Duckmoor

Bellway Homes

South London

Design Stage

AES Sustainability Consultants Ltd

26th April 2024



	Assessor	Date	E-mail address
Produced By:	Aymon Winter	24/04/2024	aymon.winter@aessc.co.uk
Reviewed By:	Maja Stanisz	24/04/2024	Maja.stanisz@aessc.co.uk

Revision	Assessor	Date	Comment
Rev 1	Aymon Winter	26/04/2024	Amended plot 8

If construction deviates from the specification in any way whatsoever, please check with AES Sustainability Consultants immediately to ensure compliance is still achieved. AES Sustainability Consultants cannot be held responsible for non compliance if the specification that the calculation is based upon is not followed.

AES Sustainability Consultants

																						Carbon Emissions (Dwelling Emission Rate)			Primary Energy (Dwelling Primary Energy Rate)			Fabric (Dwelling Fabric Energy Efficiency)					
Property Ref	House Type	Property Type	Total Floor Area	Ground Floor U Value	External Wall U Value	Plane Roof U Value	Sloping Roof U Value	Window U Value	Window Solar Transmission g-glazing	Front Door U Value	Y Value	Design Air Pressure	Heating System	Heating System	Heating Controls	Cylinder Volume (L)	Cylinder Measured Heat Loss (kWh/24hrs)	PV Diverter	Ventilation System	PV kWp	PV Orientation	PV kWp	PV Orientation	DER	TER	DER/TER % Reduction	DPER	TPER	DPER/TPER % Reduction	DFEE	TFEE	DFEE / TFEE % Reduction	Block Complaince % Improvement	EPC Rating	
4907-AU06-7819-001	Apartment	APT	70.52	0.10 - 0.12	0.24 - 0.26	0.09		1.00	0.44	1.30	0.03	3.50	Electric Panel Heaters	Dimplex EDEL200UK	Programmer and Appliance Thermostat	201	1.61	No	Titon Ultimate dMEV	1.01	East			4.75	13.08	63.69	51.50	68.87	25.23	35.24	36.97	4.69		83	B
4907-AU06-7819-002	Apartment	APt	55.18	0.10 - 0.12	0.24 - 0.26	0.09		1.00	0.44	1.30	0.04	3.50	Electric Panel Heaters	Dimplex EDEL200UK	Programmer and Appliance Thermostat	201	1.61	No	Titon Ultimate dMEV	1.01	East			3.98	13.58	70.69	44.71	71.73	37.67	30.82	33.17	7.08		86	B
4907-AU06-7819-003	Apartment	APT	70.52	0.10 - 0.12	0.24 - 0.26	0.09		1.00	0.44	1.30	0.08	3.50	Electric Panel Heaters	Dimplex EDEL200UK	Programmer and Appliance Thermostat	201	1.61	No	Titon Ultimate dMEV	1.01	East			4.12	11.19	63.18	45.13	58.75	23.18	30.86	27.92	-10.54		82	B
4907-AU06-7819-004	Apartment	APT	55.18	0.10 - 0.12	0.24 - 0.26	0.09		1.00	0.44	1.30	0.08	3.50	Electric Panel Heaters	Dimplex EDEL200UK	Programmer and Appliance Thermostat	201	1.61	No	Titon Ultimate dMEV	1.01	East			3.55	11.88	70.12	40.46	62.60	35.36	27.83	24.84	-12.06	0.40	88	B
4907-AU06-7819-005	Apartment	APT	68.47	0.10 - 0.12	0.24 - 0.26	0.09		1.00	0.44	1.30	0.06	3.50	Electric Panel Heaters	Dimplex EDEL200UK	Programmer and Appliance Thermostat	201	1.61	No	Titon Ultimate dMEV	1.01	South			7.33	16.99	56.86	78.50	89.95	12.73	53.26	54.02	1.42		73	C
4907-AU06-7819-006	Apartment	APT	55.52	0.10 - 0.12	0.24 - 0.26	0.09	0.15	1.00	0.44	1.30	0.07	3.50	Electric Panel Heaters	Dimplex EDEL200UK	Programmer and Appliance Thermostat	201	1.61	No	Titon Ultimate dMEV	1.01	East			5.09	14.89	65.82	55.87	78.92	29.20	36.91	38.51	4.17		82	B
4907-AU06-7819-007	Apartment	APT	53.89	0.10 - 0.12	0.24 - 0.26	0.09	0.15	1.00	0.44	1.30	0.07	3.50	Electric Panel Heaters	Dimplex EDEL200UK	Programmer and Appliance Thermostat	201	1.61	No	Titon Ultimate dMEV	1.01	South			4.57	14.18	67.77	50.71	75.18	32.55	33.37	34.07	2.05		84	B
4907-AU06-7819-008	Apartment	APT	62.09	0.10 - 0.12	0.24 - 0.26	0.09	0.15	1.00	0.44	1.30	0.08	3.50	Electric Panel Heaters	Dimplex EDEL200UK	Programmer and Appliance Thermostat	201	1.61	No	Titon Ultimate dMEV	1.01	South			5.05	14.54	65.27	56.07	76.88	27.07	38.26	39.36	2.80		81	B
4907-AU06-7819-009	Souter	END	50.40	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.04	5.01	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	5.03	North			-3.64	12.29	129.62	-6.64	64.63	110.28	26.82	28.27	5.14		104	A
4907-AU06-7819-010	Glover	END	63.90	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.03	4.00	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	5.03	South			-5.26	12.21	143.08	-15.12	64.01	123.62	33.11	34.13	2.99		107	A
4907-AU06-7819-011	Souter	MID	50.40	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.04	5.01	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	5.03	North			-3.76	11.77	131.95	-7.85	61.83	112.70	24.03	25.74	6.64		104	A
4907-AU06-7819-012	Glover	MID	63.90	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.03	4.00	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	5.03	South			-5.36	11.72	145.73	-16.09	61.51	126.16	30.37	31.50	3.60		107	A
4907-AU06-7819-013	Souter	END	50.40	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.04	5.01	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	5.03	North			-3.82	12.29	129.45	-6.53	64.63	110.10	27.07	28.27	4.25		104	A
4907-AU06-7819-014	Glover	END	63.90	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.03	4.00	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	5.03	South			-5.26	12.21	143.08	-15.12	64.01	123.62	33.11	34.13	2.99		107	A
4907-AU06-7819-015	Tillman	END	93.58	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.00	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	4.02	East	4.02	West	-4.59	10.69	142.94	-11.52	55.90	120.60	35.34	35.84	1.37		107	A
4907-AU06-7819-016	Tillman	MID	93.58	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.03	4.00	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	4.02	East	4.02	West	-4.67	10.61	144.02	-12.36	55.44	122.30	33.59	35.43	5.21		107	A
4907-AU06-7819-017	Saddler	MID	68.47	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.06	4.00	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	6.03	East	6.03	West	-12.02	11.54	204.16	-39.54	61.87	163.91	46.29	47.77	3.10		118	A
4907-AU06-7819-018	Tillman	MID	93.58	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.03	4.00	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	4.02	East	4.02	West	-4.67	10.61	144.02	-12.36	55.44	122.30	33.59	35.43	5.21		107	A
4907-AU06-7819-019	Ploughwright	END	93.40	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	5.03	South			-2.84	10.44	127.20	-4.79	54.40	108.81	34.30	35.23	2.64		103	A
4907-AU06-7819-020	Jeweller	DET	158.94	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	250	1.99	No	Titon Ultimate dMEV	2.68	South	3.35	East	-0.20	9.54	102.10	11.61	50.03	76.79	42.09	42.39	0.72		96	A
4907-AU06-7819-021	Framer	DET	96.12	0.10 - 0.12	0.24 - 0.26	0.07		1.30	0.71	1.30	0.02	3.01	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	2.68	East	2.68	West	-1.36	11.59	111.73	4.71	60.55	92.22	41.84	42.20	0.85		99	A
4907-AU06-7819-022	Framer	DET	96.12	0.10 - 0.12	0.24 - 0.26	0.07		1.30	0.71	1.30	0.02	3.01	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	2.68	East	2.68	West	-1.37	11.56	111.86	4.62	60.38	92.35	41.66	42.05	0.93		99	A
4907-AU06-7819-023	Arkwright	DET	137.80	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.00	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	3.35	South	5.36	North	-2.44	9.52	125.63	-1.79	49.81	103.59	38.74	38.93	0.49		103	A
4907-AU06-7819-024	Jeweller	DET	158.94	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	250	1.99	No	Titon Ultimate dMEV	2.68	East	2.68	West	0.59	9.55	93.82	16.13	50.07	67.78	42.44	42.63	0.45		93	A
4907-AU06-7819-025	Arkwright	DET	137.80	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.00	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	3.35	West	5.36	East	-2.73	9.65	128.29	-2.99	50.47	105.92	39.80	39.83	0.08		103	A
4907-AU06-7819-026	Jeweller	DET	158.94	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	250	1.99	No	Titon Ultimate dMEV	2.68	East	3.35	South	-0.30	9.55	103.14	11.08	50.07	77.88	42.44	42.63	0.45		96	A
4907-AU06-7819-027	Dexter	DET	118.08	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	3.69	North	6.03	South	-4.42	10.10	143.76	11.63	52.69	122.07	38.59	39.34	1.90		107	A
4907-AU06-7819-028	Jeweller	DET	158.94	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	250	1.99	No	Titon Ultimate dMEV	2.68	East	2.68	West	0.59	9.55	93.82	16.13	50.07	67.78	42.44	42.63	0.45		93	A
4907-AU06-7819-029	Dexter	DET	118.08	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	3.69	Southeast	6.03	Northwest	-3.45	10.57	132.64	-6.06	55.21	110.98	41.34	41.83	1.15		105	A
4907-AU06-7819-030	Dexter	DET	118.08	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	3.69	Southeast	6.03	Northwest	-3.44	10.62	132.39	-5.95	55.45	110.74	41.56	42.03	1.11		105	A
4907-AU06-7819-031	Reedmaker	DET	119.80	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.00	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	6.03	South	6.03	North	-1.88	10.12	118.58	-5.17	52.85	109.78	38.41	39.02	1.57		104	A
4907-AU06-7819-032	Jeweller	DET	158.94	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	250	1.99	No	Titon Ultimate dMEV	2.68	South	3.35	West	-0.20	9.54	102.10	11.61	50.03	76.79	42.09	42.39	0.72		96	A
4907-AU06-7819-033	Falconer	Semi	93.70	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	4.02	West	4.02	East	-4.73	10.47	145.18	-12.91	54.57	123.66	34.35	35.43	3.05		107	A
4907-AU06-7819-034	Blemmere	SEMI	93.60	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	5.01	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	3.35	North			0.74	11.13	93.35	15.84	58.04	72.70	38.06	38.98	2.35		94	A
4907-AU06-7819-035	Framer	DET	96.12	0.10 - 0.12	0.24 - 0.26	0.07		1.30	0.71	1.30	0.02	3.01	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	2.68	East	2.68	West	-1.24	12.10	110.25	5.89	63.29	90.70	44.37	44.52	0.35		99	A
4907-AU06-7819-036	Blemmere	DET	93.60	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	3.35	East	3.35	West	-3.11	11.68	126.63	-3.88	61.03	106.35	41.19	41.49	0.72		103	A
4907-AU06-7819-037	Walker	DET	186.72	0.10 - 0.12	0.24 - 0.26	0.09	0.15	0.90	0.44	1.30	0.03	3.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	5.03	South	1.68	North	-0.29	9.16	103.17	10.09	47.98	78.98	39.33	39.34	0.01		96	A
4907-AU06-7819-038	Framer	DET	96.12	0.10 - 0.12	0.24 - 0.26	0.07		1.30	0.71	1.30	0.02	3.01	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	2.68	North	2.68	South	-1.33	11.52	111.55	4.48	60.15	92.55	40.61	41.45	2.03		99	A
4907-AU06-7819-039	Walker	DET	186.72	0.10 - 0.12	0.24 - 0.26	0.09	0.15	0.90	0.44	1.30	0.03	3.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	5.03	East	1.68	West	0.17	9.28	98.17	12.97	48.59	73.31	39.97	40.06	0.23		95	A
4907-AU06-7819-040	Jeweller	DET	158.94	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	250	1.99	No	Titon Ultimate dMEV	2.68	South	3.35	East	-0.20	9.54	102.10	11.61	50.03	76.79	42.09	42.39	0.72		96	A
4907-AU06-7819-041	Walker	DET	186.72	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	5.03	South	1.68	North	-0.29	9.16	103.17	10.09	47.98	78.98	39.33	39.34	0.01		96	A
4907-AU06-7819-042	Jeweller	DET	158.94	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	250	1.99	No	Titon Ultimate dMEV	2.68	South	3.35	West	-0.20	9.54	102.10	11.61	50.03	76.79	42.09	42.39	0.72		96	A
4907-AU06-7819-043	Framer	DET	96.12	0.10 - 0.12	0.24 - 0.26	0.07		1.30	0.71	1.30	0.02	3.01	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	2.68	North	2.68	South	-1.33	11.52	111.55	4.48	60.15	92.55	40.61	41.45	2.03		99	A
4907-AU06-7819-044	Walker	DET	186.72	0.10 - 0.12	0.24 - 0.26	0.07	0.15	0.90	0.44	1.30	0.03	3.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	5.03	South	1.68	North	-0.29	9.16	103.17	10.09	47.98	78.98	39.33	39.34	0.01		96	A
4907-AU06-7819-045	Walker	DET	186.72	0.10 - 0.12	0.24 - 0.26	0.09	0.15	0.90	0.44	1.30	0.03	3.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	5.03	South	1.68	North	-0.29	9.16	103.17	10.09	47.98	78.98	39.33	39.34	0.01		96	A
4907-AU06-7819-046	Framer	DET	96.12	0.10 - 0.12	0.24 - 0.26	0.07		1.30	0.71	1.30	0.02	3.01	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	2.68	North	2.68	South	-1.33	11.52	111.55	4.48	60.15	92.55	40.61	41.45	2.03		99	A
4907-AU06-7819-047	Walker	DET	186.72	0.10 - 0.12	0.24 - 0.26	0.09	0.15	0.90	0.44	1.30	0.03	3.30	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	5.03	East	1.68	West	0.17	9.28	98.17	12.97	48.59	73.31	39.97	40.06	0.23		95	A
4907-AU06-7819-048	Blemmere	DET	93.60	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	3.35	South	3.35	North	-3.15	11.28	127.93	-4.57	58.87	107.76	39.43	39.73	0.75		104	A
4907-AU06-7819-049	Framer	DET	96.12	0.10 - 0.12	0.24 - 0.26	0.07		1.30	0.71	1.30	0.02	3.01	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	2.68	South	2.68	North	-1.25	11.78	110.61	5.24	61.53	91.49	42.08	42.63	1.29		99	A
4907-AU06-7819-050	Souter	SEMI	50.40	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.04	5.01	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	2.01	North			0.64	12.52	94.89	15.98	65.91	75.76	28.47	29.66	4.01		96	A
4907-AU06-7819-051	Souter	SEMI	63.90	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.03	4.00	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	5.03	South			-5.20	12.48	141.67	-14.49	65.44	122.15	34.62	35.53	2.55		107	A
4907-AU06-7819-052	Cartographer	SEMI	101.20	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	5.01	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	5.03	West	5.03	East	-1.88	10.64	117.67	-4.78	55.60	108.60	37.25	37.63	0.99		103	A
4907-AU06-7819-053	Cartographer	SEMI	101.20	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	5.01	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	5.03	South	5.03	East	-1.93	10.48	118.42	-5.17	54.71	109.44	36.41	36.86	1.21		104	A
4907-AU06-7819-054	Ploughwright	SEMI	93.40	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	5.03	South			0.15	11.31	98.67	24.65	59.09	58.28	38.79	39.25	1.18		91	B
4907-AU06-7819-055	Ploughwright	SEMI	93.40	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	5.03	South			0.12	11.18	98.93	24.35	58.34	58.26	38.07	38.61	1.39		91	B
4907-AU06-7819-056	Baker	Semi	79.94	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	3.02	West	3.02	East	-2.55	11.68	121.83	2.91	61.22	95.24	36.16	36.78	1.70		101	A
4907-AU06-7819-057	Cartographer	END	101.20	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	5.01	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	5.03	West	5.03	East	-1.88	10.64	117.67	-4.78	55.60	108.60	37.25	37.63	0.99		103	A
4907-AU06-7819-058	Baker	MID	79.94	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.03	5.01	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	3.02	West	3.02	East	-3.85	10.34	137.23	-9.56	54.00	117.71	28.51	30.46	6.39		105	A
4907-AU06-7819-059	Tillman	END	93.58	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.00	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	4.02	South	2.01	North	-3.02	10.69	128.25	-4.57	55.90	108.17	35.34	35.84	1.38		104	A
4907-AU06-7819-060	Arkwright	DET	137.80	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.00	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	3.35	South	5.36	North	-2.44	9.52	125.63	-1.79	49.81	103.59	38.74	38.93	0.49		103	A
4907-AU06-7819-061	Jeweller	DET	158.94	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	250	1.99	No	Titon Ultimate dMEV	2.68	South	3.35	East	-0.20	9.54	102.10	11.61	50.03	76.79	42.09	42.39	0.72		96	A
4907-AU06-7819-062	Walker	DET	186.72	0.10 - 0.12	0.24 - 0.26	0.09	0.15	0.90	0.44	1.30	0.03	3.30	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	5.03	East	1.68	West	-0.26	9.28	102.80	8.72	48.59	82.05	39.97	40.06	0.23		97	A
4907-AU06-7819-063	Blemmere	DET	93.60	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	3.35	North	3.35	South	-2.93	12.20	124.02	-2.51	63.82	103.94	43.91	43.98	0.15		103	A
4907-AU06-7819-064	Framer	DET	96.12	0.10 - 0.12	0.24 - 0.26	0.07		1.30	0.71	1.30	0.02	3.01	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	2.68	North	2.68	South	-1.33	11.52	111.55	4.48	60.15	92.55	40.61	41.45	2.03		99	A
4907-AU06-7819-065	Blemmere	DET	93.60	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.50	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	3.35	North	3.35	South	-2.93	12.20	124.02	-2.51	63.82	103.94	43.91	43.98	0.15		103	A
4907-AU06-7819-066	Arkwright	DET	137.80	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.00	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	3.35	West	5.36	East	-2.73	9.65	128.29	-2.99	50.47	105.92	39.80	39.83	0.08		103	A
4907-AU06-7819-067	Reedmaker	DET	119.80	0.10 - 0.12	0.24 - 0.26	0.09		1.30	0.71	1.30	0.02	4.00	Panasonic WH-MDC05J3E5		Dual Zone: time and Temperature Zone Contol	200	1.70	No	Titon Ultimate dMEV	6.03	East	6.03	West	-1.89	10.14	118.64	-4.76	53.00	108.98	38.93	39.43	1.28		104

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U VALUES

Element	Description	U Value Achieved
External Wall - Full Fill	12.5mm Plasterboard on dabs, 100mm Aircrete block (λ=0.11/0.15/0.18 W/mK), 100mm Supafil (λ=0.034 W/mK), Brick Outer	0.24 - 0.26 W/m^{2}K
Stairwell Wall / Corridor Walls	12.5mm Plasterboard on dabs, 100mm Aircrete block (λ=0.15 W/mK), 100mm Party Roll (λ=0.040 W/mK), 100mm Aircrete block (λ=0.15 W/mK), 12.5mm Plasterboard on dabs	0.24 W/m2K
External Wall - Wall to Garage	12.5mm Plasterboard on dabs, 100mm Aircrete block (λ=0.15 W/mK), 100mm Party Roll (λ=0.040 W/mK), 100mm Aircrete block (λ=0.15 W/mK)	0.23 W/m^{2}K
External Wall - Dormer Cheek	Prefabricated Dormer with target performance:-	0.23 W/m^{2}K
Spandral Gable - NYT	NYT Cassette Wall System to meet U Value:-	0.23 W/m^{2}K
Wall to Void (WTV)	Prefabricated NYT Cassette Roof System to meet U Value:- x Sheltor Factor (x0.72)	0.11 W/m^{2}K
SW Timber 037	50mm Thermaline Super Board (R = 1.970), Insulation ((λ=0.037 W/mK) between timber frame	0.29 W/m^{2}K
Ground Floor - Jet Floor	Jet Floor beam and block 150mm Grey Topsheet, 150mm Grey Infill	0.10 - 0.12 W/m^{2}K (P/A)
Exposed Floor - E-FC-5	75mm Screed, 6mm YELOfon HD10 (0.06 W/mK), 150mm Concrete plank, 50mm Air Layer, 160mm Knauf Earthwool Soffit Linerboard (0.034 W/mK), Plasterboard	0.18 W/m^{2}K
External Roof - Plane - 600mm	12.5mm plasterboard, 100mm Mineral wool (λ=0.040 W/mK), 500mm Mineral wool quilt cross-laid	0.07 W/m^{2}K
External Roof - Plane - 500mm	12.5mm plasterboard, 100mm Mineral wool (λ=0.044 W/mK), 400mm Mineral wool quilt cross-laid	0.09 W/m^{2}K
External Roof - Plane - 300mm	12.5mm plasterboard, 100mm Mineral wool (λ=0.044 W/mK), 200mm Mineral wool quilt cross-laid	0.14 W/m^{2}K
External Roof - NYT Cassette Roof	Prefabricated NYT Cassette Roof System to meet U Value:-	0.15 W/m^{2}K
Ceiling to Void (CTV)	Prefabricated NYT Cassette Roof System to meet U Value:- x Sheltor Factor (x0.72)	0.11 W/m^{2}K
External Roof - Dormer Roof	Dormer Roof System to meet U Value:-	0.22 W/m^{2}K
Glazing Specification Windows	Whole Window U Value = 1.30 Solar Transmission G Glazing = 0.71	
Glazing Specification Windows - Apartment	Whole Window U Value = 1.00 Solar Transmission G Glazing = 0.44	
Glazing Specification French Doors	Whole Window U Value = 1.30 Solar Transmission G Glazing = 0.71	
Front Door	U Value = 1.40 W/m^{2}K	
Half Glazed Door	U Value = 1.40 Solar Transmission G Glazing = 0.63	
Rooflights	U Value = 1.10 W/m^{2}K Solar Transmission (G Glazing) = 0.55	

PSI VALUES

Junction with External Wall	Junction Detail	Specification	Junction reference	Psi Value
E2	Other lintels (including other steel lintels)	Catnic Calculation	E02-Catnic-TS90/100	0.037
E2	Other lintels (including other steel lintels)	Catnic Calculation	E02-Catnic-TX90/100	0.041
E2	Other lintels (including other steel lintels)	Catnic Calculation	E02-NRG-Catnic TS90/100	0.021
E2	Other lintels (including other steel lintels)	Trada	E02 - Trada H EX 42	0.141
E3	Sill	Knauf Calculation	E03 - Knauf Sill	0.009
E3	Sill	Trada	E03 - Trada H EX 41	0.027
E4	Jamb	Knauf Calculation	E4 - Knauf Jamb	0.014
E4	Jamb	Trada	E04 - Trada H EX 43	0.038
E5	Suspended beam and block floor - Insulation above slab	Jetfloor Calculation	E05 - Jetfloor Lo G&G Par/Per	0.048
E6	Intermediate timber floor within a dwelling	RCD	E06-MFF-100-E6-01	0.003
E6	Intermediate timber floor within a dwelling	Bellway Calculation	E06 - 273TB - Bellway Gable	0.083
E7	Intermediate Floor between dwellings (in a block of flats)	RCD	E07 - MFF-100-E7-01	0.051
E10	Eaves (insulation at Ceiling Level)	Knauf Calculation	E10 - Knauf	0.036
E11	Eaves (insulation at Rafter Level)	Calculated	E11 - NYT105a	0.047
E12	Gable (insulation at Ceiling Level)	Knauf Calculation	E12 - Knauf	0.043
E12	Gable (insulation at Ceiling Level)	Calculated	E12 - NTSRoof	0.046
E13	Gable (insulation at Rafter Level)	Bellway Calculation	E13 - 273TB - Bellway Gable	0.041
E14	Flat Roof	Default	E14 - Default	0.16
E16	Corner (normal)	Calculated	E16 - SIG - 034	0.048
E16	Corner (normal)	Bellway Calculation	E16 - 273TB - Bellway Gable	0.033
E16	Corner (normal)	Default	E16 - Default	0.18
E17	Corner (inverted - Internal area greater than External area)	Calculated	E17 - SIG - 034	-0.096
E18	Party Wall between dwellings	RCD	E18 - MFF-100-E18-02	0.042
E18	Party Wall between dwellings	RCD	E18 - MFF-100-E18-01	0.04
E20	Exposed Floor	Calculated	E20 - NRG-179TB	0.068
E20	Exposed Floor	Default	E20 - Placeholder (0.16)	0.32
E21	Exposed Floor (inverted)	Calculated	E21 - Placeholder (0.16)	0.05
E24	Eaves (insulation at ceiling level - inverted)	Default	E24 - Default	0.15
E25	Staggered party wall between Dwellings	Knauf Calculation	E25 - KI_PSI-E25_SF34_0001	0.063
Junction with Roof	**Junction Detail**	**Specification**	**Junction reference**	
R1	Head of roof window - Dormer Cheeks	Bellway Calculation	R01 - 273TB - Bellway Gable	0.029
R1	Head of roof window - Roof Lights	Calculated	R01 - NTSRoof	0.122
R2	Sill of roof window - Dormer Cheeks	Bellway Calculation	R02 - 273TB - Bellway Gable	0.071
R2	Sill of roof window - Roof Lights	Calculated	R02 - NTSRoof	0.118
R3	Jamb of roof window - Dormer Cheeks	Bellway Calculation	R03 - 273TB - Bellway Gable	0.033
R3	Jamb of roof window - Roof Lights	Calculated	R03 - NTSRoof	0.066
R5	Ridge (inverted)	Default	Default	
R6	Flat ceiling	Calculated	R06 - NTS106a	0.026
R7	Flat ceiling (inverted)	Bellway Calculation	R07 - 273TB - Bellway Gable	0.044
R9	Roof to wall (flat ceiling)	Bellway Calculation	R09 - 273TB - Bellway Gable	0.024
Junction with Party Wall	**Junction Detail**	**Specification**	**Junction reference**	
P1	Ground Floor	Jetfloor Calculation	P01 - Jetfloor Lo	0.047
P2	Intermediate Floor within a dwelling	Default	Default	
P3	Intermediate Floor between dwellings (in a block of flats)	Default	Default	
P4	Roof (Insulation at Ceiling Level)	RCD	P04 - WPW-P4-01	0.033
P4	Roof (Insulation at Ceiling Level)	Bellway Calculation	P04 - 273TB - Bellway Gable	0.019
P5	Roof (Insulation at Rafter Level)	Bellway Calculation	P05 - 273TB - Bellway Gable	0.035

PARTY WALLS

Party Wall Detail	Plots specified
E-WM-30 (Assumed)	All Plots

PARTY FLOORS

Party Floor Detail	Plots specified
E-FC-5 (Assumed)	Apartments

All Party Wall thermal bypasses have been assumed to be fully filled and sealed. As per Part L1 2021 regulations 'Where outside air is able to flow into the party wall cavity a cold zone is created which results in heat flux through the wall sections on either side.'
'The air movements involved can be significant and, if no steps are taken to restrict flows, the resulting heat losses can be large.'
'Fully filling the cavity may have implications for the sound transmission through party walls. Developers who follow this route must satisfy the BCB that the requirements of Part E will be satisfied, either by adopting a full fill detail under the Robust Details Scheme, or through specific site testing.'

Additional Aspects

- Standard Electricity Tariff assumed
- No Secondary Heating
- Low Energy Lighting with all internal light fittings achieving a minimum efficacy of 75 lumens/W
- Showers to achieve flow rates no greater than 8 ltrs/min

If construction deviates from the specification above in any way whatsoever, please check with AES Sustainability Consultants immediately to ensure compliance is still achieved. AES Sustainability Consultants cannot be held responsible for non compliance if the specification that the calculation is based upon is not followed.

Working in partnership to ensure the smooth delivery of your test results and EPCs

We aim to make the process of delivering your air tests, sound tests and EPCs easy and hassle free. To ensure that this service runs as efficiently as possible, please follow the information below:

14 days before plots due to be completed:

Contact **Stewart Boyce** on **01884 210329** or **07712 304040** or email **testing@aessc.co.uk** to book in air leakage and / or sound testing.

Provide the following details at the time of booking:

- Development name / phase number
- Location
- Sat Nav postcode
- Plot number/s requiring testing
- Site contact name and number in case of queries

What happens next:

The air test / sound test results will be uploaded by the AES Compliance & Testing representative overnight to the Admin Team. Assuming that all the necessary 'Built to Spec' confirmations have been provided to AES in good time by the Technical Manager, the Admin Team will assign the EPCs to a member of the AES team for completion.

Once these have been lodged, the test certificate(s) and EPC(s) will be issued to the relevant Technical Manager (and others by request), normally within 24 hours of the test results being received.

If you have CML booked at a specific time and you require the test certificate(s) and EPC(s)

DO YOU HAVE PLOTS ON SITE THAT NEED TO COMPLY WITH CfSH, HQM or BREEAM?

Please speak to Stewart or the Admin Team to find out what the specific requirements are for your

Air Permeability Pre-Test Checklist

Location / item to be checked before air testing is carried out:	Checked?
Dry lining carried out in accordance with manufacturers recommendations - perimeter bead of adhesive and continuous bead around service entry.	
Skirting / floor / plaster junctions to walls - decorators caulk or mastic to prevent air movement from floor void.	
Recessed ceiling spotlights - use either sealed fitting or propriety covers.	
Loft hatch - check draught seal and hatch for distortion, especially for pre-formed plastic units.	
Service entries (oil, gas, water and electric) - check sealing at entry points particularly where leakage could occur from external meter cabinets.	
Perimeter of external door frames.	
Perimeter of window openings.	
Soil and vent pipe boxing taken into ceiling void - ensure seal where boxing exits living spaces.	
Gaps around sockets, light switches, room stats etc., particularly where external walls are dry lined.	
Pipes and cables passing through ceiling - mastic or foam seal around thoroughly.	
Waste and service pipe penetrations - hot and cold-water storage vessels.	

All extract fans - ensure sealed where duct penetrates external wall / ceiling lining.	
TV / satellite cable, security, fire alarm installations - penetrations and entry point.	
Tumble dryer vents.	
Gaps around wall mounted heaters / boiler flues / condensate drain.	
All plumbing should be fully installed and all traps filled with water in basins, baths, showers and WCs. Bath panels should be fully sealed with mastic.	
2x 240v mains electrical sockets within 15m of the fan set up made available – our engineers do not carry generators.	
Please note:	
Whilst we would prefer not to have other trades within the building during the test, people can stay in the building but they will not be able to leave whilst the test is in progress.	
Please have a competent member of staff available on the test day to modify and / or seal any further areas that we identify as requiring remedial work.	
If we arrive on site and are delayed due to the plot/s not being prepared adequately, or the items on this checklist have not been completed prior to our arrival, we reserve the right to cancel the test/s and charge an aborted visit fee.	

Sound Pre-Test Checklist

Location / item to be checked before sound testing is carried out:	Checked?
Rooms available in pairs either vertically separated by the party floor, or horizontally separated by the party wall.	
Rooms unfurnished.	
Wall and ceiling surfaces complete and skimmed.	
Skirting boards, architraves and covings fitted.	
Windows fully fitted and closable with working trickle vents.	
Internal doors hung.	
External doors fully fitted with threshold and perimeter seals.	
Kitchen units in place.	
Electrical sockets, light fittings and switches in place.	
Down-lighters fully fitted.	
Smoke alarms silenced for the duration of testing.	
Please note:	
2x 240v mains electrical sockets within 15m of the test equipment up made available.	
We will use our discretion to select rooms for testing unless specific arrangements have been made with the building control officer.	
All trades should be suspended for the duration of the testing (about 2 to 3 hours for a typical set of tests), or workmen sent to another part of the site where their work will not affect the test area.	
Soft floor coverings, such as carpets and underlays, are not permitted for impact sound testing and should therefore NOT be fitted at the time of testing.	

AES Sustainability Consultants

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