

U VALUES		
Element	Description	U Value Achieved
External Wall - Full Fill	12.5mm Plasterboard on dabs, 100mm Supabloc block ($\lambda=0.11/0.15/0.18\text{W/mK}$), 100mm Supafil ($\lambda=0.034\text{ W/mK}$), Brick Outer or Render with LWA block $\lambda=0.58\text{W}$ or Weatherboard	0.24-0.26 $\text{W/m}^2\text{K}$
Sheltered Corridor/Stairwell walls Apartments	12.5mm Plasterboard on dabs, 100mm Supabloc ($\lambda=0.18\text{ W/mK}$), 100mm Supafil (0.034 W/mK), 100mm Aircrete block ($\lambda=0.18\text{ W/mK}$), 12.5mm	0.23 $\text{W/m}^2\text{K}$
External Wall - Dormer Cheek	Prefabricated Dormer with target performance:-	0.44 $\text{W/m}^2\text{K}$
Ground Floor - Jetfloor	B&B, Jetfloor 150mm top sheet (White infill)	0.12 - 0.13 $\text{W/m}^2\text{K}$ (P/A)
Exposed Floor - E-FC-4	12.5mm Plasterboard, 150mm Mineral wool ($\lambda=0.040\text{ W/mK}$) between Plank, 150mm Concrete Plank, Iso Rubber, 65mm Concrete Screed	0.23 $\text{W/m}^2\text{K}$
External Roof - Plane	12.5mm plasterboard, 100mm Mineral wool ($\lambda=0.044\text{ W/mK}$) between joist, 300mm Mineral wool quilt cross-laid	0.11 $\text{W/m}^2\text{K}$
External Roof - Sloping Ceiling	70mm Celotex GA4000 ($\lambda=0.022\text{ W/mK}$), 150mm Isover 034 mineral wool between rafters, 50mm ventilated gap, felt, tiles	0.14 $\text{W/m}^2\text{K}$
External Roof - Flat Bay	Prefabricated Bay Roof with target performance:-	0.20 $\text{W/m}^2\text{K}$
Exposed Soffit	15mm Plasterboard, 70mm Celotex GA4000, 220mm OmniFit full filled with mineral wool ($\lambda=0.034\text{ W/mK}$), 20mm battens, 22mm chipboard	0.11 $\text{W/m}^2\text{K}$
External Roof - Dormer Flat Roof	GRP Roof to achive equal or better than 0.29	0.29 $\text{W/m}^2\text{K}$
WINDOW AND DOOR SPECIFICATION		
Glazing Specification (Windows, French Doors and Bi Fold Doors)	Whole Window U Value = 1.30 BFRC Rated Solar Transmission (G Glazing) = 0.46	
Front Door	U Value = 0.64-1.30 $\text{W/m}^2\text{K}$	
Rear and Half Glazed Door	U Value = 1.30-1.40 $\text{W/m}^2\text{K}$	

PSI VALUES			
Junction with External Wall	Junction Detail	Specification	Junction reference (Full Fill)
E02	Other lintels (including other steel lintels)	Catnic Calculation	E02-CG90/100 / E02-CX90/100 / E02-CH90/100 / E02-CXL290 / E02-ACD
E03	Sill	Knauf Calculation	E03-Knauf-034 / E03-ACD
E04	Jamb	Knauf Calculation	E04-Knauf-034 / E04-ACD
E05	Suspended beam and block floor - Insulation below screed	Accredited Details / Jetfloor	E05-ACD, E05-JBL-EPS150-Par/Per,
E06	Intermediate timber floor within a dwelling	Constructive Details	E06 - CD0029 / E06-ACD
E07	Intermediate Floor between dwellings (in a block of flats)	Constructive Details	E07 - MCI-IF-01 / E07-ACD
E10	Eaves (insulation at Ceiling Level)	Constructive Details	E10 - MCI-RE-01 / E10-ACD
E11	Eaves (insulation at Rafter Level)	Constructive Details	E11-ACD
E12	Gable (insulation at Ceiling Level)	Constructive Details	E12 - CD0031 / E12-ACD
E13	Gable (insulation at Rafter Level)	Constructive Details	E13-ACD
E14	Flat roof	Default	E14-Default
E16	Corner (normal)	SIG Details / CBA Details	E16-SIG-034 / E16-ACD
E17	Corner (inverted - Internal area greater than External area)	SIG Details / CBA Details	E17-SIG-034 / E17-ACD
E18	Party Wall between dwellings	Constructive Details	E18-CD0037 / E18-ACD
E20	Exposed floor (normal)	Default / CBA Details	E20-Default / CBA-C-A1
E21	Exposed floor (inverted)	Default	E21-Default
E24	Eaves (insulation at ceiling level - inverted)	Default	E24-Default
E25	Staggered party wall between Dwellings	Default	E25-Default
Junction with Roof	Junction Detail	Specification	Junction reference (Full Fill)
R1	Head of roof window	Default	Default
R2	Sill of roof window	Default	Default
R3	Jamb of roof window	Default	Default
R4	Ridge (vaulted ceiling)	Default	Default
R5	Ridge (inverted)	Default	Default
R6	Flat ceiling	Default	Default
R7	Flat ceiling (inverted)	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	Beam & 0.19 Block floor, E-WM-20 Wall - Parallel	Jetfloor Calculation	P1 - Jetfloor Lo
P4	Roof (Insulation at Ceiling Level)	Knauf Calculation	P4 - Knauf
P5	Roof (Insulation at Rafter Level)	Knauf Calculation	P5 - Knauf

PARTY WALLS	
Party Wall Detail	Plots specified
E-WM-30	All attached houses
PARTY FLOORS	
Party Floor Detail	Plots specified
E-FC-4	FOGs and Apartments
<u>All Party Wall thermal bypasses have been assumed to be fully filled and sealed.</u> As per Part L1a 2013 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 100% Low Energy Lighting - All wet rooms assumed to have extract ventilation

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.
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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 link to our online Toolbox Talk video to assist you with the preparation of your plots.

<https://www.youtube.com/watch?v=FiNqvZxWieU>

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) urgently, please call AES Compliance & Testing and advise them of the requirement. Tel: 01884 210329.

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 scheme, and to arrange a site visit to collect evidence.

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.	

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