



Newfoundland Road, Deepcut
SBEM Calculations: Building Specification Report
Project Stage: As-Designed
Type of Calculation: Refurbishment / Change of Use – Shell Only
Compliance With: Part L (2021) – England



3D Model representation of the building in the SBEM calculation software (IES Virtual Environment). Geometry simplifications are made where appropriate.

Revision History:

Revision	Date of Issue	Reason(s) for Issue
1 st	27/10/2023	Initial issue to client

Purpose of Document

The information in this document details the specification items used to complete the as-designed SBEM calculation for the project in support of the building warrant application. This document is also used to confirm the specification at as-built stage to lodge the Energy Performance Certificate (EPC). The specification items are sourced from the latest design or as-built information provided to the Energy Assessor by the project team. The information in this document should be reviewed by the project team and feedback provided if necessary to avoid any issues. The comments boxes throughout this document provide an opportunity to highlight if any information needs correcting.

Please note that construction of the building(s) not following the specification detailed in this document may render the development non-compliant with the building standards.

For items where specification information was unavailable at the time of producing the as-designed SBEM calculation, but are expected to be installed during construction and/or will be applicable at as-built stage, these items are highlighted in **red** and have been suggested by the Energy Assessor to comply. It is the duty of the client and project team to check the suitability of these specification items. Evidence supporting the actual as-installed/as-built specification for these items will be required before the as-built EPC can be lodged. This can include drawings, technical schedules, data sheets, and on-site photographs. Deviation from these specification items may result in non-compliance with the building standards and therefore should be checked with the Energy Assessor as early as possible to avoid any issues occurring at as-built stage.

For the purposes of producing an EPC for a Shell-Only or Shell and Core building (if applicable), appropriate building services must be used in place of the items which will be installed at a later date. These items are highlighted in **blue** and have been suggested by the Energy Assessor to comply. It is the duty of the client to check the suitability of these specification items before the as-built EPC is lodged.

Please note the Energy Assessor is not qualified to design building services and this must be done by others. Any suggestions in this document are purely advisory to ensure compliance with Part L can be achieved.

At at-built stage the specification detailed in this document will be reviewed and updated against the as-built information and verified via a signature at the end of this document. This signature should be provided by an **appropriate person** responsible for coordinating the construction works, for example the main contractor, developer, etc.

To ensure all EPCs accurately reflect the as-built construction, key evidence that must be provided to the Energy Assessor by the project team. A **'Request for Information'** document will be issued alongside this report which will outline in full all the required as-built evidence which needs to be provided to the Energy Assessor before the EPC can be lodged. This document will also confirm what has currently been received and what is currently missing. Upon receipt of all required evidence, **a minimum of two weeks** is required for the Energy Assessor to carry out any required updates to the model and complete the final EPC lodgement. **Please ensure adequate time is given to collate this information to avoid any delay at handover.**

Summary of Specification

The following tables summarise the specification items used to complete the SBEM calculations. They also indicate where the information was taken from, e.g. architects drawings, M&E schematics, etc. If required, please use the comments box at the bottom of each table to provide feedback/corrections.

Table 1. Building Postal Address*

Building Name	TBC
Address Line 1	TBC
Address Line 2	TBC
Address Line 3	TBC
Address Line 4	TBC
Town	TBC
Postcode	TBC
UPRN	TBC
Comments:	

*This is the full postal address as registered with the Royal Mail. The final address may differ from what the original project was called.

Table 2. Compliance Weather File

Weather File Used	CIBSE weather file London_TRY.fwt
Comments:	

Table 3. Building Geometry

<p>Drawings/Source of Information: 795-PD11 - P1 - Proposed Plans 795-PD12 - P1 - Proposed Elevations 795-PD13 - P1 - Proposed Site Plan 795 - Proposed Plans and Elevations - Issued 2023.10.19 795 - Proposed Site Plan- Issued 2023.10.19</p>
<p>Comments: Marked up floor plans provided by surveyor indicate room types</p>

Table 4. Building Fabric

Element	U-value	g-value
Ground Floor	U = 0.25 W/m ² K	N/A
External Walls	U = 0.37 W/m ² K	N/A
Cold Roof (Insulated at Ceiling Level)	U = 0.42 W/m ² K	N/A
Windows and Glazed Entrance Doors	U = 3.51 W/m ² K	0.76
Solid Entrance Doors	U = 3.00 W/m ² K	N/A
<p>Source of Information: U-values for walls, roofs, and floor based on build-ups provided by Surveyor. U-values for openings based on existing openings, based on year of construction of original building 1995. All glazing double-glazed.</p>		
<p>Comments:</p>		

Table 5. Air Tightness Level

Building design air permeability	25.0 m ³ /h.m ² (@ 50 Pa)
Building air permeability test result	Only applicable at as-built stage
Building air permeability test certificate ID	Only applicable at as-built stage
Source of Information: Air tightness based on year of construction of original building. Air test will improve performance.	

Table 6. Lighting

Lighting Specification	Efficiency	Light Output Ratio	Lighting Controls	Applicable building area(s)
LED Lighting	95 lm/W	1.00	Manual On / Off	Plant room, kitchen
Source of Information: No lighting information available. All lighting to meet minimum performance requirements under Part L 2021 as part of refurbishment works.				
Comments:				

Table 7. Heating and Cooling

Heating/Cooling Specification	Efficiency	Pump Type	Metering provision and warns of "out of range" values?	Applicable Building Areas*
Electric panel heaters	100%	N/A	No	All building areas in community building
VRF	SCOP = 2.50 SEER = 3.50	N/A	No	Retail shell unit
Source of Information: No heating and cooling design available. Above specification assumed based on building typology and room activity, and minimum performance requirements under Part L 2021.				
Comments:				

Table 8. Domestic Hot Water

DHW Specification	Efficiency	Applicable Building Areas
Electric point of use water heaters	100% Allowances made for standing losses	All building areas which call for hot water.
Source of Information:		
Comments:		

Table 9. Mechanical Ventilation

Ventilation Specification*	SFP	Extract Only Rate	Heat Recovery Efficiency	Applicable Building Areas*
Local Extract Ventilation	0.30 W/l/s	10 ACH	None	Toilets
MVHR	2.00 W/l/s	N/A	65%	Retail unit
Source of Information: No heating and cooling design available. Above specification assumed based on building typology and room activity, and minimum performance requirements under Part L 2021.				
Comments:				

*All other building areas not detailed here are assumed to be naturally ventilated.

Table 10. Ductwork and AHU Leakage

Specification
Default leakage figures have been used for all present ductwork and AHUs. Leakage test results are required for evidence of improved performance.
Source of Information: N/A
Comments:

Table 11. Renewables

Renewable Technology	Performance Details
Solar PV	No renewables currently specified.
Source of Information:	
Comments:	

Table 12. Management Features

Feature	Performance Details
Electric power factor	<0.9 (no power factor correction present) *
Lighting systems have provision for metering?	Yes
Lighting systems metering warns of out-of-range values?	No – evidence of sub-metering and BMS monitoring required for 'Yes' answer to this.
Source of Information:	
Comments:	

*If a better power factor is proposed, evidence of power factor correction equipment is required. Where only a photograph of the power factor correction device is available then power factor shall be amended to '0.9 to 0.95'. Calculation evidence carried out by a qualified person(s) e.g. electricians and power engineering specialist, is required to use a value of >0.95.

Table 13. Calculated Results – Retail Unit

Building Emissions Rate (BER)	<i>N/A – new builds only.</i>
Target Emissions Rate (TER)	<i>N/A – new builds only.</i>
BER≤TER	<i>N/A – new builds only.</i>
Building Primary Energy Rate (BPER)	<i>N/A – new builds only.</i>
Target Primary Energy Rate (TPER)	<i>N/A – new builds only.</i>
BPER≤TPER	<i>N/A – new builds only.</i>
As-Designed EPC Rating	A (23)

Table 14. Calculated Results – Community Unit

Building Emissions Rate (BER)	<i>N/A – new builds only.</i>
Target Emissions Rate (TER)	<i>N/A – new builds only.</i>
BER≤TER	<i>N/A – new builds only.</i>
Building Primary Energy Rate (BPER)	<i>N/A – new builds only.</i>
Target Primary Energy Rate (TPER)	<i>N/A – new builds only.</i>
BPER≤TPER	<i>N/A – new builds only.</i>
As-Designed EPC Rating	B (49)

As-Built Declaration

I hereby confirm that the construction works have been completed in accordance with the data outlined in this document and the building is ready for occupation. I request that an EPC is lodged using the data outlined in this document and I understand that once lodged, the EPC cannot be altered, and is available to be viewed by the public.

Name: _____ Signed: _____

Date: _____ Company/Organisation: _____

Position at Company/Organisation: _____