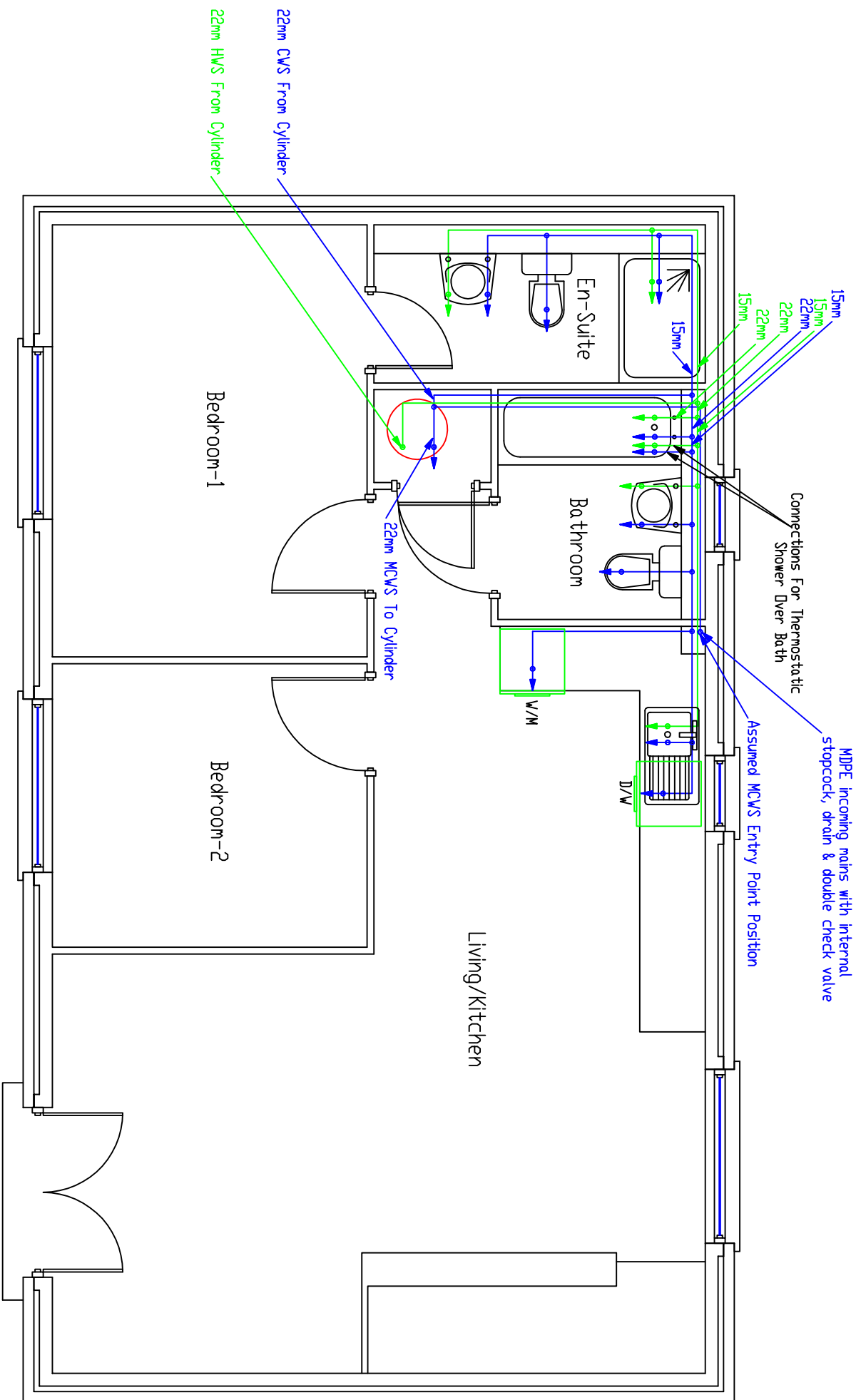
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PIPEWORK	BELOW FLOOR LEVEL	— F.A. = FROM ABOVE	F.B. = FROM BELOW
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PIPEWORK	AT HIGH LEVEL	— M.C.W. = MAINS COLD WATER	
PIPEWORK	IN ROOF SPACE	— C.W.S. = COLD WATER SUPPLY	
		— H.W.S. = HOT WATER SUPPLY	
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 :		B U T T E R W O R T H	
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. : V240015-20
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