

## Project name

**Abacus Belsize Primary - SCHOOL (BE LEAN)**

As designed

Date: Thu Aug 29 11:31:44 2019

## Administrative information

## Building Details

Address: 26 Rosslyn Hill, London, NW3 1PD

## Owner Details

Name: ESFA

Telephone number: Phone

Address: Street Address, City, Postcode

## Certification tool

Calculation engine: SBEM

Calculation engine version: v5.6.a.2

Interface to calculation engine: Virtual Environment

Interface to calculation engine version: v7.0.12

BRUKL compliance check version: v5.6.a.1

## Certifier details

Name: Konstantinos Pyrintsos

Telephone number: 01275813500

Address: 65 Macrae Road, Bristol, BS20 0DD

Criterion 1: The calculated CO<sub>2</sub> emission rate for the building must not exceed the target

The building does not comply with England Building Regulations Part L 2013

|  |                     |
|--|---------------------|
| CO <sub>2</sub> emission rate from the notional building, kgCO <sub>2</sub> /m <sup>2</sup> .annum | 13.4                |
| Target CO <sub>2</sub> emission rate (TER), kgCO <sub>2</sub> /m <sup>2</sup> .annum               | 13.4                |
| Building CO <sub>2</sub> emission rate (BER), kgCO <sub>2</sub> /m <sup>2</sup> .annum             | 27.7                |
| Are emissions from the building less than or equal to the target?                                  | BER > TER           |
| Are as built details the same as used in the BER calculations?                                     | Separate submission |

## Criterion 2: The performance of the building fabric and fixed building services should achieve reasonable overall standards of energy efficiency

Values which do not achieve the standards in the Non-Domestic Building Services Compliance Guide and Part L are displayed in red.

## Building fabric

| Element   | U <sub>a</sub> -Limit | U <sub>a</sub> -Calc | U <sub>i</sub> -Calc | Surface where the maximum value occurs* |
|---|-----------------------|----------------------|----------------------|---|
| Wall**  | 0.35                  | 1.14                 | 1.79                 | FR000006_W3_A1                          |
| Floor   | 0.25                  | 0.61                 | 2.41                 | SF000001_F_A4                           |
| Roof  | 0.25                  | 0.17                 | 0.18                 | SC000000_C                              |
| Windows***, roof windows, and rooflights  | 2.2                   | 2.89                 | 2.89                 | SC000000_W0_O0                          |
| Personnel doors   | 2.2                   | 2.2                  | 2.2                  | GR000007_W-1_O0                         |
| Vehicle access & similar large doors  | 1.5                   | -                    | -                    | "No external vehicle access doors"      |
| High usage entrance doors   | 3.5                   | -                    | -                    | "No external high usage entrance doors" |
| U <sub>a</sub> -Limit = Limiting area-weighted average U-values [W/(m <sup>2</sup> K)]<br>U <sub>a</sub> -Calc = Calculated area-weighted average U-values [W/(m <sup>2</sup> K)]<br>U <sub>i</sub> -Calc = Calculated maximum individual element U-values [W/(m <sup>2</sup> K)] |                       |                      |                      |   |
| * There might be more than one surface where the maximum U-value occurs.  |                       |                      |                      |   |
| ** Automatic U-value check by the tool does not apply to curtain walls whose limiting standard is similar to that for windows.  |                       |                      |                      |   |
| *** Display windows and similar glazing are excluded from the U-value check.  |                       |                      |                      |   |
| N.B.: Neither roof ventilators (inc. smoke vents) nor swimming pool basins are modelled or checked against the limiting standards by the tool.  |                       |                      |                      |   |

| Air Permeability                             | Worst acceptable standard | This building |
|--|---------------------------|---------------|
| m <sup>3</sup> /(h.m <sup>2</sup> ) at 50 Pa | 10                        | 7             |

## Building services

The standard values listed below are minimum values for efficiencies and maximum values for SFPs. Refer to the Non-Domestic Building Services Compliance Guide for details.

|  |      |
|--|------|
| Whole building lighting automatic monitoring & targeting with alarms for out-of-range values | NO   |
| Whole building electric power factor achieved by power factor correction                     | <0.9 |

### 1- BE LEAN-Heating

|   | Heating efficiency | Cooling efficiency | Radiant efficiency | SFP [W/(l/s)] | HR efficiency |
|---|--------------------|--------------------|--------------------|---------------|---------------|
| <b>This system</b>  | 0.91               | -                  | -                  | -             | -             |
| <b>Standard value</b>   | 0.91*              | N/A                | N/A                | N/A           | N/A           |
| <b>Automatic monitoring &amp; targeting with alarms for out-of-range values for this HVAC system</b>  |                    |                    |                    |               | NO            |
| * Standard shown is for gas single boiler systems <=2 MW output. For single boiler systems >2 MW or multi-boiler systems, (overall) limiting efficiency is 0.86. For any individual boiler in a multi-boiler system, limiting efficiency is 0.82. |                    |                    |                    |               |               |

### 2- BE LEAN-Active Cooling

|   | Heating efficiency | Cooling efficiency | Radiant efficiency | SFP [W/(l/s)] | HR efficiency |
|---|--------------------|--------------------|--------------------|---------------|---------------|
| <b>This system</b>  | 0.91               | 2.5                | -                  | 2.9           | -             |
| <b>Standard value</b>   | 0.91*              | 2.55               | N/A                | 1.6^          | N/A           |
| <b>Automatic monitoring &amp; targeting with alarms for out-of-range values for this HVAC system</b>  |                    |                    |                    |               | NO            |
| * Standard shown is for gas single boiler systems <=2 MW output. For single boiler systems >2 MW or multi-boiler systems, (overall) limiting efficiency is 0.86. For any individual boiler in a multi-boiler system, limiting efficiency is 0.82. |                    |                    |                    |               |               |
| ^ Limiting SFP may be extended by the amounts specified in the Non-Domestic Building Services Compliance Guide if the system includes additional components as listed in the Guide.   |                    |                    |                    |               |               |

### 1- SYST0009-DHW

|   | Water heating efficiency | Storage loss factor [kWh/litre per day] |
|---|--------------------------|---|
| <b>This building</b>  | 0.91                     | 0.001                                   |
| <b>Standard value</b>   | 0.9*                     | N/A                                     |
| * Standard shown is for gas boilers >30 kW output. For boilers <=30 kW output, limiting efficiency is 0.73. |                          |   |

## Local mechanical ventilation, exhaust, and terminal units

| ID | System type in Non-domestic Building Services Compliance Guide  |
|----|---|
| A  | Local supply or extract ventilation units serving a single area   |
| B  | Zonal supply system where the fan is remote from the zone   |
| C  | Zonal extract system where the fan is remote from the zone  |
| D  | Zonal supply and extract ventilation units serving a single room or zone with heating and heat recovery |
| E  | Local supply and extract ventilation system serving a single area with heating and heat recovery        |
| F  | Other local ventilation units   |
| G  | Fan-assisted terminal VAV unit  |
| H  | Fan coil units  |
| I  | Zonal extract system where the fan is remote from the zone with grease filter                           |

| Zone name                    | SFP [W/(l/s)] |     |     |     |     |     |     |     |   |      | HR efficiency |  |
|------------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|---|------|---------------|--|
|                              | A             | B   | C   | D   | E   | F   | G   | H   | I | Zone | Standard      |  |
| <b>Standard value</b>        | 0.3           | 1.1 | 0.5 | 1.9 | 1.6 | 0.5 | 1.1 | 0.5 | 1 |      |               |  |
| SF-Staff WC                  | -             | -   | 0.3 | -   | -   | -   | -   | -   | - | -    | N/A           |  |
| SF-Pupil WC                  | -             | -   | 0.3 | -   | -   | -   | -   | -   | - | -    | N/A           |  |
| FF-Library                   | -             | -   | -   | 1.3 | -   | -   | -   | -   | - | 0.75 | 0.5           |  |
| FF-Staff Room & Repographics | -             | -   | -   | 1.4 | -   | -   | -   | -   | - | 0.75 | 0.5           |  |
| FF-Pupil WC                  | -             | -   | 0.3 | -   | -   | -   | -   | -   | - | -    | N/A           |  |

| Zone name                     | SFP [W/(l/s)]     |     |     |     |     |     |     |     |     | HR efficiency |      |          |
|-------------------------------|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|---------------|------|----------|
|                               | ID of system type | A   | B   | C   | D   | E   | F   | G   | H   | I             | Zone | Standard |
| Standard value                | 0.3               | 1.1 | 0.5 | 1.9 | 1.6 | 0.5 | 1.1 | 0.5 | 1   |               |      |          |
| FF-Staff WC                   | -                 | -   | 0.3 | -   | -   | -   | -   | -   | -   | -             | -    | N/A      |
| GF-Kitchen Prep/Servery Suite | -                 | -   | -   | -   | -   | -   | -   | -   | -   | 1             | -    | N/A      |
| GF-Staff WK RM-01             | -                 | -   | -   | 1   | -   | -   | -   | -   | -   | -             | 0.75 | 0.5      |
| GF-Sick Bay                   | -                 | -   | -   | 1   | -   | -   | -   | -   | -   | -             | 0.75 | 0.5      |
| GF-Staff WC                   | -                 | -   | 0.3 | -   | -   | -   | -   | -   | -   | -             | -    | N/A      |
| GF-Pupil WC                   | -                 | -   | 0.3 | -   | -   | -   | -   | -   | -   | -             | -    | N/A      |
| GF-Staff WK RM-02             | -                 | -   | -   | 1   | -   | -   | -   | -   | -   | -             | 0.75 | 0.5      |
| LGF-Sup WC/Cloak/Ext WC       | -                 | -   | 0.3 | -   | -   | -   | -   | -   | -   | -             | -    | N/A      |
| LGF-Year 1                    | -                 | -   | -   | 1.1 | -   | -   | -   | -   | -   | -             | 0.75 | 0.5      |
| LGF-Year 2                    | -                 | -   | -   | 1.1 | -   | -   | -   | -   | -   | -             | 0.75 | 0.5      |
| LGF-Office/Meeting Room       | -                 | -   | -   | 1.2 | -   | -   | -   | -   | -   | -             | 0.75 | 0.5      |
| LGF-Cleaner Store             | -                 | -   | 0.3 | -   | -   | -   | -   | -   | -   | -             | -    | N/A      |
| LGF-Interview Room            | -                 | -   | -   | 1.2 | -   | -   | -   | -   | -   | -             | 0.75 | 0.5      |
| LGF-Staff WC                  | -                 | -   | 0.3 | -   | -   | -   | -   | -   | -   | -             | -    | N/A      |
| LGF-Pupil WC                  | -                 | -   | 0.3 | -   | -   | -   | -   | -   | -   | -             | -    | N/A      |
| LGF-Small GRP Room            | -                 | -   | -   | 1.1 | -   | -   | -   | -   | -   | -             | 0.75 | 0.5      |
| LGF-Sup WC/Cloak              | -                 | -   | 0.3 | -   | -   | -   | -   | -   | -   | -             | -    | N/A      |
| LGF-WC                        | -                 | -   | 0.3 | -   | -   | -   | -   | -   | -   | -             | -    | N/A      |
| SF-Small Hall                 | -                 | -   | -   | -   | -   | -   | -   | -   | 1.1 | -             | -    | N/A      |
| SF-Head Office (Meeting Room) | -                 | -   | -   | -   | -   | -   | -   | -   | 1.1 | -             | -    | N/A      |
| SF-Specialist Practical       | -                 | -   | -   | -   | -   | -   | -   | -   | 1.1 | -             | -    | N/A      |
| FF-SEN Room (Res Base)        | -                 | -   | -   | -   | -   | -   | -   | -   | 0.3 | -             | -    | N/A      |
| FF-SEN Room (Therapy/MI)      | -                 | -   | -   | -   | -   | -   | -   | -   | 0.7 | -             | -    | N/A      |

| Zone name                    | General lighting and display lighting | Luminous efficacy [lm/W] |      |              | General lighting [W] |
|------------------------------|---------------------------------------|--------------------------|------|--------------|----------------------|
|                              |                                       | Luminaire                | Lamp | Display lamp |                      |
| Standard value               |                                       | 60                       | 60   | 22           |                      |
| SF-Year 4                    |                                       | 70                       | -    | -            | 601                  |
| SF-Staff WC                  |                                       | -                        | 70   | -            | 52                   |
| SF-Pupil WC                  |                                       | -                        | 70   | -            | 88                   |
| SF-CIRC-01                   |                                       | -                        | 70   | -            | 76                   |
| SF-CIRC-02                   |                                       | -                        | 70   | -            | 46                   |
| SF-Stairs                    |                                       | -                        | 70   | -            | 77                   |
| SF-CIRC-03                   |                                       | -                        | 70   | -            | 164                  |
| FF-Year 3                    |                                       | 70                       | -    | -            | 656                  |
| FF-Studio                    |                                       | 70                       | -    | -            | 365                  |
| FF-Library                   |                                       | 70                       | -    | -            | 282                  |
| FF-Staff Room & Repographics |                                       | 70                       | -    | -            | 406                  |
| FF-Pupil WC                  |                                       | -                        | 70   | -            | 94                   |
| FF-Staff WC                  |                                       | -                        | 70   | -            | 71                   |
| FF-Stairs 1                  |                                       | -                        | 70   | -            | 89                   |
| FF-Circ-01                   |                                       | -                        | 70   | -            | 148                  |
| FF-Stairs 2                  |                                       | -                        | 70   | -            | 108                  |

| General lighting and display lighting |                | Luminous efficacy [lm/W] |      |              | General lighting [W] |
|---------------------------------------|----------------|--------------------------|------|--------------|----------------------|
| Zone name                             | Standard value | Luminaire                | Lamp | Display lamp |                      |
|                                       |                | 60                       | 60   | 22           |                      |
| FF-Circ-02                            |                | -                        | 70   | -            | 168                  |
| GF-Kitchen Prep/Servery Suite         |                | -                        | 70   | -            | 393                  |
| GF-PE Store                           |                | 70                       | -    | -            | 41                   |
| GF-Hall                               |                | -                        | 70   | -            | 962                  |
| GF-Staff WK RM-01                     |                | 70                       | -    | -            | 306                  |
| GF-Stairs-01                          |                | -                        | 70   | -            | 94                   |
| GF-Circ-01                            |                | -                        | 70   | -            | 137                  |
| GF-Circ-02                            |                | -                        | 70   | -            | 229                  |
| GF-Sick Bay                           |                | 70                       | -    | -            | 288                  |
| GF-Staff WC                           |                | -                        | 70   | -            | 59                   |
| GF-Pupil WC                           |                | -                        | 70   | -            | 83                   |
| GF-Gen Office                         |                | 70                       | -    | -            | 223                  |
| GF-Staff WK RM-02                     |                | 70                       | -    | -            | 182                  |
| GF-Circ-03                            |                | -                        | 70   | -            | 92                   |
| LGF-Dry Store                         |                | 70                       | -    | -            | 48                   |
| LGF-Sup WC/Cloak/Ext WC               |                | -                        | 70   | -            | 97                   |
| LGF-Year 1                            |                | 70                       | -    | -            | 605                  |
| LGF-Year 2                            |                | 70                       | -    | -            | 627                  |
| LGF-Stairs-01                         |                | -                        | 70   | -            | 78                   |
| LGF-Office/Meeting Room               |                | 70                       | -    | -            | 274                  |
| LGF-Exam Arch                         |                | 70                       | -    | -            | 28                   |
| LGF-Cleaner Store                     |                | 70                       | -    | -            | 28                   |
| LGF-Interview Room                    |                | 70                       | -    | -            | 178                  |
| LGF-Staff WC                          |                | -                        | 70   | -            | 59                   |
| LGF-Pupil WC                          |                | -                        | 70   | -            | 90                   |
| LGF-Gen Store                         |                | 70                       | -    | -            | 28                   |
| LGF-Circ-02                           |                | -                        | 70   | -            | 174                  |
| LGF-General Plant Room                |                | 70                       | -    | -            | 169                  |
| LGF- SRV RM & ICT Hub                 |                | 70                       | -    | -            | 158                  |
| LGF-Reception Classroom               |                | 70                       | -    | -            | 774                  |
| LGF-Small GRP Room                    |                | 70                       | -    | -            | 207                  |
| LGF-Sup WC/Cloak                      |                | -                        | 70   | -            | 81                   |
| LGF-WC                                |                | -                        | 70   | -            | 42                   |
| LGF-Circ-01                           |                | -                        | 70   | -            | 104                  |
| LGF-Circ-01-a-NewBuild                |                | -                        | 70   | -            | 82                   |
| SF-Small Hall                         |                | -                        | 70   | -            | 773                  |
| SF-Head Office (Meeting Room)         |                | 70                       | -    | -            | 290                  |
| SF-Specialist Practical               |                | 70                       | -    | -            | 308                  |
| FF-SEN Room (Res Base)                |                | 70                       | -    | -            | 251                  |
| FF-SEN Room (Therapy/MI)              |                | 70                       | -    | -            | 176                  |

**Criterion 3: The spaces in the building should have appropriate passive control measures to limit solar gains**

| Zone                          | Solar gain limit exceeded? (%) | Internal blinds used? |
|-------------------------------|--------------------------------|-----------------------|
| SF-Year 4                     | NO (-65.7%)                    | NO                    |
| FF-Year 3                     | NO (-70.7%)                    | NO                    |
| FF-Studio                     | NO (-65.6%)                    | NO                    |
| FF-Library                    | NO (-37.7%)                    | NO                    |
| FF-Staff Room & Repographics  | NO (-60.9%)                    | NO                    |
| GF-Hall                       | NO (-79.2%)                    | NO                    |
| GF-Staff WK RM-01             | NO (-43.4%)                    | NO                    |
| GF-Sick Bay                   | NO (-17.9%)                    | NO                    |
| GF-Gen Office                 | NO (-62.8%)                    | NO                    |
| GF-Staff WK RM-02             | NO (-78.7%)                    | NO                    |
| LGF-Year 1                    | NO (-77.6%)                    | NO                    |
| LGF-Year 2                    | N/A                            | N/A                   |
| LGF-Office/Meeting Room       | NO (-74.5%)                    | NO                    |
| LGF-Interview Room            | NO (-43.6%)                    | NO                    |
| LGF-Reception Classroom       | NO (-87%)                      | NO                    |
| LGF-Small GRP Room            | N/A                            | N/A                   |
| SF-Small Hall                 | NO (-33.7%)                    | NO                    |
| SF-Head Office (Meeting Room) | NO (-76.4%)                    | NO                    |
| SF-Specialist Practical       | NO (-82.7%)                    | NO                    |
| FF-SEN Room (Res Base)        | NO (-49.5%)                    | NO                    |
| FF-SEN Room (Therapy/MI)      | NO (-1.8%)                     | NO                    |

**Criterion 4: The performance of the building, as built, should be consistent with the calculated BER**

Separate submission

**Criterion 5: The necessary provisions for enabling energy-efficient operation of the building should be in place**

Separate submission

**EPBD (Recast): Consideration of alternative energy systems**

|  |     |
|--|-----|
| Were alternative energy systems considered and analysed as part of the design process? | YES |
| Is evidence of such assessment available as a separate submission?                     | YES |
| Are any such measures included in the proposed design?                                 | YES |

# Technical Data Sheet (Actual vs. Notional Building)

## Building Global Parameters

|   | Actual  | Notional |
|---|---------|----------|
| Area [m <sup>2</sup> ]                                | 1466    | 1466     |
| External area [m <sup>2</sup> ]                       | 2691.7  | 2691.7   |
| Weather   | LON     | LON      |
| Infiltration [m <sup>3</sup> /hm <sup>2</sup> @ 50Pa] | 7       | 4        |
| Average conductance [W/K]                             | 2745.96 | 1410.74  |
| Average U-value [W/m <sup>2</sup> K]                  | 1.02    | 0.52     |
| Alpha value* [%]                                      | 7.5     | 19.96    |

\* Percentage of the building's average heat transfer coefficient which is due to thermal bridging

## Building Use

### % Area Building Type

|  |
|--|
| A1/A2 Retail/Financial and Professional services                   |
| A3/A4/A5 Restaurants and Cafes/Drinking Est./Takeaways             |
| B1 Offices and Workshop businesses                                 |
| B2 to B7 General Industrial and Special Industrial Groups          |
| B8 Storage or Distribution   |
| C1 Hotels  |
| C2 Residential Institutions: Hospitals and Care Homes              |
| C2 Residential Institutions: Residential schools                   |
| C2 Residential Institutions: Universities and colleges             |
| C2A Secure Residential Institutions                                |
| Residential spaces   |
| D1 Non-residential Institutions: Community/Day Centre              |
| D1 Non-residential Institutions: Libraries, Museums, and Galleries |
| <b>100 D1 Non-residential Institutions: Education</b>              |
| D1 Non-residential Institutions: Primary Health Care Building      |
| D1 Non-residential Institutions: Crown and County Courts           |
| D2 General Assembly and Leisure, Night Clubs, and Theatres         |
| Others: Passenger terminals  |
| Others: Emergency services   |
| Others: Miscellaneous 24hr activities                              |
| Others: Car Parks 24 hrs   |
| Others: Stand alone utility block                                  |

## Energy Consumption by End Use [kWh/m<sup>2</sup>]

|                | Actual       | Notional     |
|----------------|--------------|--------------|
| Heating        | 55.09        | 16.97        |
| Cooling        | 0.99         | 0.96         |
| Auxiliary      | 10.51        | 3.35         |
| Lighting       | 16.54        | 12.76        |
| Hot water      | 5.88         | 5.13         |
| Equipment*     | 25.55        | 25.55        |
| <b>TOTAL**</b> | <b>89.02</b> | <b>39.17</b> |

\* Energy used by equipment does not count towards the total for consumption or calculating emissions.

\*\* Total is net of any electrical energy displaced by CHP generators, if applicable.

## Energy Production by Technology [kWh/m<sup>2</sup>]

|                       | Actual | Notional |
|-----------------------|--------|----------|
| Photovoltaic systems  | 0      | 0        |
| Wind turbines         | 0      | 0        |
| CHP generators        | 0      | 0        |
| Solar thermal systems | 0      | 0        |

## Energy & CO<sub>2</sub> Emissions Summary

|   | Actual | Notional |
|---|--------|----------|
| Heating + cooling demand [MJ/m <sup>2</sup> ] | 203.84 | 155.29   |
| Primary energy* [kWh/m <sup>2</sup> ]         | 160.48 | 78.05    |
| Total emissions [kg/m <sup>2</sup> ]          | 27.7   | 13.4     |

\* Primary energy is net of any electrical energy displaced by CHP generators, if applicable.

## HVAC Systems Performance

| System Type  | Heat dem<br>MJ/m <sup>2</sup> | Cool dem<br>MJ/m <sup>2</sup> | Heat con<br>kWh/m <sup>2</sup> | Cool con<br>kWh/m <sup>2</sup> | Aux con<br>kWh/m <sup>2</sup> | Heat<br>SSEFF | Cool<br>SSEER | Heat gen<br>SEFF | Cool gen<br>SEER |
|--|-------------------------------|-------------------------------|--------------------------------|--------------------------------|-------------------------------|---------------|---------------|------------------|------------------|
| <b>[ST] Central heating using water: radiators, [HS] LTHW boiler, [HFT] Natural Gas, [CFT] Electricity</b> |                               |                               |                                |                                |                               |               |               |                  |                  |
| <b>Actual</b>  | 166.2                         | 43.2                          | 56.8                           | 0                              | 3.3                           | 0.81          | 0             | 0.91             | 0                |
| <b>Notional</b>  | 52.6                          | 107.1                         | 17.8                           | 0                              | 1.7                           | 0.82          | 0             | ----             | ----             |
| <b>[ST] Fan coil systems, [HS] LTHW boiler, [HFT] Natural Gas, [CFT] Electricity</b>                       |                               |                               |                                |                                |                               |               |               |                  |                  |
| <b>Actual</b>  | 132.3                         | 36                            | 43.8                           | 7.4                            | 52.2                          | 0.84          | 1.35          | 0.91             | 2                |
| <b>Notional</b>  | 34.1                          | 92.5                          | 11.6                           | 7.1                            | 14                            | 0.82          | 3.6           | ----             | ----             |

### Key to terms

|                                |   |
|--------------------------------|---|
| Heat dem [MJ/m <sup>2</sup> ]  | = Heating energy demand   |
| Cool dem [MJ/m <sup>2</sup> ]  | = Cooling energy demand   |
| Heat con [kWh/m <sup>2</sup> ] | = Heating energy consumption  |
| Cool con [kWh/m <sup>2</sup> ] | = Cooling energy consumption  |
| Aux con [kWh/m <sup>2</sup> ]  | = Auxiliary energy consumption  |
| Heat SSEFF                     | = Heating system seasonal efficiency (for notional building, value depends on activity glazing class) |
| Cool SSEER                     | = Cooling system seasonal energy efficiency ratio   |
| Heat gen SSEFF                 | = Heating generator seasonal efficiency   |
| Cool gen SSEER                 | = Cooling generator seasonal energy efficiency ratio  |
| ST                             | = System type   |
| HS                             | = Heat source   |
| HFT                            | = Heating fuel type   |
| CFT                            | = Cooling fuel type   |

# Key Features

The Building Control Body is advised to give particular attention to items whose specifications are better than typically expected.

## Building fabric

| Element   | U <sub>i-Typ</sub> | U <sub>i-Min</sub>  | Surface where the minimum value occurs* |
|---|--------------------|---|---|
| Wall  | 0.23               | 0.26  | LG000006_W-1                            |
| Floor   | 0.2                | 0.22  | SF000007_F                              |
| Roof  | 0.15               | 0.16  | SF000003_C                              |
| Windows, roof windows, and rooflights   | 1.5                | 2.89  | SC000000_W0_O0                          |
| Personnel doors   | 1.5                | 2.2   | GR000007_W-1_O0                         |
| Vehicle access & similar large doors  | 1.5                | -   | "No external vehicle access doors"      |
| High usage entrance doors   | 1.5                | -   | "No external high usage entrance doors" |
| U <sub>i-Typ</sub> = Typical individual element U-values [W/(m <sup>2</sup> K)] |                    | U <sub>i-Min</sub> = Minimum individual element U-values [W/(m <sup>2</sup> K)] |   |
| * There might be more than one surface where the minimum U-value occurs.        |                    |   |   |

| Air Permeability                             | Typical value | This building |
|--|---------------|---------------|
| m <sup>3</sup> /(h.m <sup>2</sup> ) at 50 Pa | 5             | 7             |