

Leatherhead Road (116)



BRegs LV1 2021			Planning Authority: Royal Borough of Kingston upon Thames																		Rev A
Option	Unit	External Wall	Room in Roof Wall	Pitch Roof (Rafters)	Pitch Roof (Joists)	Ground Floor	Flat Roof	Windows	Roof Lights	Ext Door	Heating Strategy	HW Cylinder	Renewables (PV)	Renewables (Area)	Mechanical Ventilation	Air- Permeability	EPC	DER v TER Improvement	DREE vs TFEI Improvement	DPER vs TPER Improvement	
Type	Plot No	U Value	U Value	U Value	U Value	U Value	U Value	U Value	U Value	U Value	Make	(litres)	(kWp)	m <sup>2</sup>	Type	m <sup>3</sup> /hr/m <sup>2</sup>	Rating	%	%	%	
End Terrace House	3	0.16	0.20	0.12	0.10	0.10	0.00	1.00	1.60	1.20	5kW ASHP	150.00	1.20	6.00	Extract	4.00	84B	69.65	8.35	36.39	
Mid Terrace	5	0.16	0.20	0.12	0.10	0.10	0.00	1.00	1.60	1.20	5kW ASHP	150.00	1.20	6.00	Extract	4.00	85B	68.89	6.57	33.86	
Bungalow	7	0.16	0.20	0.12	0.10	0.10	0.00	1.00	1.60	1.20	5kW ASHP	150.00	1.20	6.00	Extract	4.00	80C	64.34	0.51	28.24	
Element		U Values	Description																		
External Wall		0.16	Modelled as - 102.5mm Brick Outerleaf, 25mm Low-e Cavity, 110mm Phenolic Insulation (0.019W/mK) (Plastic Wall Ties), 100mm Concrete Block, 12.5mm Plasterboard																		
Room in Roof Wall		0.20	Modelled as - 12.5mm Plasterboard, 75mm Phenolic Insulation (0.019 W/mK) between Timber Battens, Vapour Control Layer, 10mm Unventilated Air Space between Counter Battens, 41.5mm Insulated Plasterboard (30mm Phenolic Insulation 0.019W/mK + 12.5mm Plasterboard)																		
Pitch Roof (Rafters)		0.12	Modelled as - Tiles on Battens, Vapour Control Layer, 150mm Phenolic Insulation (0.019W/mK) between Battens, 50mm Phenolic Insulation (0.019W/mK), 12.5mm Plasterboard																		
Pitch Roof (Joists)		0.10	Modelled as - 250mm Mineral Wool (0.038W/mK), 150mm Mineral Wool between Battens (0.038W/mK), 12.5mm Plasterboard																		
Ground Floor		0.10	Modelled as - Beam and Block Foundation, PIR Insulation (0.022W/mK), 65mm Screed																		
Windows		1.00	Triple Glazed windows with a centre pain G-value of 0.40 - TBC																		
Roof Lights		1.60	Double Glazed windows (Vertical U-value 1.20 W/m <sup>2</sup> K +0.40 W/m <sup>2</sup> K for 30 degree inclien as per SAP 10.2 guidance ) with a centre pain G-value of 0.40																		
External Door		1.20	Solid Wooden Door																		
Construction Details (Psi values)		-	Accredited Construction Details Psi Values used where relevant (see separate sheet)																		
Heating Strategy		-	Modelled as Ecodan 5kW ASHP																		
Controls		-	Modlled as - Time and Temperature Zone Control																		
Heating Emitters		-	Radiators																		
Hot Water Cylinder		-	Modelled as 150 L Hot water tank with 1.30kWh/day heat loss																		
Waste Water Heat Recovery		-	n/a																		
Air- Permeability		-	4.00 m <sup>3</sup> /hr/m <sup>2</sup> as per the Blower Door Method @ 50 pa																		
Mechanical Ventilation		-	Intermittent Extract Fan																		
Lighting		-	Modelled as - 12W, 85lm/W, 1020lm																		
Renewables		-	Modelled with 3 panels per dwelling - rated at 0.4kWp with the resulting total of 1.2kW																		
Overheating		-																			
Notes		-																			
Sign Off of details		Name	PP M Maclean	Date	21/02/2024							Name		Date							
		Sign	(on behalf of SRE)									Sign									