

Part L 2021

Site: Pennington Street
Levenshulme

Date: 1st Sept 2025

Ref: 33502

Specification Used Within the Calculations

Item	Description	Notes.	Comments
	The following information is required for the design submission (as per requirements of Approved Doc L1A).	Please note submission is in two stages. A) Design, B) As installed	
1. Dwelling Type			
1.1	Building Regulations Part L1A 2021 Software used.	Elmhurst SAP 10	
1.2	Thermal mass parameter has been calculated based on assumed construction details.		
2. Floor Construction Details			
2.1	Ground Floor- will be insulated to achieve the U-value stated opposite.	U-Value = 0.11 W/m ² K	Please provide construction details when available
2.2	Exposed heatloss floor- to be insulated to achieve the U-value opposite:	U-Value = 0.15 W/m ² K	Please provide construction details when available
3. Wall Construction Details			
3.1	Proposed External Wall- Timber frame- to be constructed to achieve U-value opposite.	U-Value = 0.18 W/m ² K (Knauf Dritherm 32)	Please provide construction details when available
3.2	Party Walls- to be fully filled and sealed to achieve the U-value opposite.	U-Value = 0.00 W/m ² K	
3.3	Dormer Walls- to be insulated to achieve the U-value opposite	U-Value = 0.19 W/m ² K	Please provide construction details when available
4. Roof Construction Details			
4.1	Pitch Roof- to be insulated to achieve the U-value stated opposite, (500mm of Dritherm Loft Roll).	U-Value = 0.09 W/m ² K	Please provide construction details when available
4.2	Flat Roof- construction is to be Insulated to achieve the U-value stated opposite.	U-Value = 0.15 W/m ² K	Please provide construction details when available
4.3	Slope Roof insulated to achieve the U-value opposite:	U-Value = 0.13 W/m ² K	Please provide construction details when available
5. Openings			
5.1	Doors insulated to achieve the U-value opposite.	U-Value = 1.0 W/m ² K	
5.2	All windows / fully glazed patio doors are double glazed windows to achieve the U-value and G-value opposite. Windows to be BFRC certified.	U-Value = 1.2 W/m ² K G-value = 0.52 (average glass and frame U-value)	Subject to overheating
6. Thermal Bridging			
6.1	Individual Psi values will be calculated based on assumed construction details (Timber Frame) NOTE-Knauf thermal bridging details have been used. These are dependent on Knauf products being used	Sign off required at As-Built stage.	Subject to change
7. Air Pressure Test			
7.1	An air permeability test will be undertaken on each dwelling. This will achieve a rating of 3.00 or below.	Air test to achieve 3.00 or less, see Results Sheet. All plots to be tested.	Please provide construction details when available
8. Ventilation			
8.1	Mechanical Ventilation with heat recovery will be installed to each dwelling. To be installed by an Approved Installer.	MR XBOX ECO 3 or similar approved.	Installation certificate at Sign Off Stage
9. Lighting & Tariff			

9.1	All light fittings are to be low energy.	100% low energy light fittings. Details of fittings will be required at as built stage.	
9.2	Lighting details as follows: power = 8W Efficacy = 100lm/w	Details of fittings will be required at as built stage	
9.3	Electricity is supplied by standard tariff rather than economy 7, 10 or 24.	Assumed Standard Tariff	
10. Space Heating			
10.1	Main Heating is provided via ASHP.	Vaillant Arotherm Plus 5Kw	
10.2	Heating controls- Programmer and room thermostat.		
11. Water Heating			
11.1	Hot water is provided via hot water cylinder. Water usage per person per day is less than 125 Litres per person per day.	Cylinder volume 150L, heat loss 1.4kwh/day	
11.2	Shower flow rates are set at 8l/min		
11.4	WWHR units will not be installed.		
12. Renewables			
12.1	PV Panels will be included to achieve EPC ratings of A	See results summary for breakdown for quantities.	

Thermal Bridging

Thermal Bridge	PSI Value	Certificate Reference	Action Taken
E2 – Lintel	0.085	Refer to Knauf Details	Place holder values have been incorporated, Refer to Knauf Details
E3 – Sill	0.034	Refer to Knauf Details	Place holder values have been incorporated, Refer to Knauf Details
E4 – Jamb	0.039	Refer to Knauf Details	Place holder values have been incorporated, Refer to Knauf Details
E5 – Ground Floor	0.040	Refer to Knauf Details	Place holder values have been incorporated, Refer to Knauf Details
E6 – Intermediate Floor	0.027	Refer to Knauf Details	Place holder values have been incorporated, Refer to Knauf Details

E10 – Eaves (Ceiling)	0.059	Refer to Knauf Details	Place holder values have been incorporated, Refer to Knauf Details
E11 – Eaves (Rafter)	0.008	Refer to Knauf Details	Place holder values have been incorporated, Refer to Knauf Details
E12 - Gable (Ceiling)	0.099	Refer to Knauf Details	Place holder values have been incorporated, Refer to Knauf Details
E13 – Eaves (Rafter level)	0.062	Refer to Knauf Details	Place holder values have been incorporated, Refer to Knauf Details
E14 – Flat Roof	0.16	Default	Sign and return certificate at as built stage
E16 - Corner	0.060	Refer to Knauf Details	Place holder values have been incorporated, Refer to Knauf Details
E17- Inverted Corner	-0.059	Refer to Knauf Details	Place holder values have been incorporated, Refer to Knauf Details
E18 - Party Wall	0.050	Refer to Knauf Details	Place holder values have been incorporated, Refer to Knauf Details
E20 - Exposed Floor (normal)	0.32	Default	Sign and return certificate at as built stage
E21 - Exposed Floor (inverted)	0.32	Default	Sign and return certificate at as built stage
E24 – Eaves (Ceiling level inverted)	0.15	Default	Sign and return certificate at as built stage

E25 – Staggered Party	0.24	Default	Sign and return certificate at as built stage
P1 - Party Floor	0.070	Refer to Knauf Details	Place holder values have been incorporated, Refer to Knauf Details
P2 - Intermediate Floor	0.00	Default	Sign and return certificate at as built stage
P4 - Party Ceiling	0.065	Refer to Knauf Details	Place holder values have been incorporated, Refer to Knauf Details
P5 - Party Ceiling	0.065	Refer to Knauf Details	Place holder values have been incorporated, Refer to Knauf Details
R4 - Ridge of Roof	0.08	As Design stage Assumed	Place holder values have been incorporated
R7 – Flat Ceiling (inverted)	0.04	As Design stage Assumed	Place holder values have been incorporated
R9 – Roof to Wall (flat ceiling)	0.04	As Design stage Assumed	Place holder values have been incorporated

Lighting

Please complete the following table for as built lighting:

Room	Make/Model	Wattage of Light	Lumes
Lounge			
Kitchen			
Bedroom 1			
Bedroom 2			
Bedroom 3			
WC			
Bathroom			

Showers

Please complete the table below with as built shower details:

Shower Reference (Room)	Make and Model	Flow Rate (L/s)
Shower 1 (Main Bathroom)		
Shower 2 (En-suite 1)		

Evidence Required for Final Sign Off

Photographs required under Part L 2021:

All Photographs are required to have GEO location data and time and date stamped. (iPhones will do this automatically however all over phones will need the photos taking through an appropriate App)

1. **Foundations/ substructure and ground floor:** to show thermal continuity and quality of insulation in the following places:
 - a. At ground floor perimeter edge insulation.
 - b. At external door threshold
 - c. Below damp-proof course on external walls.
2. **External walls:** for each main wall type, to show thermal continuity and quality of insulation for the following.
 - a. Ground floor to wall junctions.
 - b. Structural penetrating elements.

NOTE, for blown fill, photos should show clean cavities and clean rick ties with very limited mortar droppings.
3. **Roof:** for each main roof type to show thermal continuity and quality of insulation at the following:
 - a. Joist/ rafter level
 - b. Eaves and gables edges
4. **Openings:** for each opening type (one image per wall or roof type is sufficient) to show thermal continuity and quality of insulation with photographs of the following:
 - a. Window positioning in relation to cavity closer or insulation line.
 - b. External door set positioning in relation to cavity closer or insulation line.
5. **Airtightness:** additional photographs for all details 1-4 to show airtightness details (only if not included or visible in continuity of insulation images).
6. **Building services:** for all plant associated with space heating, hot water, ventilation and low zero carbon technology equipment within or on the building, show the following:
 - a. Plant/ equipment identification label including make/model and serial number.
 - b. Primary pipework continuity of insulation
 - c. Mechanical ventilation ductwork continuity of insulation (for duct sections outside the thermal envelope).

Signature.....

Name.....

On Behalf

Results

Plot Reference	House Name /	DPER	TPER	% DPER < TPER	DER	TER	% DER < TER	DFEE	TFEE	% DFEE < TFEE	SAP Rating	EPC Rating	PV orientation	PV kW peak 1	PV Diverter	Mechanical Ventilation	Air Permeability
1	HT-A	26.8	77.07	65.23	0.67	14.4	95.35	51.43	57.65	10.78	92	A	South	2.8	No	MVHR	3
2	HT-C	23.53	68.34	65.58	0.86	13.05	93.41	43.69	45.26	3.48	92	A	West	3.7	No	MVHR	3
3	HT-B	22.11	58.92	62.47	1.04	11.3	90.8	33.59	37.67	10.84	92	A	West	3	No	MVHR	3
4	HT-B	22.11	58.92	62.47	1.04	11.3	90.8	33.59	37.67	10.84	92	A	West	3	No	MVHR	3
5	HT-B	21.5	63.57	66.17	0.75	12.16	93.83	37.35	41.79	10.63	92	A	West	3.5	No	MVHR	3
6	HT-B	22.72	63.43	64.18	0.96	12.14	92.09	37.27	41.67	10.55	92	A	West	3.3	No	MVHR	3
7	HT-B	22.11	58.92	62.47	1.04	11.3	90.8	33.59	37.67	10.84	92	A	West	3	No	MVHR	3
8	HT-B	22.11	58.92	62.47	1.04	11.3	90.8	33.59	37.67	10.84	92	A	West	3	No	MVHR	3
9	HT-B	22.11	58.92	62.47	1.04	11.3	90.8	33.59	37.67	10.84	92	A	West	3	No	MVHR	3
10	HT-B	22.78	63.57	64.17	0.97	12.16	92.02	37.35	41.79	10.63	92	A	West	3.3	No	MVHR	3
11	HT-E	20.37	59.33	65.67	0.84	11.34	92.59	40.67	42.66	4.66	92	A	South	3.8	No	MVHR	3
12	HT-D	18.84	52.36	64.03	0.89	10.04	91.14	33.93	36.02	5.8	92	A	South	3.2	No	MVHR	3
13	HT-D	18.88	51.84	63.57	0.9	9.94	90.95	33.71	35.64	5.42	92	A	South	3.2	No	MVHR	3
14	HT-D	19.58	57.86	66.16	0.79	11.06	92.86	38.52	40.94	5.91	92	A	South	3.7	No	MVHR	3

If you have any questions, please contact the office.