

SBEM Input Parameters Summary

The following section gives details of various SBEM model parameters under relevant sub-headings.

The commercial areas are proposed as shell and core. Elements in the summary below that form part of the base build are given in **black**, with assumptions in *red* for elements forming part of the subsequent fit-out works.

General

Development Name	1 Hampshire Street
Full Postal Address	1 Hampshire Street London NW5 2TE
Version of Building Regulations	L2A 2013
Calendar	NCM Standard
Weather File	London TRY
Planning Use Class	B1 Business

Building Geometry

The building geometry has been modelled using Planning Stage information from Sada Architecture.

Fabric Performance

Air Permeability: 5m³/hr.m²

Thermal Transmittance

Building Element	g-value/ light transmittance	U-value (W/m2.K)	Construction
External Walls	N/A	0.18	Brick exterior with insulated cavity and plasterboard lined block inner
Roof	N/A	0.11	Plasterboard ceiling with insulated concrete roof over.
Floor	N/A	0.18	Screeded ground floor slab with insulation under.
Windows	0.40 / 0.70	1.4	Double glazed with solar control
Pedestrian Doors	0.40 / 0.70	1.4	Double glazed with solar control

Accredited Constructions

Used	
Not Used	✓

Mechanical Services

Heating

Type	<i>VRF via air source heat pump</i>
Seasonal Efficiency (SCoP)	<i>4.0</i>
Fuel Type	<i>Grid-supplied electricity</i>
Distribution Efficiency (%)	<i>95</i>

Cooling

Type	<i>VRF via air source heat pump</i>
Seasonal Efficiency (SEER)	<i>4.5</i>
Fuel Type	<i>Grid-supplied electricity</i>
Distribution Efficiency (%)	<i>95</i>

Hot Water

Type	<i>Point of use electric water heaters</i>
Arrangement	<i>Assumed no storage associated with heaters</i>
Generation Efficiency (%)	<i>100</i>
Distribution Efficiency (%)	<i>100</i>

Ventilation

Zones Served	Ventilation Type	Extract Rate (l)	Specific Fan Power (W/l.s)	Heat Recovery Efficiency (%)	Demand Control
<i>All areas</i>	<i>MVHR with VRF</i>	<i>N/A</i>	<i>1.5</i>	<i>70</i>	<i>x</i>

Miscellaneous HVAC

Pumping Arrangement	<i>Variable speed pumping with differential across pump</i>
Metering with warnings for out-of-range values	<i>x</i>

Electrical Services

Electrical Power Factor

<0.90	<i>✓</i>
0.90 – 0.95	
>0.95	

Lighting

Control strategies for lighting have been assumed as per the details in the table below.

Zone	Lighting Efficacy (LL/CW)	Auto Presence Switching	Daylight Control	Design Illuminance (lux)
<i>All areas</i>	<i>80</i>	<i>Manual On – Auto Off</i>	<i>Photocell control</i>	<i>400</i>

Miscellaneous Lighting

Metering with warnings for out-of-range values	<i>x</i>
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Renewables

Type	Photovoltaic array
Annual yield (kWh)	2,567