

HEALTH & SAFETY NOTE

ANY CONSTRUCTION OR CONSTRUCTION RELATED PERSONNEL INCLUDING OPERATIVES INTENDING TO CONSTRUCT THE DESIGNS SHOWN ON THIS DRAWING SHOULD ENSURE THAT THEY HAVE BEEN THOROUGHLY BRIEFED BY THE PRINCIPAL CONTRACTOR ON ALL HEALTH & SAFETY MATTERS & HAVE SIGHT OF:

1. THE FULL DESIGNERS & CONTRACTORS HAZARD & RISK ASSESSMENTS & RISK REGISTERS.
2. THE DEVELOPED CONSTRUCTION PHASE SAFETY & HEALTH PLAN
3. THE CONTRACTORS CONSTRUCTION METHOD STATEMENTS.



INDOOR HEAT PUMP UNIT.

OUTDOOR HEAT PUMP UNIT.
(APPROX DIMENSIONS: 1270 W x 815 H x 340 D.)

STEEL PANEL RADIATORS.

T	For Tender	RY	24.03.25
REV:	DESCRIPTION:	BY:	DATE:
STATUS:			

CBS Consulting Engineers
MECHANICAL & ELECTRICAL ENGINEERS

Limerick
CITY & COUNTY
COUNCIL

SITE: Residential Development at
58 Mayorstone Drive, Limerick

TITLE: Heating Services
Ground Floor Layout

SCALE AT A1:	DATE:	DRAWN:	CHECKED:
1:40	23.04.25	VP	RY
PROJECT NO:	DRAWING NO:	REVISION:	
	M101	T	

NOTES:

THE HOT WATER HEATING WILL HAVE SEPARATE TIME CONTROL FOR HOT WATER THE CYLINDER SHALL BE TEMPERATURE CONTROLLED BY THERMOSTAT.

THE OUTDOOR HEAT PUMP UNIT TO BE MOUNTED ON FLEXI-FEET SUPPORT BASE WITH 100mm GROUND CLEARANCE, 300mm REAR CLEARANCE AND 1000mm FRONT CLEARANCE. FINAL POSITION TO BE AGREED ON SITE WITH BUILDER.

NOTE, THE MECHANICAL CONTRACTOR SHALL CONSIDER THE SEPARATION DISTANCE BETWEEN THE INDOOR & OUTDOOR HEAT PUMP UNITS. IF REQUIRED, THE SYSTEM SHALL BE RE-CHARGED WITH REFRIGERANT GAS AS PART OF THE CONTRACT.

OUTDOOR HEAT PUMP TO BE MOUNTED ON CONCRETE SUPPORT BASE BY MAIN CONTRACTOR.

ALL REFRIGERANT GAS WORKS TO BE CARRIED OUT BY AN F-GAS REGISTERED SPECIALIST CONTRACTOR.

ALL HEATING PIPEWORK SHALL BE INSTALLED IN A SINGLE LENGTH & SHALL BE JOINT-FREE.

THE PIPEWORK INSTALLATION SHALL BE FULLY CO-ORDINATED TO MINIMIZE PIPE CROSS-OVERS.

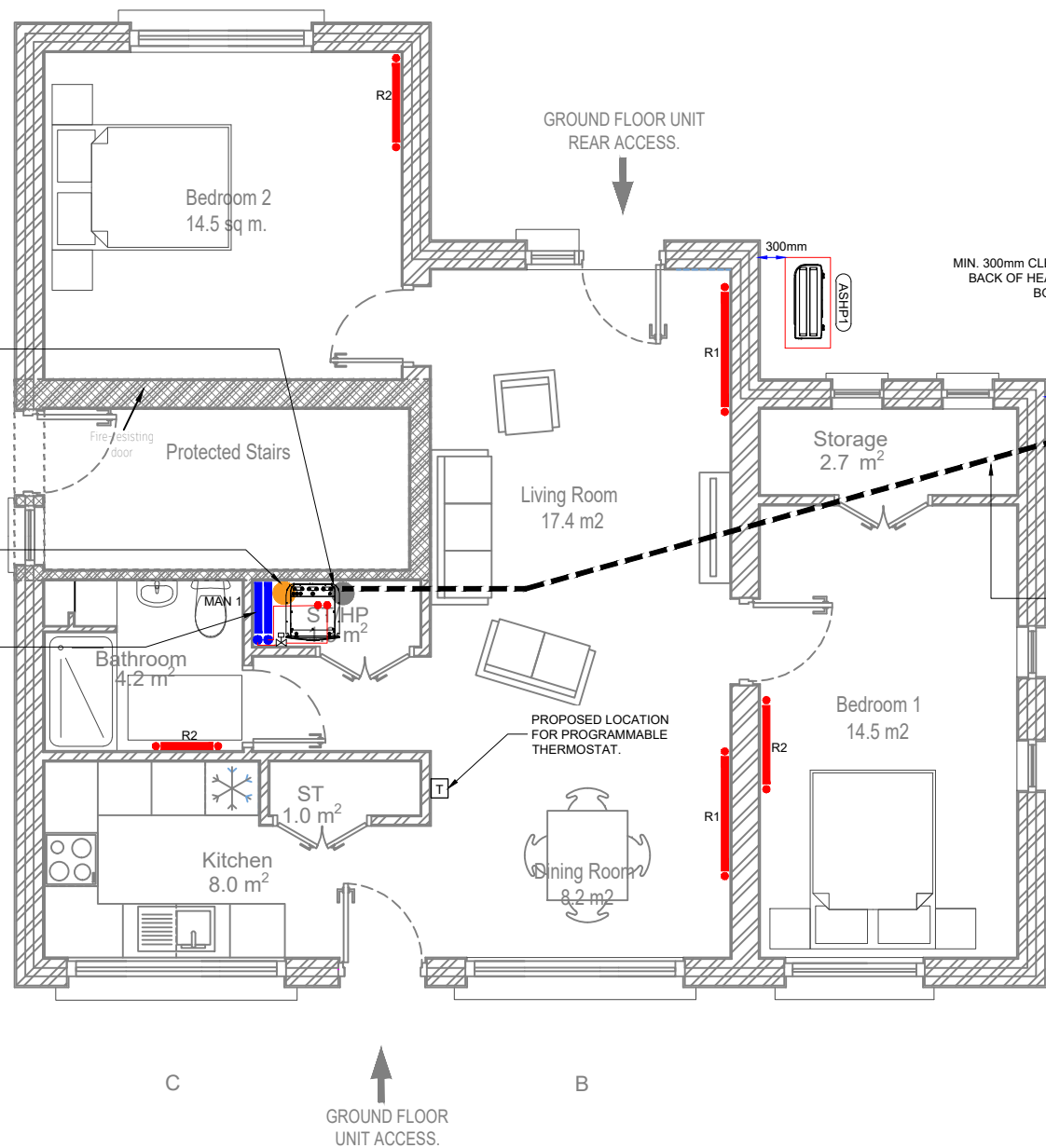
INTERCONNECTING PRE-INSULATED HEAT PUMP SYSTEM PIPEWORK & CABLE RISE FROM BUILDER'S 6 INCH DUCT BELOW GROUND TO LOW LEVEL. PROVIDE DUCT SLEEVE FOR CABLEING.

FRONT FLOOR UNIT
FRONT ACCESS.

A

25 LITRE EXPANSION
VESSEL IN PLANT
ROOM

Ø32mm HEATING F&R DROP
FROM CEILING LEVEL TO LOW
LEVEL & CONNECT TO
MANIFOLD AT LOW LEVEL.



GROUND FLOOR
UNIT ACCESS.

Proposed Ground floor unit layout 2 Bed 4 persons. TOTAL 88.3 sqm

RAD REF.	RADIATOR MODEL	PIPE CENTRES (mm)	HEIGHT (mm)
R1	AIRFEL 500 DOUBLE	2080	500
R2	AIRFEL 500 DOUBLE	1880	500
R3	AIRFEL 500 DOUBLE	580	500

ALL RADIATORS TO BE STEEL PANEL AIRFEL RADIATORS PROVIDED WITH TRV's & ALL REQUIRED BRACKETS/SUPPORTS.

ALL RADIATORS TO BE PIPED IN WRAS APPROVED & CERTIFIED FRANKISCHE PRE-INSULATED MULTI-LAYER HEATING F&R PIPEWORK. PIPEWORK TO BE CLIPPED BETWEEN JOISTS IN CEILINGS. PIPEWORK INSULATION TO BE 13mm MINIMUM. ALL PIPES AT GROUND & FIRST FLOOR LEVEL TO BE ROLLED OUT & LAID JOINT-FREE IN REQUIRED LOCATIONS.

DESIGN FLOW TEMPERATURE:

IN LINE WITH THE PBER/PART L REPORTS, THE DESIGN FLOW TEMPERATURE FOR THE HEAT PUMP HEATING SYSTEM WILL BE 35°C. THE THICKNESS & THERMAL CONDUCTIVITY OF INSULATION ON ALL PIPEWORK SHALL BE FULLY COMPLIANT WITH PART L.



FLEXI-FEET FOR OUTDOOR HEAT PUMP



MECHANICAL CONTRACTOR TO PROVIDE WEATHER PROTECTED, LOCKABLE STEEL MESH GUARD ENCLOSURE C/W EPOXY-POLYESTER COATING & SCRATCH RESISTANT TEXTURED FINISH TO ARCHITECTS RAL COLOUR SPECIFICATION. PROVIDE ENCLOSURE TO EACH OUTDOOR CONDENSER UNIT.

PROGRAMMABLE THERMOSTAT

CONTROLS

1. Thermostats to be fitted 1500mm from finish floor level, in a 35mm recessed box.
2. Thermostats to be positioned away from heat emitters and glazing.
3. Thermostat positions shown are recommendations only.
4. Thermostats should be positioned in relation to final design of the building and in agreement with the client.
5. All dwellings to have minimum two time and temperature zones and a scheduled DHW controlled by programmable in compliance part L building regulations.

T DENOTES PROGRAMMABLE THERMOSTAT.

NOTES:

THE INTERCONNECTING SPACE HEATING PIPEWORK CONNECTING THE INDOOR HEAT PUMP UNIT TO ALL MANIFOLDS SHALL BE WRAS APPROVED & CERTIFIED FRANKISCHE PRE-INSULATED MULTI-LAYER HEATING F&R PIPEWORK. PIPEWORK TO BE CLIPPED BETWEEN JOISTS IN CEILINGS. PIPEWORK INSULATION TO BE 13mm MINIMUM. ALL PIPES AT GROUND & FIRST FLOOR LEVEL TO BE ROLLED OUT & LAID JOINT-FREE IN REQUIRED LOCATIONS.

THE INTERCONNECTING PIPEWORK CONNECTING THE OUTDOOR & INDOOR HEAT PUMP UNITS SHALL BE WRAS APPROVED & CERTIFIED FRANKISCHE PRE-INSULATED MULTI-LAYER HEATING F&R PIPEWORK. PIPEWORK TO BE CLIPPED BETWEEN JOISTS IN CEILINGS. PIPEWORK INSULATION TO BE 13mm MINIMUM. ALL PIPES AT GROUND & FIRST FLOOR LEVEL TO BE ROLLED OUT & LAID JOINT-FREE IN REQUIRED LOCATIONS.

LEGEND:

T

DENOTES NEW PROGRAMMABLE (TIME & TEMPERATURE) HEATMISER DSL1 ELECTRONIC MAINS SET-POINT ROOM THERMOSTAT C/W DIGITAL TEMPERATURE DISPLAY SUPPLIED & INSTALLED BY MECHANICAL CONTRACTOR.

ASHP1



DENOTES PROPOSED LOCATION FOR 4.4kW HISENSE HIM4.4 MONOBLOC OUTDOOR POWER INVERTER HEAT PUMP UNIT C/W MATCHING INDOOR UNIT. UNIT TO USE REFRIGERANT GAS R32. UNIT TO BE MOUNTED ON FLEXI-FEET SUPPORT BASE WITH 100mm GROUND CLEARANCE, 300mm REAR CLEARANCE & 1800mm FRONT CLEARANCE. FINAL CLEARANCE REQUIREMENTS & POSITION TO BE AGREED ON SITE WITH HEAT PUMP SUPPLIER & BUILDER. UNIT TO BE PROVIDED WITH ANTI-CORROSION TREATMENT AT CLIENTS REQUEST.

APPROXIMATE OUTDOOR UNIT DIMENSIONS: 815 H x 1270 W x 340 D (mm).

NOTE, THE MECHANICAL CONTRACTOR SHALL CONSIDER THE SEPARATION DISTANCE BETWEEN THE INDOOR & OUTDOOR HEAT PUMP UNIT. IF REQUIRED, THE SYSTEM SHALL BE RE-CHARGED WITH REFRIGERANT GAS WITH NO EXTRA COST AS PART OF THE CONTRACT.

OUTDOOR HEAT PUMP TO BE PROVIDED WITH DRIP TRAY & FLEXI-FEET PROVIDED BY MECHANICAL CONTRACTOR.



PROPOSED LOCATION FOR HISENSE HEAT PUMP UNIT C/W 200 LITRE INTEGRATED CYLINDER. PROVIDE INTEGRATED PROGRAMMABLE CONTROLS PACK, CIRCULATING PUMP, FLOOR MOUNTING KIT, BYPASS VALVE, UNVENTED KIT C/W EXPANSION VESSEL, THERMAL/PRESSURE RELIEF VALVE & DRAIN WASTE.

R1

DENOTES AIRFEL STEEL PANEL RADIATOR C/W TRV & LSV.

L

DENOTES LOW LEVEL DISTRIBUTION MANIFOLD C/W ISOLATION VALVES, FITTINGS, DRAIN COCKS & AUTOMATIC AIR VENTS.