

	Property Ref	House Type	Ground Floor U Value	External Wall U Value	Plane Roof U Value	Sloping Roof U Value	Window U Value	Window Solar Transmissi on	Front Door U Value	Y Value	Design Air Pressure	Boiler Reference	Heating Controls	Weather Compensator	Ventilation Reference	Beds	Baths	En-Suites	Water usage less than 125L/p/day	DER	TER	% Reductio n	Block Complied % Reduction	DfEE	TfEE	% Reductio n	Block Complied % Reduction	Heating Designs correct (Y/N)	Heating design comments
Block A	4907-0015-3990-001	GFF Semi	0.13-0.16	0.25			1.40	0.43	1.08-1.20	0.051	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	1	1		TRUE	19.73	21.71	9.11	9.76	47.68	54.91	13.17	11.78		
	4907-0015-3990-002	GFF Semi	0.13-0.16	0.25			1.40	0.43	1.08-1.20	0.049	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	1	1		TRUE	18.95	20.93	9.45		44.17	50.34	12.26			
	4907-0015-3990-003	GFF Det	0.13-0.16	0.25			1.40	0.43	1.08-1.20	0.042	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	1	1		TRUE	19.89	21.85	8.96		50.09	58.02	13.66			
	4907-0015-3990-004	1FF Semi		0.25			1.40	0.43	1.08-1.20	0.086	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	1	1		TRUE	17.53	19.39	9.57		39.03	43.77	10.83			
	4907-0015-3990-005	1FF Semi		0.25			1.40	0.43	1.08-1.20	0.089	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	1	1		TRUE	16.77	18.61	9.89		36.61	40.04	8.55			
	4907-0015-3990-006	1FF Det		0.25			1.40	0.43	1.08-1.20	0.079	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	1	1		TRUE	17.87	19.51	8.40		42.75	46.75	8.56			
	4907-0015-3990-007	2FF Semi		0.25			1.40	0.43	1.08-1.20	0.086	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	1	1		TRUE	17.53	19.39	9.57		39.03	43.77	10.83			
	4907-0015-3990-008	2FF Semi		0.25			1.40	0.43	1.08-1.20	0.089	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	1	1		TRUE	16.77	18.61	9.89		36.61	40.04	8.55			
	4907-0015-3990-009	2FF Det		0.25			1.40	0.43	1.08-1.20	0.079	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	1	1		TRUE	17.87	19.51	8.40		42.75	46.75	8.56			
	4907-0015-3990-010	3FF Semi		0.25	0.08	0.20	1.40	0.43	1.08-1.20	0.064	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	1	1		TRUE	18.62	21.07	11.62		44.05	52.38	15.89			
	4907-0015-3990-011	3FF Semi		0.25	0.08	0.20	1.40	0.43	1.08-1.20	0.065	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	1	1		TRUE	17.89	20.32	11.96		41.41	48.79	15.11			
	4907-0015-3990-012	3FF Det		0.25	0.08	0.20	1.40	0.43	1.08-1.20	0.068	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	1	1		TRUE	18.74	20.87	10.19		46.79	53.66	12.82			
Block B	4907-0015-3990-013	GFF Semi	0.13-0.16	0.25			1.40	0.43	1.08-1.20	0.044	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	2	1		TRUE	17.92	19.52	8.19	10.20	43.29	49.48	12.50	13.27		
	4907-0015-3990-014	GFF Semi	0.13-0.16	0.25			1.40	0.43	1.08-1.20	0.044	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	2	1		TRUE	16.71	18.44	9.36		38.35	44.01	12.85			
	4907-0015-3990-015	GFF Semi	0.13-0.16	0.25			1.40	0.43	1.08-1.20	0.051	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	2	1		TRUE	17.3	18.93	8.59		40.88	46.67	12.41			
	4907-0015-3990-016	GFF Semi	0.13-0.16	0.25			1.40	0.43	1.08-1.20	0.051	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	2	1		TRUE	16.03	17.75	9.68		35.68	40.74	12.41			
	4907-0015-3990-017	GFF Semi	0.13-0.16	0.25			1.40	0.43	1.08-1.20	0.050	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	2	1	1	TRUE	17.62	19.51	9.69		41.93	48.56	13.66			
	4907-0015-3990-018	GFF Det	0.13-0.16	0.25			1.40	0.43	1.08-1.20	0.040	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	2	1	1	TRUE	19.06	21.06	9.50		48.61	56.58	14.08			
	4907-0015-3990-019	1FF Semi		0.25			1.40	0.43	1.08-1.20	0.074	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	2	1		TRUE	15.63	17.09	8.54		33.53	37.01	9.42			
	4907-0015-3990-020	1FF Semi		0.25			1.40	0.43	1.08-1.20	0.079	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	2	1		TRUE	14.75	16.33	9.70		30.74	34.09	9.83			
	4907-0015-3990-021	1FF Semi		0.25			1.40	0.43	1.08-1.20	0.090	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	2	1		TRUE	14.93	16.61	10.14		30.77	34.85	11.72			
	4907-0015-3990-022	1FF Semi		0.25			1.40	0.43	1.08-1.20	0.087	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	2	1		TRUE	13.66	15.42	11.39		25.89	29.12	11.09			
	4907-0015-3990-023	1FF Semi		0.25			1.40	0.43	1.08-1.20	0.082	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	2	1	1	TRUE	15.4	17.14	10.13		32.46	36.39	10.81			
	4907-0015-3990-024	1FF Det		0.25			1.40	0.43	1.08-1.20	0.079	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	2	1	1	TRUE	16.86	18.51	8.91		40.76	45.03	9.47			
	4907-0015-3990-025	2FF Semi		0.25	0.08	0.20	1.40	0.43	1.08-1.20	0.058	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	2	1		TRUE	16.56	18.64	11.17		37.85	44.96	15.81			
	4907-0015-3990-026	2FF Semi		0.25	0.08	0.20	1.40	0.43	1.08-1.20	0.061	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	2	1		TRUE	15.71	17.83	11.90		34.93	41.74	16.32			
	4907-0015-3990-027	2FF Semi		0.25	0.08	0.20	1.40	0.43	1.08-1.20	0.064	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	2	1		TRUE	16.21	18.47	12.25		36.30	44.02	17.53			
	4907-0015-3990-028	2FF Semi		0.25	0.08	0.20	1.40	0.43	1.08-1.20	0.063	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	2	1		TRUE	15.01	17.19	12.70		31.87	38.45	17.12			
	4907-0015-3990-029	2FF Semi		0.25	0.08	0.20	1.40	0.43	1.08-1.20	0.057	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	2	1	1	TRUE	16.32	18.73	12.85		36.56	44.53	17.88			
	4907-0015-3990-030	2FF Det		0.25	0.08	0.20	1.40	0.43	1.08-1.20	0.059	4.00	Ideal Logic Combi ESP1 35	Time and Temperature Zone Control	Ideal Touch Connect	Greenwood Unity CV2GIP	2	1	1	TRUE	17.47	19.26	9.32		43.15	48.87	11.71			

U VALUES		
Element	Description	U Value Achieved
External Wall - Full Fill	12.5mm Plasterboard on dabs, 100mm Aircrete Blocks ($\lambda=0.15$ W/mK), 100mm Knauf 34 ($\lambda=0.034$ W/mK), Brick or block and render outer	0.25 W/m ² K
External Wall - To Corridor	12.5mm Plasterboard on dabs, 100mm Aircrete Blocks ($\lambda=0.15$ W/mK), 100mm Knauf 34 ($\lambda=0.040$ W/mK), 100mm Aircrete Blocks ($\lambda=0.15$ W/mK), 12.5mm Plasterboard on dabs	0.22 W/m ² K
External Wall - To Stairwell	12.5mm Plasterboard on dabs, 100mm Aircrete Blocks ($\lambda=0.15$ W/mK), 100mm Knauf 34 ($\lambda=0.040$ W/mK), 100mm Aircrete Blocks ($\lambda=0.15$ W/mK), 12.5mm Plasterboard on dabs	0.20 W/m ² K
Ground Floor	Jetfloor Grey Flooring System	0.13-0.16 W/m ² K
External Roof - Plane	12.5mm plasterboard, 100mm Mineral wool ($\lambda=0.044$ W/mK), 450mm Mineral wool quilt cross-laid	0.08 W/m ² K
External Roof - Sloping	12.5mm plasterboard, 140mm PU between rafters, 10mm air gap, Sarking felt, 25mm Battens	0.20 W/m ² K
External Roof - Flat	Flat Dormer Roof construction to meet	0.20 W/m ² K

PSI VALUES			
Junction with External Wall	Junction Detail	Specification	Junction reference (Full Fill)
E2	Other lintels (including other steel lintels)	Keystone	MCI--WD-02
E3	Sill	Eurocell	TW-E03-Eurocell
E4	Jamb	Eurocell	TW-E04-Eurocell
E5	Suspended beam and block floor - Insulation above slab	JETFLOOR	Jetfloor Par/ Per
E7	Intermediate Floor between dwellings (in a block of flats)	AES Calc	TW-E07-CFF01
E9	Balcony between dwellings	DEFAULT	DEFAULT
E11	Eaves (insulation at Rafter Level)	AES Calc	TW-E11-EFF01
E12	Gable (insulation at Ceiling Level)	AES Calc	TW-E12-EFF01
E12	Gable (insulation at Ceiling Level) - To Corridor	ACD	E12 ACD
E16	Corner (normal)	AES Calc	TW-E16-EFF
E17	Corner (inverted - Internal area greater than External area)	ACD	ACD
E18	Party Wall between dwellings	AES Calc	AES Calc
E24	Eaves (insulation at ceiling level - inverted)	DEFAULT	DEFAULT
E25	Staggered party wall between Dwellings	AES Calc	AES Calc
Junction with Roof	Junction Detail	Specification	Junction reference (Full Fill)
R6	Flat ceiling	DEFAULT	DEFAULT
R8	Roof to wall (rafter)	DEFAULT	DEFAULT
R9	Roof to wall (flat ceiling)	DEFAULT	DEFAULT
Junction with Party Wall	Junction Detail	Specification	Junction reference
P1	Jetfloor Ground Floor, E-WM-28	DEFAULT	DEFAULT
P3	Intermediate Floor between dwellings (in a block of flats)	DEFAULT	DEFAULT
P4	Roof (Insulation at Ceiling Level)	DEFAULT	DEFAULT
P5	Roof (Insulation at Rafter Level)	DEFAULT	DEFAULT

PARTY WALLS	
Party Wall Detail	Plots specified
Aircrete Party Wall	All Plots
PARTY FLOORS	
Party Wall Detail	Plots specified
E-FC-4	All Plots

All Party Wall thermal bypasses have been assumed to be fully filled and sealed. As per Part L1a 2010 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
<ul style="list-style-type: none"> ▪ Standard Electricity Tariff assumed <ul style="list-style-type: none"> ▪ No Secondary Heating ▪ 100% Low Energy Lighting

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.

Part L1A 2010 regulations: Relevant to Air Testing new residential dwellings whose Building Regulation applications were approved after October 1st 2010.

A dwelling type is defined as a group of dwellings on a site having the same generic form
A detached, semi-detached, end terrace or mid terrace house
A ground-floor (inc. ground floor maisonette), mid-floor or top-floor flat (inc. top floor maisonette)
Where the same construction methods are used for each of the main elements (walls, floors, roofs etc)
Be of the same number of storeys
Be of the same design air permeability
Have similar adjacency to unheated spaces such as stairwells, integral garages etc
Have a similar (i.e. ± 1) number of significant penetrations, i.e. for windows, doors, flues/chimneys, supply/exhaust terminals, waste water pipes
Have envelope areas that do not differ by more than 10%

Air Test Regime from 2010 Regulations

On each development air testing should be carried out on three units of each dwelling type or 50 per cent of all instances of that dwelling type, whichever is the less.
A block of flats should be treated as a separate development.
The dwellings to be tested should be taken from the first completed batch of units of each dwelling type.
Those dwellings selected for air testing should be selected so that about half of the scheduled tests, for each dwelling type, are carried out during construction of the first 25 per cent of each dwelling type.
All air tests on dwellings in the sample should be reported including any test failure.
In the event of an air test fail that dwelling must undergo remedial works so that it passes and another of the same dwelling type air tested.
Where a dwelling of a type has not been air tested, the assessed air permeability is the average test result obtained from other dwellings of the same dwelling type on the development increased by a margin of $+2.0\text{m}^3/\text{h}/\text{m}^2$ at 50pa.
In the event that the average of those air tested does not permit those not air tested to pass, then more must be air tested in an attempt to reduce the average.
Conclusion, the number of dwellings requiring air testing will increase on each site.