Anderson Goddard Ltd

Independent Energy Specialists, SAP, SBEM, EPC's, U-Value & Condensation Risk, 2D & 3D Thermal Modelling

Site	Victoria Ave, Blackley, MANCHESTER	Assessor	Paul Goddard
Client	John Southworth Builders	Accreditation	EES/05113
Date	08/02/2023	Tel	01925 733942
Ref	AG-76528-Design-Rev B	Web	www.andersongoddard.com
Drawing ref	18025 01 AC rev Y	email	Info@andersongoddard.com

Thermal Values				Thermal Mass	Kappa
Ground Floor	150mm PIR λ 0.022	0.11	W/m²K	Suspended	75
Main wall	100mm Brick, 50mm TF200 Thermo, 9mm OSB, 140mm Insulation λ 0.035, 25mm service void, VC foil Ultra, Plaster board	0.20	W/m²K	Timber frame	9
Party walls	Filled and sealed cavity	0.00	W/m²K	Block	20
Roof Cold (PIJ)	500mm mineral wool λ 0.044, 100 between 400 above Joists	0.09	W/m²K	Timber, plaster board	9
Windows	Double glazed Hard coat g-Value 0.63	1.40	W/m²K		
Doors		1.20	W/m²K		

Heating, Ventilation, LZC etc.				Comments
Air permeability		4.00	m³	
Thermal Bridging	TRADA Calculated Ψ values and 2D thermal models	variable	Y-Value	
LE lights	Minimum 80lm/watt	100	%	
Heating	Vaillant ecoFIT sustain 830		%	
Emitter	Radiators			
Controls	Programmer, Room thermostats and TRV's			
Compensator	Delayed Start thermostat			
Domestic Hot Water (DHW)	From Main System			
Showers	< 8 Litres /min			
Ventilation	Part F, System 3, decentralised Mechanical Extract Ventilation (dMEV)			
Secondary heating	None			
Photovoltaic	None			
Appendix G (FGHRS / WWHRS)	None			
Appendix Q (other Tech)	None			
Overheating	Assumed, Windows can be fully opened and cross Ventilation is possible in all other cases a minimum ACR of 4			

Property details					AD.L1a 2013 Criterion 1 & CfSH input data										Block Compliance				M & E		Low or Zero Carbon Technologies (LZC)							
Plot N°	House Type	Front Orient	Side	Det	GIFA	DER	TER	DER / TER %	DER =< TER	DFEE	TFEE	DFEE / TFEE %	DFEE =< TFEE	SAP Rating	Band	DER x TFA	TER x TFA	DFEE x TFA	TFEE x TFA	Heating	Ventilation	Orientation	Roof Angle	Min PV Kw Peak	No Panels	Panel size watts	* ASR	Actual PV Peak	* Yield PA
1	35A-1	North		Det	85.18	17.61	19.46	9.50%	PASS	47.94	59.08	18.85%	PASS	83	B	1500.02	1657.60	4083.53	5032.43	Vaillant	Combi	-	-	-	-	-	-	-	-
2	35A-1	West		Det	85.18	18.00	19.91	9.59%	PASS	49.90	61.78	19.22%	PASS	83	B	1533.24	1695.93	4250.48	5262.42	Vaillant	Combi	-	-	-	-	-	-	-	-
3	24A-1	West	North	End	69.46	17.86	19.74	9.52%	PASS	46.57	56.65	17.79%	PASS	83	B	1240.56	1371.14	3234.75	3934.91	Vaillant	Combi	-	-	-	-	-	-	-	-
4	24A-1	West		Mid	69.46	16.30	18.28	10.83%	PASS	40.03	48.88	18.10%	PASS	84	B	1132.20	1269.73	2780.48	3395.20	Vaillant	Combi	-	-	-	-	-	-	-	-
5	24A-1	West	South	End	69.46	17.74	19.60	9.48%	PASS	46.14	55.96	17.54%	PASS	83	B	1232.22	1361.42	3204.88	3886.98	Vaillant	Combi	-	-	-	-	-	-	-	-
6	35A-1	East	South	Semi	86.58	16.58	18.47	10.23%	PASS	44.31	54.61	18.86%	PASS	84	B	1435.50	1599.13	3836.36	4728.13	Vaillant	Combi	-	-	-	-	-	-	-	-
7	35A-1	East	North	Semi	86.58	16.68	18.59	10.27%	PASS	44.68	55.19	19.04%	PASS	84	B	1444.15	1609.52	3868.39	4778.35	Vaillant	Combi	-	-	-	-	-	-	-	-
8	35A-1	North		Det	85.18	17.61	19.46	9.50%	PASS	47.94	59.08	18.85%	PASS	83	B	1500.02	1657.60	4083.53	5032.43	Vaillant	Combi	-	-	-	-	-	-	-	-
9	24A-1	North	East	Semi	69.46	17.45	19.27	9.44%	PASS	44.42	53.75	17.35%	PASS	84	B	1212.08	1338.49	3085.41	3733.48	Vaillant	Combi	-	-	-	-	-	-	-	-
10	24A-1	North	West	Semi	69.46	17.45	19.27	9.44%	PASS	44.42	53.75	17.35%	PASS	84	B	1212.08	1338.49	3085.41	3733.48	Vaillant	Combi	-	-	-	-	-	-	-	-
11	35C	West	North	Det	93.56	18.50	20.48	9.66%	PASS	53.09	67.19	20.98%	PASS	83	B	1730.86	1916.11	4967.10	6286.30	Vaillant	Combi	-	-	-	-	-	-	-	-
12	35C	West	South	Det	93.56	17.19	18.87	8.90%	PASS	48.19	59.04	18.37%	PASS	84	B	1608.30	1765.48	4508.66	5523.78	Vaillant	Combi	-	-	-	-	-	-	-	-
13	35A-1	West	North	Semi	86.58	16.68	18.59	10.27%	PASS	44.68	55.19	19.04%	PASS	84	B	1444.15	1609.52	3868.39	4778.35	Vaillant	Combi	-	-	-	-	-	-	-	-
14	35A-1	West	South	Semi	86.58	16.62	18.55	10.40%	PASS	43.97	54.56	19.40%	PASS	84	B	1438.96	1606.06	3806.92	4723.80	Vaillant	Combi	-	-	-	-	-	-	-	-
15	24A-1	NW	NE	Semi	69.46	17.65	19.50	9.48%	PASS	45.53	55.23	17.56%	PASS	83	B	1225.97	1354.47	3162.51	3836.28	Vaillant	Combi	-	-	-	-	-	-	-	-
16	24A-1	NW	SW	Semi	69.46	17.57	19.41	9.47%	PASS	45.23	54.75	17.38%	PASS	84	B	1220.41	1348.22	3141.68	3802.94	Vaillant	Combi	-	-	-	-	-	-	-	-
17	35A-1	NW		Det	85.18	17.79	19.67	9.55%	PASS	48.90	60.38	19.01%	PASS	83	B	1515.35	1675.49	4165.30	5143.17	Vaillant	Combi	-	-	-	-	-	-	-	-
18	24A-1	NW	NE	Semi	69.46	17.65	19.50	9.48%	PASS	45.53	55.23	17.56%	PASS	83	B	1225.97	1354.47	3162.51	3836.28	Vaillant	Combi	-	-	-	-	-	-	-	-
19	24A-1	NW	SW	Semi	69.46	17.57	19.41	9.47%	PASS	45.23	54.75	17.38%	PASS	84	B	1220.41	1348.22	3141.68	3802.94	Vaillant	Combi	-	-	-	-	-	-	-	-
20	24A-1	NW	NE	Semi	69.46	17.65	19.50	9.48%	PASS	45.53	55.23	17.56%	PASS	83	B	1225.97	1354.47	3162.51	3836.28	Vaillant	Combi	-	-	-	-	-	-	-	-
21	24A-1	NW	SW	Semi	69.46	17.57	19.41	9.47%	PASS	45.23	54.75	17.38%	PASS	84	B	1220.41	1348.22	3141.68	3802.94	Vaillant	Combi	-	-	-	-	-	-	-	-

22	35A-1	East		Det	85.18	17.91	19.80	9.54%	PASS	49.53	61.18	19.04%	PASS	83	B	1525.57	1686.56	4218.97	5211.31	Vaillant	Combi	-	-	-	-	-	-	-	-
23	35A-1	North		Det	85.18	17.61	19.46	9.50%	PASS	47.94	59.08	18.85%	PASS	83	B	1500.02	1657.60	4083.53	5032.43	Vaillant	Combi	-	-	-	-	-	-	-	-
24	24A-1	North	East	Semi	69.46	17.45	19.27	9.44%	PASS	44.42	53.75	17.35%	PASS	84	B	1212.08	1338.49	3085.41	3733.48	Vaillant	Combi	-	-	-	-	-	-	-	-
25	24A-1	North	West	Semi	69.46	17.45	19.27	9.44%	PASS	44.42	53.75	17.35%	PASS	84	B	1212.08	1338.49	3085.41	3733.48	Vaillant	Combi	-	-	-	-	-	-	-	-
Average Improvement					1947.50	17.44	19.31	9.66%	PASS	46.32	56.79	18.43%	PASS			33968.57	37600.95	90215.51	110601.55			-	-	-	-	-	-	-	-

Rev	Date	Description
B	14/02/2023	Specification amended

SAP Ratings - Please note that SAP rating have been calculated using SAP2012 methodology, SAP methodology is expected to be updated sometime after June 2022 to SAP 10.3, if the post construction assessment occurs after this change then this will have an affect the final SAP rating which will be downgraded