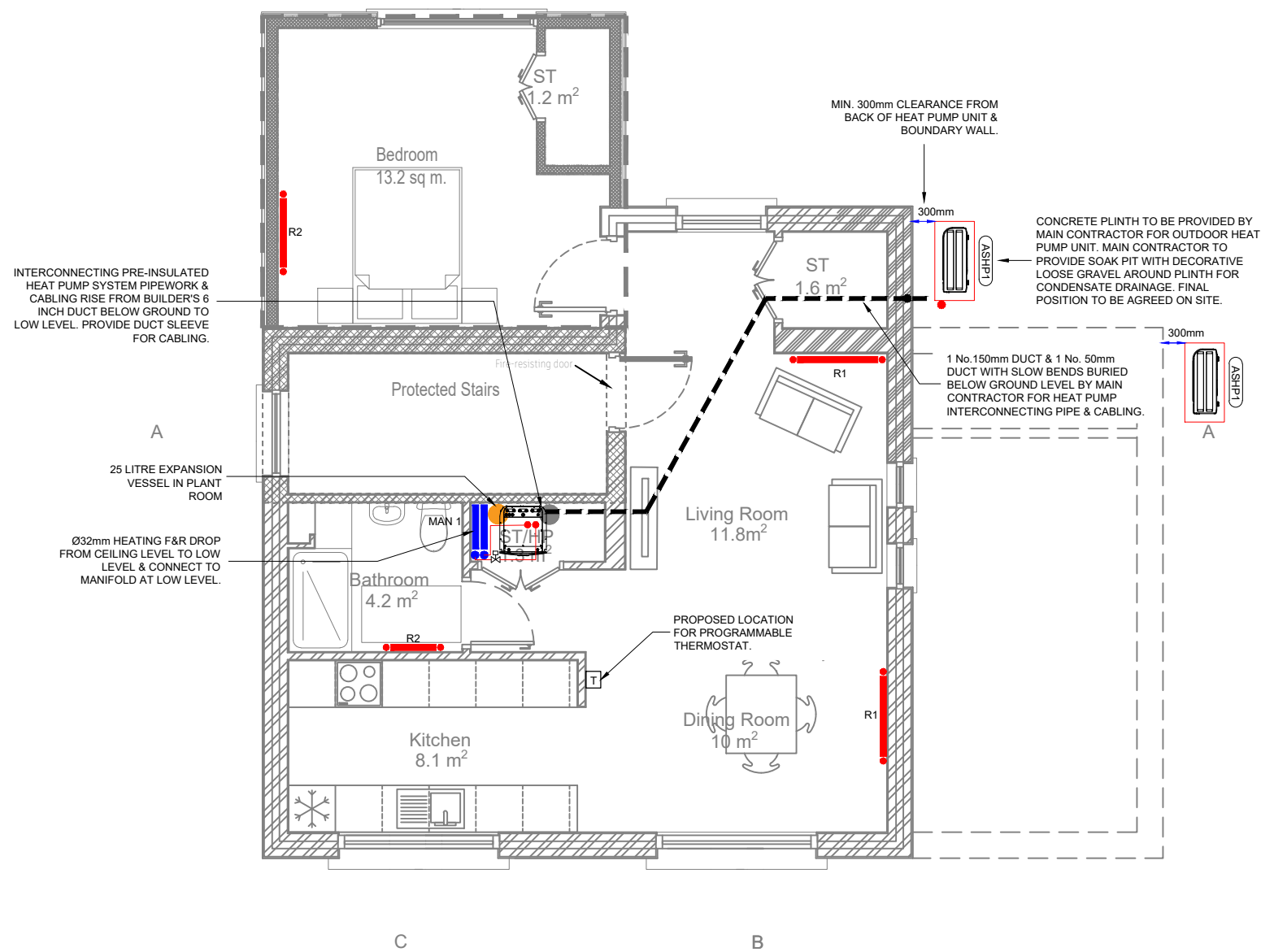




Proposed First floor unit layout. 1 Bed 2 persons. TOTAL 68.6 sqm

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

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.

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.

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:

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

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.

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

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

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.

NOTES:

ALL HEATING PIPEWORK SHALL BE PROVIDED WITH DRAIN POINT AT SYSTEM LOW POINTS.

PIPEWORK TO BE LAID TO FALLS TO ALLOW VENTING OF SERVICE BY MEANS OF AUTOMATIC AIR VENTS AT ALL SYSTEM HIGH POINTS. WHERE PIPEWORK IS INSTALLED JOINT FREE, THE MECHANICAL CONTRACTOR SHALL GIVE DUE CARE & ATTENTION TO POSITIONING & INSTALLING AUTOMATIC AIR VENTS AT SYSTEM HIGH POINTS. THIS SHALL BE CAREFULLY CONSIDERED & CO-ORDINATED BY THE MECHANICAL CONTRACTOR AT THE BEGINNING OF THE PROJECT PRE-INSTALLATION.

ALL CONCEALED PIPEWORK TO BE FULLY INSULATED.

ISOLATING VALVES TO BE FITTED TO ALL SYSTEM BRANCH CONNECTIONS.

MECHANICAL CONTRACTOR TO LIAISE WITH MAIN CONTRACTOR REGARDING FINAL LOCATIONS & SIZES OF ALL HEATING DISTRIBUTION MANIFOLDS. POSITION TO BE FULLY CO-ORDINATED BY CONTRACTORS ON SITE.

MECHANICAL CONTRACTOR TO LIAISE WITH MAIN CONTRACTOR REGARDING ANY REQUIRED GROUNDS FOR SUPPORT FOR MOUNTING OF MECHANICAL SERVICES EQUIPMENT (RADIATORS ETC). SUITABLE GROUNDS FOR SUPPORT IN WALLS ETC TO BE PROVIDED BY MAIN CONTRACTOR BASED ON CO-ORDINATED POSITIONS WITH MECHANICAL CONTRACTOR.

THE SPACE HEATING SYSTEM SHALL HAVE TIME & TEMPERATURE ZONE CONTROL WITH 7-DAY DIGITAL PROGRAMMER WITH MIN. OF 2 SPACE HEATING ZONES PLUS ONE FOR SEPARATE HOT WATER, ROOM THERMOSTATS TO CONTROL EACH ZONE/ROOM. ALL CONTROLS EQUIPMENT REQUIRED TO COMPLETE THE INSTALLATION & PROVIDE INDIVIDUAL CONTROL FOR EACH ROOM SHALL BE SUPPLIED & INSTALLED AS PART OF THIS PROJECT.

BUILDER'S WORK NOTES:

ALL BUILDER'S WORK REQUIRED TO COMPLETE THE SUCCESSFUL INSTALLATION OF THE MECHANICAL SERVICES WORKS SHALL BE COMPLETED BY THE MAIN CONTRACTOR. NOTE, ALL OPES & CHASES REQUIRED SHALL BE FULLY CO-ORDINATED WITH OTHER TRADES AND CLEARLY MARKED OUT ON SITE IN CONJUNCTION WITH THE MAIN CONTRACTOR. ALL OPES AND CHASES SHALL BE AGREED WITH ALL TRADES AND THE MAIN CONTRACTOR PRIOR TO CUTTING SAME.

WHERE REQUIRED, THE MAIN CONTRACTOR TO PROVIDE 6 INCH DUCT FROM OUTDOOR UNIT TO INDOOR UNIT TO FACILITATE INSTALLATION OF INTERCONNECTING PIPING BETWEEN UNITS. USE SLOW SWEEPING BENDS WHERE REQUIRED & PROVIDE NEAT SEALING & WEATHER PROOFING AS NECESSARY. THE LOCATION OF INDOOR & OUTDOOR UNITS REQUIRES CAREFUL CONSIDERATION TO ENSURE THE DUCT IS INSTALLED IN A CO-ORDINATED MANNER NEAR THE EXACT & FINAL LOCATION OF BOTH UNITS.

THE MAIN CONTRACTOR SHALL PROVIDE ALL REQUIRED GROUNDS FOR SUPPORT FOR ALL WALL-HUNG FITTINGS.

THE MAIN CONTRACTOR SHALL CO-ORDINATE THE FINAL SIZE AND DEPTH OF ALL MANIFOLDS & PROVIDE THE NECESSARY WALL MAKE-UP TO FACILITATE SECURE FITTING OF RECESSED MANIFOLD CABINETS & ENSURE THE FRONT SURFACE OF THE CABINET IS FLUSH WITH THE WALL SURFACE.

WHERE MANIFOLDS ARE TO BE SURFACE MOUNTED, THE MAIN CONTRACTOR SHALL PROVIDE SUITABLE GROUND FOR SUPPORT ON WHICH TO MOUNT/HANG THE EQUIPMENT. THIS SHALL BE FULLY CO-ORDINATED WITH THE MECHANICAL SERVICES CONTRACTOR.



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.

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.

DENOTES PROGRAMMABLE THERMOSTAT.

PROGRAMMABLE THERMOSTAT

Notes:

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 First Floor Layout			
SCALE AT A1: 1:40	DATE: 23.04.25	DRAWN: VP	CHECKED: RY
PROJECT NO:	DRAWING NO: M102	REVISION: T	