HERBAL HOUSE

Energy Statement Report
Fabric Details
WBS-RPE-009_A01

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This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2008, BS EN ISO 14001: 2004 and BS OHSAS 18001:2007)

Issue	Date	Prepared by	Checked by	Approved by
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[redacted]

Comments A01 Issue

Comments

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Contents

1. FABRIC DETAILS RELATING TO ENERGY STATEMENT REV. E

Residential

Walls	Maximum U-values	
solid façade wall elements	0.15	$W/m^2.K$ (area weighted)
non-active insulated louvres	0.15	$W/m^2.K$ (area weighted)
party walls for individual dwellings	0*	$W/m^2.K$ (area weighted)

*(this means either solid or "Fully filled cavity with effective sealing at all exposed edges and in line with insulation layers in abutting elements")

Basement perimeter walls	0.20	$W/m^2.K$ (area weighted)
Basement walls separating unheated spaces from heated spaces	0.20	$W/m^2.K$ (area weighted)

Roof and floor	Maximum U-values	
Roof and terrace	0.13	$W/m^2.K$ (area weighted)
Basement soffit separating unheated spaces from heated spaces	0.20	$W/m^2.K$ (area weighted)
Basement floor on the themal line	0.20	$W/m^2.K$ (area weighted)

DGU Windows / Doors (inc balcony doors)	Maximum U-values	
Double glazing units (DGU) with argon filled glass - Recommended	1.00	$W/m^2.K$ (centre pane)
Double glazing units (DGU) with argon filled glass - Worst Case	1.10	$W/m^2.K$ (centre pane)
glazing panel and frame for doors and windows	1.50	$W/m^2.K$ (area weighted)

All glazing	Maximum g-values
g-value	0.28

All glazing	Minimum Light transmittance	
Light transmittance	58	%

Please note :- proportion of transparent to opaque and the effective g-value of the façade should not exceed that of the planning drawings

Area-weighted U-value calculations must include all thermal bridges except for those listed below:

- Roof / wall junction (including gables and eaves)
- Floor (intermediate or exposed) / wall junction
- Wall / wall junction (including corners)
- Lintel / wall junction
- Sill / wall junction
- Jamb / wall junction
- Balcony / wall junction (only applies to Part L1)

Hence, **reduced thermal performance from all other thermal bridges should be overcome with increased insulation** elsewhere. Please see SAP (table K1) and SBEM (table 6) technical guides for further details.

For compliance with Building Regulation Part L2A 5.5 constructions details should achieve a temperature factor higher than 0.50 for offices and retail. Based upon CWCT internal and external temperatures:
Minimum internal surface temperatures > 7.5°C in general
Minimum internal surface temperatures > 8.5°C near ground floor

For compliance with Building Regulation Part L1A 5.10 constructions details should achieve a temperature factor higher than 0.75 for residential buildings. Based upon CWCT internal and external temperatures:
Minimum internal surface temperatures > 13.75°C in general
Minimum internal surface temperatures > 15.17°C near ground floor

Hence, **construction details should be designed to minimise thermal bridging** to avoid condensation on internal surfaces. Please see BRE IP1/06 guidance for further details.

New Office Floors

Walls	Maximum U-values
overall cladding system	1.40 $W/m^2.K$ (area weighted)

(this figure is area weighted for façade solid/opaque and glazed elements combined)

solid façade wall/spandrell elements	0.35 $W/m^2.K$ (area weighted)
non-active insulated louvres	0.30 $W/m^2.K$ (area weighted)

Roof and floor	Maximum U-values
Roof and terrace	0.18 $W/m^2.K$ (area weighted)

Office Windows / Doors	Maximum U-values
Double glazing units (DGU) with argon filled glass - Recommended	1.00 $W/m^2.K$ (centre pane)
Double glazing units (DGU) with argon filled glass - Worst Case	1.10 $W/m^2.K$ (centre pane)
glazing panel and frame for doors and windows	1.60 $W/m^2.K$ (area weighted)
overall cladding system	1.40 $W/m^2.K$ (area weighted)

(this figure is area weighted for façade solid/opaque and glazed elements combined)

All glazing on Block B	Maximum g-values
g-value	0.28

All glazing on Block B	Minimum Light transmittance
Light transmittance	58 %

Please note :- proportion of transparent to opaque and the effective g-value of the façade should not exceed that of the planning drawings

Area-weighted U-value calculations must include all thermal bridges except for those listed below:

- Roof / wall junction (including gables and eaves)
- Floor (intermediate or exposed) / wall junction
- Wall / wall junction (including corners)
- Lintel / wall junction
- Sill / wall junction
- Jamb / wall junction

Hence, **reduced thermal performance from all other thermal bridges should be overcome with increased insulation** elsewhere. Please see SBEM (table 6) technical guides for further details.

For compliance with Building Regulation Part L2A 5.5 constructions details should achieve a temperature factor higher than 0.50 for offices and retail. Based upon CWCT internal and external temperatures:
Minimum internal surface temperatures > 7.5°C in general
Minimum internal surface temperatures > 8.5°C near ground floor

Hence, **construction details should be designed to minimise thermal bridging** to avoid condensation on internal surfaces. Please see BRE IP1/06 guidance for further details.

Refurbished Office

Walls	Maximum U-values
solid façade wall/spandrell elements	0.30 $W/m^2.K$ (area weighted)
non-active insulated louvres	0.30 $W/m^2.K$ (area weighted)
party walls between blocks	0.20 $W/m^2.K$ (area weighted)
Basement perimeter walls	0.20 $W/m^2.K$ (area weighted)
Basement walls separating unheated spaces from heated spaces	0.20 $W/m^2.K$ (area weighted)

Roof and floor	Maximum U-values
Roof and terrace	0.18 $W/m^2.K$ (area weighted)
Basement soffit separating unheated spaces from heated spaces	0.20 $W/m^2.K$ (area weighted)
Basement floor on the themal line	0.20 $W/m^2.K$ (area weighted)

Windows / Doors	Maximum U-values
Double glazing units (DGU) with argon filled glass - Recommended	1.00 $W/m^2.K$ (centre pane)
Double glazing units (DGU) with argon filled glass - Worst Case	1.10 $W/m^2.K$ (centre pane)
glazing panel and frame for doors and windows	1.60 $W/m^2.K$ (area weighted)

All glazing	Maximum g-values
g-value	0.28

All glazing	Minimum Light transmittance
Light transmittance	58 %

Please note :- proportion of transparent to opaque and the effective g-value of the façade should not exceed that of the planning drawings

Area-weighted U-value calculations must include all thermal bridges except for those listed below:

- Roof / wall junction (including gables and eaves)
- Floor (intermediate or exposed) / wall junction
- Wall / wall junction (including corners)
- Lintel / wall junction
- Sill / wall junction
- Jamb / wall junction

Hence, **reduced thermal performance from all other thermal bridges should be overcome with increased insulation** elsewhere. Please see SBEM (table 6) technical guides for further details.

For compliance with Building Regulation Part L2A 5.5 constructions details should achieve a temperature factor higher than 0.50 for offices and retail. Based upon CWCT internal and external temperatures:
Minimum internal surface temperatures > 7.5°C in general
Minimum internal surface temperatures > 8.5°C near ground floor

Hence, **construction details should be designed to minimise thermal bridging** to avoid condensation on internal surfaces. Please see BRE IP1/06 guidance for further details.

UK and Ireland Office Locations