

BRUKL Output Document



Compliance with England Building Regulations Part L 2021

Project name

CAM-WWL-1Z-ZZ-RP-N-000001 P04
STATUS: S4

Phase 1 Brukl

As designed

Date: Fri Oct 31 20:00:32 2025

Administrative information

Building Details

Address: Cambridge Hall Phase 1, Manchester, M15 6TT

Certifier details

Name: Wallace Whittle

Telephone number: 0330 460 5200

Address: The Garment Factory, 10 Montrose St, Glasgow,
G1 1RE

Certification tool

Calculation engine: Apache

Calculation engine version: 7.0.29

Interface to calculation engine: IES Virtual Environment

Interface to calculation engine version: 7.0.29

BRUKL compliance module version: v6.1.e.1

Foundation area [m²]: 840.07

The CO₂ emission and primary energy rates of the building must not exceed the targets

Target CO ₂ emission rate (TER), kgCO ₂ /m ² annum	4.69
Building CO ₂ emission rate (BER), kgCO ₂ /m ² annum	4.09
Target primary energy rate (TPER), kWh _{PE} /m ² annum	49.56
Building primary energy rate (BPER), kWh _{PE} /m ² annum	42.41
Do the building's emission and primary energy rates exceed the targets?	BER ≤ TER BPER ≤ TPER

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

Fabric element	U _{a-Limit}	U _{a-Calc}	U _{i-Calc}	First surface with maximum value
Walls*	0.26	0.15	0.15	L00001BC:Surf[2]
Floors	0.18	0.09	0.09	L00001BC:Surf[0]
Pitched roofs	0.16	-	-	No pitched roofs in building
Flat roofs	0.18	0.12	0.12	L00001C0:Surf[13]
Windows** and roof windows	1.6	0.8	0.8	L00001BC:Surf[1]
Rooflights***	2.2	-	-	No roof lights in building
Personnel doors^	1.6	1.18	1.6	L000054B:Surf[0]
Vehicle access & similar large doors	1.3	-	-	No vehicle access doors in building
High usage entrance doors	3	-	-	No high usage entrance doors in building
U _{a-Limit} = Limiting area-weighted average U-values [W/(m ² K)] U _{a-Calc} = Calculated area-weighted average U-values [W/(m ² K)] U _{i-Calc} = Calculated maximum individual element U-values [W/(m ² K)] * 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. *** Values for rooflights refer to the horizontal position. ^ For fire doors, limiting U-value is 1.8 W/m ² K NB: Neither roof ventilators (inc. smoke vents) nor swimming pool basins are modelled or checked against the limiting standards by the tool.				

Air permeability	Limiting standard	This building
m ³ /(h.m ²) at 50 Pa	8	1.7

Building services

For details on the standard values listed below, system-specific guidance, and additional regulatory requirements, refer to the Approved Documents.

Whole building lighting automatic monitoring & targeting with alarms for out-of-range values	NO
Whole building electric power factor achieved by power factor correction	>0.95

1- EPH + Ext

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	1	-	0	-	-
Standard value	N/A	N/A	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					NO

2- VRF + HRU

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.3	6.8	0	1.4	0.8
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					NO
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					
^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.					

3- Comms Split

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.3	6.8	-	-	-
Standard value	2.5*	5	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					NO
* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.					

4- EPH + MVHR

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	1	-	0	-	0.8
Standard value	N/A	N/A	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					NO

1- ASHP DHW

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	3.64	-
Standard value	2*	N/A
* Standard shown is for all types except absorption and gas engine heat pumps.		

Zone-level mechanical ventilation, exhaust, and terminal units

ID	System type in the Approved Documents
A	Local supply or extract ventilation units
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 balanced supply and extract ventilation system
E	Local balanced supply and extract ventilation units
F	Other local ventilation units
G	Fan assisted terminal variable air volume units
H	Fan coil units
I	Kitchen extract with the fan remote from the zone and a grease filter
NB: Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.	

Zone name	SFP [W/(l/s)]									HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I		
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard
L00-Changing	-	-	0.4	-	-	-	-	-	-	-	N/A
L00-Comms	-	-	-	2	-	-	-	-	-	-	N/A
L00-Laundry	-	-	-	1	-	-	-	-	-	-	N/A
L00-WC	-	-	0.4	-	-	-	-	-	-	-	N/A
L00-WC & Shower	-	-	0.4	-	-	-	-	-	-	-	N/A
L01- Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01- Acc. Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Acc. Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Acc. Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Acc. Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Acc. Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Acc. Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Acc. Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Acc. Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Acc. Studio	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Acc. Studio-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Acc. Studio-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Acc. WC	-	-	0.4	-	-	-	-	-	-	-	N/A
L01-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L01-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A

Zone name	SFP [W/(l/s)]										HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I			
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard	
L01-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A	
L01-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A	
L01-Studio (acc. convertible)	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02- Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02- Acc. Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Acc. Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Acc. Cluster-En Suite-	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Acc. Cluster-En Suite-	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Acc. Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Acc. Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Acc. Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Acc. Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Acc. Studio	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Acc. Studio-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Acc. Studio-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-Bedroom	-	-										

Zone name	SFP [W/(l/s)]										HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I			
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard	
L02-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Cluster-En Suite-	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A	
L02-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A	
L02-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A	
L02-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A	
L02-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A	
L02-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A	
L02-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A	
L02-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A	
L02-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A	
L02-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A	
L02-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A	
L02-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A	
L02-Studio (acc. convertible)	-	-	-	0.8	-	-	-	-	-	-	N/A	
L02-Studio (acc. convertible)-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03- Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03- Acc. Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03-Acc. Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03-Acc. Cluster-En Suite-	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03-Acc. Cluster-En Suite-	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03-Acc. Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03-Acc. Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03-Acc. Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03-Acc. Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03-Acc. Studio	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03-Acc. Studio-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03-Acc. Studio-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	
L03-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A	

[illegible]

[illegible]

[illegible]

Zone name	SFP [W/(l/s)]									HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I		
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard
L04-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L04-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L04-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L04-Cluster-En Suite-	-	-	-	0.8	-	-	-	-	-	-	N/A
L04-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L04-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L04-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L04-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L04-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L04-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L04-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L04-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L04-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L04-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L04-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L04-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L04-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L04-Studio (acc. convertible)	-	-	-	0.8	-	-	-	-	-	-	N/A
L04-Studio (acc. convertible)-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L05- Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L05- Acc. Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Acc. Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Acc. Cluster-En Suite-	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Acc. Cluster-En Suite-	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Acc. Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Acc. Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Acc. Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Acc. Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Acc. Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Acc. Studio	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Acc. Studio-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Acc. Studio-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L05-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A

[illegible]

Zone name	SFP [W/(l/s)]									HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I		
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard
L06-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L06-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L06-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L06-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L06-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L06-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L06-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L06-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L06-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L06-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L06-Studio (acc. convertible)	-	-	-	0.8	-	-	-	-	-	-	N/A
L06-Studio (acc. convertible)-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07- Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L07- Acc. Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Acc WC	-	-	0.4	-	-	-	-	-	-	-	N/A
L07-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Acc. Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Acc. Studio-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Acc. Studio-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A

Zone name	SFP [W/(l/s)]									HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I		
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L07-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L07-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L07-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L07-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L07-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L07-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L07-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L08- Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L08- Acc. Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A
L08-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L08-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L08-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L08-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L08-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L08-Acc. Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L08-Acc. Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L08-Acc. Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L08-Acc. Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L08-Acc. Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A
L08-Acc. Studio-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A
L08-Acc. Studio-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A
L08-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L08-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L08-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L08-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A

[illegible]

[illegible]

Zone name	SFP [W/(l/s)]									HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I		
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard
L18-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L18-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L18-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L18-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L18-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L18-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L18-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L18-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L18-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L18-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L18-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L18-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L18-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L18-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L18-Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A
L18-Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A
L18-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L18-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L18-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L18-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L19-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-Bedroom	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-En Suite	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Cluster-Ensuite	-	-	-	0.8	-	-	-	-	-	-	N/A
L19-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A
L19-Kitchen	-	-	0.4	-	-	-	-	-	-	-	N/A

[illegible]

General lighting and display lighting		General luminaire		Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]	
	Standard value	95	80	0.3	
L00-Circulation		144	-	-	
L00-Circulation		144	-	-	
L00-Circulation		144	-	-	
L00-Cloakroom		144	-	-	
L00-Club Lounge		144	-	-	
L00-Commercial		144	15	10	
L00-Commercial Refuse		144	-	-	
L00-Comms		144	-	-	
L00-Core 1A		144	-	-	
L00-Core 1B		144	-	-	
L00-Core 1C		144	-	-	
L00-Core 1C		144	-	-	
L00-Core 1D		144	-	-	
L00-Core 1D		144	-	-	
L00-Courtyard Lounges		144	-	-	
L00-Cupboard		144	-	-	
L00-District Heat		144	-	-	
L00-Laundry		144	-	-	
L00-Lobby		144	-	-	
L00-Lobby		144	-	-	
L00-Lobby		144	-	-	
L00-Lobby		144	-	-	
L00-Lobby		144	-	-	
L00-Lobby		144	-	-	
L00-Lobby		144	-	-	
L00-Lobby		144	-	-	
L00-Lobby		144	-	-	
L00-Lobby		144	-	-	
L00-Lobby		144	-	-	
L00-LV Room		144	-	-	
L00-Parcel Store		144	-	-	
L00-Plant		144	-	-	
L00-Refuse		144	-	-	
L00-Refuse		144	-	-	
L00-Refuse		144	-	-	
L00-Refuse		144	-	-	
L00-Refuse Circ		144	-	-	
L00-Screen Room		144	-	-	
L00-Screen Room		144	-	-	
L00-Security Lobby		144	-	-	
L00-Security Lobby		144	-	-	
L00-Security/Fire Mgmt		144	-	-	
L00-Staff Office & Welfare Lounge		144	-	-	
L00-Staff Office & Welfare Lounge		144	-	-	

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
L00-Stair 0A		144	-	-
L00-Stair 1B		144	-	-
L00-Stair 1C		144	-	-
L00-Stair 1D		144	-	-
L00-Stair 1D		144	-	-
L00-Standby Generator		144	-	-
L00-Storage		144	-	-
L00-Store		144	-	-
L00-Student Seating/Lounge		144	-	-
L00-Student Welfare		144	-	-
L00-Substation		144	-	-
L00-Substation		144	-	-
L00-TV & Pool Lounge		144	-	-
L00-WC		144	-	-
L00-WC & Shower		144	-	-
L00-WC/Shower Lobby		144	-	-
L00-Welcome Desk		144	15	9
L01- Acc. Cluster-Bedroom		144	-	-
L01- Acc. Cluster-En Suite		144	-	-
L01-Acc. Cluster-Bedroom		144	-	-
L01-Acc. Cluster-Bedroom		144	-	-
L01-Acc. Cluster-Bedroom		144	-	-
L01-Acc. Cluster-Bedroom		144	-	-
L01-Acc. Cluster-Bedroom		144	-	-
L01-Acc. Cluster-En Suite		144	-	-
L01-Acc. Cluster-En Suite		144	-	-
L01-Acc. Cluster-En Suite		144	-	-
L01-Acc. Cluster-En Suite		144	-	-
L01-Acc. Cluster-En Suite		144	-	-
L01-Acc. Cluster-En Suite		144	-	-
L01-Acc. Cluster-En Suite		144	-	-
L01-Acc. Cluster-En Suite		144	-	-
L01-Acc. Studio		144	-	-
L01-Acc. Studio-En Suite		144	-	-
L01-Acc. Studio-En Suite		144	-	-
L01-Acc. WC		144	-	-
L01-Circulation		144	-	-
L01-Circulation		144	-	-
L01-Circulation		144	-	-
L01-Circulation		144	-	-
L01-Circulation		144	-	-
L01-Circulation		144	-	-

[illegible]

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Cluster-En Suite		144	-	-
L01-Core 1A		144	-	-
L01-Core 1A		144	-	-
L01-Core 1B		144	-	-
L01-Core 1B		144	-	-
L01-Core 1C		144	-	-
L01-Core 1D		144	-	-
L01-Core 1D		144	-	-
L01-Creative Work Shop		144	-	-
L01-Creative Work Shop		144	-	-
L01-DB Cupboard		144	-	-
L01-Group Study		144	-	-
L01-Group Study		144	-	-
L01-Group Study		144	-	-
L01-Group Study		144	-	-
L01-Kitchen		144	-	-
L01-Kitchen		144	-	-
L01-Kitchen		144	-	-
L01-Kitchen		144	-	-
L01-Kitchen		144	-	-
L01-Kitchen		144	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
L01-Kitchen		144	-	-
L01-Silent Study		144	-	-
L01-Stair 1A		144	-	-
L01-Stair 1B		144	-	-
L01-Stair 1C		144	-	-
L01-Stair 1D		144	-	-
L01-Stair1D		144	-	-
L01-Store		144	-	-
L01-Studio (acc. convertible)		144	-	-
L01-Study Breakout		144	-	-
L01-Study Lounge		144	-	-
L02- Acc. Cluster-Bedroom		144	-	-
L02- Acc. Cluster-Ensuite		144	-	-
L02-Acc. Cluster-Bedroom		144	-	-
L02-Acc. Cluster-Bedroom		144	-	-
L02-Acc. Cluster-Bedroom		144	-	-
L02-Acc. Cluster-Bedroom		144	-	-
L02-Acc. Cluster-Bedroom		144	-	-
L02-Acc. Cluster-En Suite		144	-	-
L02-Acc. Cluster-En Suite-		144	-	-
L02-Acc. Cluster-En Suite-		144	-	-
L02-Acc. Cluster-Ensuite		144	-	-
L02-Acc. Cluster-Ensuite		144	-	-
L02-Acc. Cluster-Ensuite		144	-	-
L02-Acc. Cluster-Ensuite		144	-	-
L02-Acc. Studio		144	-	-
L02-Acc. Studio-Ensuite		144	-	-
L02-Acc. Studio-Ensuite		144	-	-
L02-Circulation		144	-	-
L02-Circulation		144	-	-
L02-Circulation		144	-	-
L02-Circulation		144	-	-
L02-Circulation		144	-	-
L02-Circulation		144	-	-
L02-Circulation		144	-	-
L02-Circulation		144	-	-
L02-Circulation		144	-	-
L02-Circulation		144	-	-
L02-Circulation		144	-	-
L02-Circulation		144	-	-
L02-Circulation		144	-	-
L02-Circulation		144	-	-

[illegible]

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
L02-Kitchen		144	-	-
L02-Kitchen		144	-	-
L02-Kitchen		144	-	-
L02-Kitchen		144	-	-
L02-Kitchen		144	-	-
L02-Kitchen		144	-	-
L02-Kitchen		144	-	-
L02-Kitchen		144	-	-
L02-Kitchen		144	-	-
L02-Kitchen		144	-	-
L02-Lobby		144	-	-
L02-Lobby		144	-	-
L02-Stair 6A		144	-	-
L02-Stair 6B		144	-	-
L02-Stair 6C		144	-	-
L02-Stair 6D		144	-	-
L02-Stair6D		144	-	-
L02-Store		144	-	-
L02-Studio (acc. convertible)		144	-	-
L02-Studio (acc. convertible)-En Suite		144	-	-
L03- Acc. Cluster-Bedroom		144	-	-
L03- Acc. Cluster-Ensuite		144	-	-
L03-Acc. Cluster-Bedroom		144	-	-
L03-Acc. Cluster-Bedroom		144	-	-
L03-Acc. Cluster-Bedroom		144	-	-
L03-Acc. Cluster-Bedroom		144	-	-
L03-Acc. Cluster-Bedroom		144	-	-
L03-Acc. Cluster-Bedroom		144	-	-
L03-Acc. Cluster-En Suite		144	-	-
L03-Acc. Cluster-En Suite-		144	-	-
L03-Acc. Cluster-Ensuite		144	-	-
L03-Acc. Cluster-Ensuite		144	-	-
L03-Acc. Cluster-Ensuite		144	-	-
L03-Acc. Cluster-Ensuite		144	-	-
L03-Acc. Studio		144	-	-
L03-Acc. Studio-Ensuite		144	-	-
L03-Acc. Studio-Ensuite		144	-	-
L03-Circulation		144	-	-
L03-Circulation		144	-	-
L03-Circulation		144	-	-
L03-Circulation		144	-	-

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General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
Standard value	95	80	0.3
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite	144	-	-
L03-Cluster-En Suite-	144	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
L03-Core 6A		144	-	-
L03-Core 6B		144	-	-
L03-Core 6C		144	-	-
L03-Core 6D		144	-	-
L03-Core 6D		144	-	-
L03-Creative Work Shop		144	-	-
L03-DB Cupboard		144	-	-
L03-Group Study		144	-	-
L03-Kitchen		144	-	-
L03-Kitchen		144	-	-
L03-Kitchen		144	-	-
L03-Kitchen		144	-	-
L03-Kitchen		144	-	-
L03-Kitchen		144	-	-
L03-Kitchen		144	-	-
L03-Kitchen		144	-	-
L03-Kitchen		144	-	-
L03-Kitchen		144	-	-
L03-Lobby		144	-	-
L03-Lobby		144	-	-
L03-Stair 6A		144	-	-
L03-Stair 6B		144	-	-
L03-Stair 6C		144	-	-
L03-Stair 6D		144	-	-
L03-Stair6D		144	-	-
L03-Store		144	-	-
L03-Studio (acc. convertible)		144	-	-
L03-Studio (acc. convertible)-En Suite		144	-	-
L04- Acc. Cluster-Bedroom		144	-	-
L04- Acc. Cluster-Ensuite		144	-	-
L04-Acc. Cluster-Bedroom		144	-	-
L04-Acc. Cluster-Bedroom		144	-	-
L04-Acc. Cluster-Bedroom		144	-	-
L04-Acc. Cluster-Bedroom		144	-	-
L04-Acc. Cluster-Bedroom		144	-	-
L04-Acc. Cluster-Bedroom		144	-	-
L04-Acc. Cluster-En Suite		144	-	-
L04-Acc. Cluster-En Suite-		144	-	-
L04-Acc. Cluster-En Suite-		144	-	-
L04-Acc. Cluster-Ensuite		144	-	-
L04-Acc. Cluster-Ensuite		144	-	-
L04-Acc. Cluster-Ensuite		144	-	-

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
Standard value	95	80	0.3
L04-Acc. Cluster-Ensuite	144	-	-
L04-Acc. Studio	144	-	-
L04-Acc. Studio-Ensuite	144	-	-
L04-Acc. Studio-Ensuite	144	-	-
L04-Circulation	144	-	-
L04-Circulation	144	-	-
L04-Circulation	144	-	-
L04-Circulation	144	-	-
L04-Circulation	144	-	-
L04-Circulation	144	-	-
L04-Circulation	144	-	-
L04-Circulation	144	-	-
L04-Circulation	144	-	-
L04-Circulation	144	-	-
L04-Circulation	144	-	-
L04-Circulation	144	-	-
L04-Circulation	144	-	-
L04-Circulation	144	-	-
L04-Circulation	144	-	-
L04-Circulation	144	-	-
L04-Circulation	144	-	-
L04-Circulation	144	-	-
L04-Cleaner Store	144	-	-
L04-Cluster-Bedroom	144	-	-
L04-Cluster-Bedroom	144	-	-
L04-Cluster-Bedroom	144	-	-
L04-Cluster-Bedroom	144	-	-
L04-Cluster-Bedroom	144	-	-
L04-Cluster-Bedroom	144	-	-
L04-Cluster-Bedroom	144	-	-
L04-Cluster-Bedroom	144	-	-
L04-Cluster-Bedroom	144	-	-
L04-Cluster-Bedroom	144	-	-
L04-Cluster-Bedroom	144	-	-
L04-Cluster-Bedroom	144	-	-
L04-Cluster-Bedroom	144	-	-
L04-Cluster-Bedroom	144	-	-
L04-Cluster-Bedroom	144	-	-
L04-Cluster-Bedroom	144	-	-
L04-Cluster-Bedroom	144	-	-
L04-Cluster-Bedroom	144	-	-
L04-Cluster-En Suite	144	-	-
L04-Cluster-En Suite	144	-	-
L04-Cluster-En Suite	144	-	-

[illegible]

General lighting and display lighting		General luminaire		Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80		0.3
L04-Cluster-En Suite		144	-		-
L04-Cluster-En Suite		144	-		-
L04-Cluster-En Suite		144	-		-
L04-Cluster-En Suite		144	-		-
L04-Cluster-En Suite		144	-		-
L04-Cluster-En Suite		144	-		-
L04-Cluster-En Suite		144	-		-
L04-Cluster-En Suite		144	-		-
L04-Cluster-En Suite-		144	-		-
L04-Core 6A		144	-		-
L04-Core 6B		144	-		-
L04-Core 6C		144	-		-
L04-Core 6D		144	-		-
L04-Core 6D		144	-		-
L04-Creative Work Shop		144	-		-
L04-DB Cupboard		144	-		-
L04-Group Study		144	-		-
L04-Kitchen		144	-		-
L04-Kitchen		144	-		-
L04-Kitchen		144	-		-
L04-Kitchen		144	-		-
L04-Kitchen		144	-		-
L04-Kitchen		144	-		-
L04-Kitchen		144	-		-
L04-Kitchen		144	-		-
L04-Kitchen		144	-		-
L04-Kitchen		144	-		-
L04-Kitchen		144	-		-
L04-Kitchen		144	-		-
L04-Kitchen		144	-		-
L04-Lobby		144	-		-
L04-Lobby		144	-		-
L04-Stair 6A		144	-		-
L04-Stair 6B		144	-		-
L04-Stair 6C		144	-		-
L04-Stair 6D		144	-		-
L04-Stair6D		144	-		-
L04-Store		144	-		-
L04-Studio (acc. convertible)		144	-		-
L04-Studio (acc. convertible)-En Suite		144	-		-
L05- Acc. Cluster-Bedroom		144	-		-
L05- Acc. Cluster-Ensuite		144	-		-
L05-Acc. Cluster-Bedroom		144	-		-
L05-Acc. Cluster-Bedroom		144	-		-
L05-Acc. Cluster-Bedroom		144	-		-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
L05-Acc. Cluster-Bedroom		144	-	-
L05-Acc. Cluster-Bedroom		144	-	-
L05-Acc. Cluster-Bedroom		144	-	-
L05-Acc. Cluster-En Suite		144	-	-
L05-Acc. Cluster-En Suite-		144	-	-
L05-Acc. Cluster-En Suite-		144	-	-
L05-Acc. Cluster-Ensuite		144	-	-
L05-Acc. Cluster-Ensuite		144	-	-
L05-Acc. Cluster-Ensuite		144	-	-
L05-Acc. Cluster-Ensuite		144	-	-
L05-Acc. Studio		144	-	-
L05-Acc. Studio-Ensuite		144	-	-
L05-Acc. Studio-Ensuite		144	-	-
L05-Circulation		144	-	-
L05-Circulation		144	-	-
L05-Circulation		144	-	-
L05-Circulation		144	-	-
L05-Circulation		144	-	-
L05-Circulation		144	-	-
L05-Circulation		144	-	-
L05-Circulation		144	-	-
L05-Circulation		144	-	-
L05-Circulation		144	-	-
L05-Circulation		144	-	-
L05-Circulation		144	-	-
L05-Circulation		144	-	-
L05-Circulation		144	-	-
L05-Circulation		144	-	-
L05-Circulation		144	-	-
L05-Circulation		144	-	-
L05-Circulation		144	-	-
L05-Cleaner Store		144	-	-
L05-Cluster-Bedroom		144	-	-
L05-Cluster-Bedroom		144	-	-
L05-Cluster-Bedroom		144	-	-
L05-Cluster-Bedroom		144	-	-
L05-Cluster-Bedroom		144	-	-
L05-Cluster-Bedroom		144	-	-
L05-Cluster-Bedroom		144	-	-
L05-Cluster-Bedroom		144	-	-
L05-Cluster-Bedroom		144	-	-
L05-Cluster-Bedroom		144	-	-
L05-Cluster-Bedroom		144	-	-
L05-Cluster-Bedroom		144	-	-
L05-Cluster-Bedroom		144	-	-
L05-Cluster-Bedroom		144	-	-

[illegible]

[illegible]

General lighting and display lighting		General luminaire		Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]	
	Standard value	95	80	0.3	
L06-Kitchen		144	-	-	
L06-Kitchen		144	-	-	
L06-Kitchen		144	-	-	
L06-Lobby		144	-	-	
L06-Lobby		144	-	-	
L06-Stair 6A		144	-	-	
L06-Stair 6B		144	-	-	
L06-Stair 6C		144	-	-	
L06-Stair 6D		144	-	-	
L06-Stair6D		144	-	-	
L06-Store		144	-	-	
L06-Studio (acc. convertible)		144	-	-	
L06-Studio (acc. convertible)-En Suite		144	-	-	
L07- Acc. Cluster-Bedroom		144	-	-	
L07- Acc. Cluster-Ensuite		144	-	-	
L07-Acc WC		144	-	-	
L07-Acc. Cluster-Bedroom		144	-	-	
L07-Acc. Cluster-Bedroom		144	-	-	
L07-Acc. Cluster-Bedroom		144	-	-	
L07-Acc. Cluster-Ensuite		144	-	-	
L07-Acc. Studio-Ensuite		144	-	-	
L07-Acc. Studio-Ensuite		144	-	-	
L07-Circulation		144	-	-	
L07-Circulation		144	-	-	
L07-Circulation		144	-	-	
L07-Circulation		144	-	-	
L07-Circulation		144	-	-	
L07-Circulation		144	-	-	
L07-Circulation		144	-	-	
L07-Circulation		144	-	-	
L07-Circulation		144	-	-	
L07-Circulation		144	-	-	
L07-Circulation		144	-	-	
L07-Circulation		144	-	-	
L07-Circulation		144	-	-	
L07-Cleaner Store		144	-	-	
L07-Cluster-Bedroom		144	-	-	
L07-Cluster-Bedroom		144	-	-	
L07-Cluster-Bedroom		144	-	-	
L07-Cluster-Bedroom		144	-	-	
L07-Cluster-Bedroom		144	-	-	
L07-Cluster-Bedroom		144	-	-	
L07-Cluster-Bedroom		144	-	-	

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
L07-Kitchen		144	-	-
L07-Kitchen		144	-	-
L07-Kitchen		144	-	-
L07-Kitchen		144	-	-
L07-Lobby		144	-	-
L07-Multi Faith		144	-	-
L07-Stair 6B		144	-	-
L07-Stair 9A		144	-	-
L07-Stair 9C		144	-	-
L07-Stair 9D		144	-	-
L07-Stair 9D		144	-	-
L07-Stair9D		144	-	-
L07-Store		144	-	-
L07-Yoga Lounge		144	-	-
L08- Acc. Cluster-Bedroom		144	-	-
L08- Acc. Cluster-Ensuite		144	-	-
L08-Acc. Cluster-Bedroom		144	-	-
L08-Acc. Cluster-Bedroom		144	-	-
L08-Acc. Cluster-Bedroom		144	-	-
L08-Acc. Cluster-Bedroom		144	-	-
L08-Acc. Cluster-Bedroom		144	-	-
L08-Acc. Cluster-Bedroom		144	-	-
L08-Acc. Cluster-En Suite		144	-	-
L08-Acc. Cluster-En Suite		144	-	-
L08-Acc. Cluster-En Suite		144	-	-
L08-Acc. Cluster-En Suite		144	-	-
L08-Acc. Cluster-Ensuite		144	-	-
L08-Acc. Studio-Ensuite		144	-	-
L08-Acc. Studio-Ensuite		144	-	-
L08-Circulation		144	-	-
L08-Circulation		144	-	-
L08-Circulation		144	-	-
L08-Circulation		144	-	-
L08-Circulation		144	-	-
L08-Circulation		144	-	-
L08-Circulation		144	-	-
L08-Circulation		144	-	-
L08-Circulation		144	-	-
L08-Circulation		144	-	-
L08-Circulation		144	-	-
L08-Circulation		144	-	-
L08-Circulation		144	-	-
L08-Cleaner Store		144	-	-
L08-Cluster-Bedroom		144	-	-

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
Standard value	95	80	0.3
L08-Cluster-Bedroom	144	-	-
L08-Cluster-Bedroom	144	-	-
L08-Cluster-Bedroom	144	-	-
L08-Cluster-Bedroom	144	-	-
L08-Cluster-Bedroom	144	-	-
L08-Cluster-Bedroom	144	-	-
L08-Cluster-Bedroom	144	-	-
L08-Cluster-Bedroom	144	-	-
L08-Cluster-Cupboard	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-En Suite	144	-	-
L08-Cluster-Ensuite	144	-	-
L08-Core	144	-	-
L08-Core 9A	144	-	-

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
L08-Core 9C		144	-	-
L08-Core 9D		144	-	-
L08-Core 9D		144	-	-
L08-Kitchen		144	-	-
L08-Kitchen		144	-	-
L08-Kitchen		144	-	-
L08-Kitchen		144	-	-
L08-Kitchen		144	-	-
L08-Kitchen		144	-	-
L08-Stair 9A		144	-	-
L08-Stair 9C		144	-	-
L08-Stair 9D		144	-	-
L08-Stair 9D		144	-	-
L08-Stair9D		144	-	-
L09- Acc. Cluster-Bedroom		144	-	-
L09- Acc. Cluster-Ensuite		144	-	-
L09-Acc. Cluster-Bedroom		144	-	-
L09-Acc. Cluster-Bedroom		144	-	-
L09-Acc. Cluster-Bedroom		144	-	-
L09-Acc. Cluster-Bedroom		144	-	-
L09-Acc. Cluster-Bedroom		144	-	-
L09-Acc. Cluster-Bedroom		144	-	-
L09-Acc. Cluster-En Suite		144	-	-
L09-Acc. Cluster-En Suite		144	-	-
L09-Acc. Cluster-En Suite		144	-	-
L09-Acc. Cluster-Ensuite		144	-	-
L09-Acc. Studio-Ensuite		144	-	-
L09-Acc. Studio-Ensuite		144	-	-
L09-Circulation		144	-	-
L09-Circulation		144	-	-
L09-Circulation		144	-	-
L09-Circulation		144	-	-
L09-Circulation		144	-	-
L09-Circulation		144	-	-
L09-Circulation		144	-	-
L09-Circulation		144	-	-
L09-Circulation		144	-	-
L09-Circulation		144	-	-
L09-Circulation		144	-	-
L09-Circulation		144	-	-
L09-Cleaner Store		144	-	-

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
Standard value	95	80	0.3
L09-Cluster-Bedroom	144	-	-
L09-Cluster-Bedroom	144	-	-
L09-Cluster-Bedroom	144	-	-
L09-Cluster-Bedroom	144	-	-
L09-Cluster-Bedroom	144	-	-
L09-Cluster-Bedroom	144	-	-
L09-Cluster-Bedroom	144	-	-
L09-Cluster-Bedroom	144	-	-
L09-Cluster-Bedroom	144	-	-
L09-Cluster-Cupboard	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-En Suite	144	-	-
L09-Cluster-Ensuite	144	-	-
L09-Core	144	-	-

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
Standard value	95	80	0.3
L10-Core 22D	144	-	-
L10-Core 22D	144	-	-
L10-Kitchen	144	-	-
L10-Kitchen	144	-	-
L10-Kitchen	144	-	-
L10-Kitchen	144	-	-
L10-Stair 22D	144	-	-
L10-Stair22D	144	-	-
L10-Store	144	-	-
L11-Circulation	144	-	-
L11-Circulation	144	-	-
L11-Circulation	144	-	-
L11-Circulation	144	-	-
L11-Circulation	144	-	-
L11-Cluster-Bedroom	144	-	-
L11-Cluster-Bedroom	144	-	-
L11-Cluster-Bedroom	144	-	-
L11-Cluster-Bedroom	144	-	-
L11-Cluster-En Suite	144	-	-
L11-Cluster-En Suite	144	-	-
L11-Cluster-En Suite	144	-	-
L11-Cluster-En Suite	144	-	-
L11-Cluster-En Suite	144	-	-
L11-Cluster-En Suite	144	-	-
L11-Cluster-En Suite	144	-	-
L11-Cluster-En Suite	144	-	-
L11-Cluster-En Suite	144	-	-
L11-Cluster-En Suite	144	-	-
L11-Cluster-En Suite	144	-	-
L11-Cluster-En Suite	144	-	-
L11-Cluster-Ensuite	144	-	-
L11-Cluster-Ensuite	144	-	-
L11-Core 22D	144	-	-
L11-Core 22D	144	-	-
L11-Core 22D	144	-	-
L11-Core 22D	144	-	-
L11-Kitchen	144	-	-
L11-Kitchen	144	-	-
L11-Kitchen	144	-	-
L11-Kitchen	144	-	-
L11-Stair 22D	144	-	-

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
Standard value	95	80	0.3
L11-Stair22D	144	-	-
L11-Store	144	-	-
L12-Circulation	144	-	-
L12-Circulation	144	-	-
L12-Circulation	144	-	-
L12-Circulation	144	-	-
L12-Circulation	144	-	-
L12-Cluster-Bedroom	144	-	-
L12-Cluster-Bedroom	144	-	-
L12-Cluster-Bedroom	144	-	-
L12-Cluster-Bedroom	144	-	-
L12-Cluster-En Suite	144	-	-
L12-Cluster-En Suite	144	-	-
L12-Cluster-En Suite	144	-	-
L12-Cluster-En Suite	144	-	-
L12-Cluster-En Suite	144	-	-
L12-Cluster-En Suite	144	-	-
L12-Cluster-En Suite	144	-	-
L12-Cluster-En Suite	144	-	-
L12-Cluster-En Suite	144	-	-
L12-Cluster-En Suite	144	-	-
L12-Cluster-En Suite	144	-	-
L12-Cluster-En Suite	144	-	-
L12-Cluster-En Suite	144	-	-
L12-Cluster-En Suite	144	-	-
L12-Cluster-En Suite	144	-	-
L12-Cluster-En Suite	144	-	-
L12-Cluster-Ensuite	144	-	-
L12-Cluster-Ensuite	144	-	-
L12-Core 22D	144	-	-
L12-Core 22D	144	-	-
L12-Core 22D	144	-	-
L12-Core 22D	144	-	-
L12-Kitchen	144	-	-
L12-Kitchen	144	-	-
L12-Kitchen	144	-	-
L12-Kitchen	144	-	-
L12-Stair 22D	144	-	-
L12-Stair22D	144	-	-
L12-Store	144	-	-
L13-Circulation	144	-	-
L13-Circulation	144	-	-
L13-Circulation	144	-	-
L13-Circulation	144	-	-

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
Standard value	95	80	0.3
L17-Stair 22D	144	-	-
L17-Stair22D	144	-	-
L17-Store	144	-	-
L18-Circulation	144	-	-
L18-Circulation	144	-	-
L18-Circulation	144	-	-
L18-Circulation	144	-	-
L18-Circulation	144	-	-
L18-Cluster-Bedroom	144	-	-
L18-Cluster-Bedroom	144	-	-
L18-Cluster-Bedroom	144	-	-
L18-Cluster-Bedroom	144	-	-
L18-Cluster-En Suite	144	-	-
L18-Cluster-En Suite	144	-	-
L18-Cluster-En Suite	144	-	-
L18-Cluster-En Suite	144	-	-
L18-Cluster-En Suite	144	-	-
L18-Cluster-En Suite	144	-	-
L18-Cluster-En Suite	144	-	-
L18-Cluster-En Suite	144	-	-
L18-Cluster-En Suite	144	-	-
L18-Cluster-En Suite	144	-	-
L18-Cluster-En Suite	144	-	-
L18-Cluster-En Suite	144	-	-
L18-Cluster-En Suite	144	-	-
L18-Cluster-En Suite	144	-	-
L18-Cluster-Ensuite	144	-	-
L18-Cluster-Ensuite	144	-	-
L18-Core 22D	144	-	-
L18-Core 22D	144	-	-
L18-Core 22D	144	-	-
L18-Core 22D	144	-	-
L18-Kitchen	144	-	-
L18-Kitchen	144	-	-
L18-Kitchen	144	-	-
L18-Kitchen	144	-	-
L18-Stair 22D	144	-	-
L18-Stair22D	144	-	-
L18-Store	144	-	-
L19-Circulation	144	-	-
L19-Circulation	144	-	-
L19-Circulation	144	-	-
L19-Circulation	144	-	-

[illegible]

General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m ²]
	Standard value	95	80	0.3
L22-Core 22D		144	-	-
L22-Core 22D		144	-	-
L22-Core 22D		144	-	-
L22-Core 22D		144	-	-
L22-Kitchen		144	-	-
L22-Kitchen		144	-	-
L22-Kitchen		144	-	-
L22-Kitchen		144	-	-
L22-Stair 22D		144	-	-
L22-Stair22D		144	-	-
L22-Store		144	-	-

The spaces in the building should have appropriate passive control measures to limit solar gains in summer

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
L00-Club Lounge	NO (-7.9%)	NO
L00-Commercial	YES (+4.5%)	NO
L00-Comms	N/A	N/A
L00-Courtyard Lounges	NO (-67.9%)	NO
L00-Security/Fire Mgmt	YES (+44.4%)	NO
L00-Staff Office & Welfare Lounge	NO (-11.3%)	NO
L00-Staff Office & Welfare Lounge	YES (+4.9%)	NO
L00-Student Seating/Lounge	NO (-26%)	NO
L00-Student Welfare	N/A	N/A
L00-TV & Pool Lounge	NO (-68.3%)	NO
L00-Welcome Desk	YES (+22.8%)	NO
L01- Acc. Cluster-Bedroom	NO (-72.1%)	NO
L01-Acc. Cluster-Bedroom	NO (-83.4%)	NO
L01-Acc. Cluster-Bedroom	NO (-75.8%)	NO
L01-Acc. Cluster-Bedroom	NO (-81.5%)	NO
L01-Acc. Cluster-Bedroom	NO (-89.4%)	NO
L01-Acc. Cluster-Bedroom	N/A	N/A
L01-Acc. Studio	NO (-44.7%)	NO
L01-Cluster-Bedroom	NO (-51.4%)	NO
L01-Cluster-Bedroom	NO (-39.8%)	NO
L01-Cluster-Bedroom	NO (-43.1%)	NO
L01-Cluster-Bedroom	NO (-53.5%)	NO
L01-Cluster-Bedroom	NO (-72.1%)	NO
L01-Cluster-Bedroom	NO (-46%)	NO
L01-Cluster-Bedroom	NO (-47.3%)	NO
L01-Cluster-Bedroom	NO (-85%)	NO
L01-Cluster-Bedroom	NO (-71.2%)	NO
L01-Cluster-Bedroom	NO (-38.5%)	NO
L01-Cluster-Bedroom	NO (-60.5%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
L01-Cluster-Bedroom	NO (-84.5%)	NO
L01-Cluster-Bedroom	NO (-78.2%)	NO
L01-Creative Work Shop	NO (-44%)	NO
L01-Creative Work Shop	YES (+14.1%)	NO
L01-Group Study	N/A	N/A
L01-Group Study	N/A	N/A
L01-Group Study	NO (-28.5%)	NO
L01-Group Study	YES (+18.4%)	NO
L01-Silent Study	NO (-19.3%)	NO
L01-Studio (acc. convertible)	NO (-68.5%)	NO
L01-Study Breakout	NO (-63.7%)	NO
L01-Study Lounge	NO (-74.3%)	NO
L02- Acc. Cluster-Bedroom	NO (-56.2%)	NO
L02-Acc. Cluster-Bedroom	NO (-72.7%)	NO
L02-Acc. Cluster-Bedroom	NO (-74.9%)	NO
L02-Acc. Cluster-Bedroom	NO (-81.5%)	NO
L02-Acc. Cluster-Bedroom	NO (-28.7%)	NO
L02-Acc. Cluster-Bedroom	N/A	N/A
L02-Acc. Cluster-Bedroom	NO (-89%)	NO
L02-Acc. Studio	NO (-44.8%)	NO
L02-Cluster-Bedroom	NO (-83.4%)	NO
L02-Cluster-Bedroom	NO (-73.7%)	NO
L02-Cluster-Bedroom	NO (-38.6%)	NO
L02-Cluster-Bedroom	NO (-43.2%)	NO
L02-Cluster-Bedroom	NO (-47%)	NO
L02-Cluster-Bedroom	NO (-50.7%)	NO
L02-Cluster-Bedroom	NO (-78.2%)	NO
L02-Cluster-Bedroom	NO (-83.9%)	NO
L02-Cluster-Bedroom	NO (-68%)	NO
L02-Cluster-Bedroom	NO (-44%)	NO
L02-Cluster-Bedroom	NO (-56.1%)	NO
L02-Cluster-Bedroom	NO (-72%)	NO
L02-Cluster-Bedroom	NO (-62.7%)	NO
L02-Cluster-Bedroom	NO (-39.7%)	NO
L02-Cluster-Bedroom	NO (-38.4%)	NO
L02-Cluster-Bedroom	NO (-36.6%)	NO
L02-Cluster-Bedroom	NO (-55%)	NO
L02-Cluster-Bedroom	NO (-55.7%)	NO
L02-Cluster-Bedroom	NO (-52.8%)	NO
L02-Creative Work Shop	N/A	N/A
L02-Group Study	N/A	N/A
L02-Studio (acc. convertible)	NO (-68.5%)	NO
L03- Acc. Cluster-Bedroom	NO (-56.2%)	NO
L03-Acc. Cluster-Bedroom	N/A	N/A
L03-Acc. Cluster-Bedroom	NO (-73.3%)	NO
L03-Acc. Cluster-Bedroom	NO (-69.8%)	NO
L03-Acc. Cluster-Bedroom	NO (-28.7%)	NO
L03-Acc. Cluster-Bedroom	NO (-88.8%)	NO
L03-Acc. Cluster-Bedroom	NO (-81.3%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
L03-Acc. Studio	NO (-44.8%)	NO
L03-Cluster-Bedroom	NO (-81.1%)	NO
L03-Cluster-Bedroom	NO (-69.7%)	NO
L03-Cluster-Bedroom	NO (-38.6%)	NO
L03-Cluster-Bedroom	NO (-43.1%)	NO
L03-Cluster-Bedroom	NO (-47%)	NO
L03-Cluster-Bedroom	NO (-50.7%)	NO
L03-Cluster-Bedroom	NO (-78.2%)	NO
L03-Cluster-Bedroom	NO (-36.6%)	NO
L03-Cluster-Bedroom	NO (-64.7%)	NO
L03-Cluster-Bedroom	NO (-44%)	NO
L03-Cluster-Bedroom	NO (-56.1%)	NO
L03-Cluster-Bedroom	NO (-71.6%)	NO
L03-Cluster-Bedroom	NO (-62.7%)	NO
L03-Cluster-Bedroom	NO (-39.7%)	NO
L03-Cluster-Bedroom	NO (-38.4%)	NO
L03-Cluster-Bedroom	NO (-55%)	NO
L03-Cluster-Bedroom	NO (-83.3%)	NO
L03-Cluster-Bedroom	NO (-51.2%)	NO
L03-Cluster-Bedroom	NO (-51.9%)	NO
L03-Creative Work Shop	N/A	N/A
L03-Group Study	N/A	N/A
L03-Studio (acc. convertible)	NO (-68.5%)	NO
L04- Acc. Cluster-Bedroom	NO (-56.2%)	NO
L04-Acc. Cluster-Bedroom	NO (-80.8%)	NO
L04-Acc. Cluster-Bedroom	NO (-65.7%)	NO
L04-Acc. Cluster-Bedroom	N/A	N/A
L04-Acc. Cluster-Bedroom	NO (-28.7%)	NO
L04-Acc. Cluster-Bedroom	NO (-72.9%)	NO
L04-Acc. Cluster-Bedroom	NO (-88%)	NO
L04-Acc. Studio	NO (-44.8%)	NO
L04-Cluster-Bedroom	NO (-38.5%)	NO
L04-Cluster-Bedroom	NO (-42.6%)	NO
L04-Cluster-Bedroom	NO (-47%)	NO
L04-Cluster-Bedroom	NO (-50.7%)	NO
L04-Cluster-Bedroom	NO (-78.2%)	NO
L04-Cluster-Bedroom	NO (-36.5%)	NO
L04-Cluster-Bedroom	NO (-62.7%)	NO
L04-Cluster-Bedroom	NO (-44%)	NO
L04-Cluster-Bedroom	NO (-56.1%)	NO
L04-Cluster-Bedroom	NO (-71.1%)	NO
L04-Cluster-Bedroom	NO (-62.7%)	NO
L04-Cluster-Bedroom	NO (-39.6%)	NO
L04-Cluster-Bedroom	NO (-38.4%)	NO
L04-Cluster-Bedroom	NO (-55%)	NO
L04-Cluster-Bedroom	NO (-79.5%)	NO
L04-Cluster-Bedroom	NO (-81.9%)	NO
L04-Cluster-Bedroom	NO (-45.7%)	NO
L04-Cluster-Bedroom	NO (-65.2%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
L04-Cluster-Bedroom	NO (-50.7%)	NO
L04-Creative Work Shop	N/A	N/A
L04-Group Study	N/A	N/A
L04-Studio (acc. convertible)	NO (-68.5%)	NO
L05- Acc. Cluster-Bedroom	NO (-56.2%)	NO
L05-Acc. Cluster-Bedroom	NO (-59%)	NO
L05-Acc. Cluster-Bedroom	NO (-28.7%)	NO
L05-Acc. Cluster-Bedroom	NO (-87%)	NO
L05-Acc. Cluster-Bedroom	NO (-71.3%)	NO
L05-Acc. Cluster-Bedroom	N/A	N/A
L05-Acc. Cluster-Bedroom	NO (-80.2%)	NO
L05-Acc. Studio	NO (-44.8%)	NO
L05-Cluster-Bedroom	NO (-61%)	NO
L05-Cluster-Bedroom	NO (-38%)	NO
L05-Cluster-Bedroom	NO (-40.9%)	NO
L05-Cluster-Bedroom	NO (-47%)	NO
L05-Cluster-Bedroom	NO (-50.7%)	NO
L05-Cluster-Bedroom	NO (-78.2%)	NO
L05-Cluster-Bedroom	NO (-36.5%)	NO
L05-Cluster-Bedroom	NO (-76.8%)	NO
L05-Cluster-Bedroom	NO (-44%)	NO
L05-Cluster-Bedroom	NO (-56.1%)	NO
L05-Cluster-Bedroom	NO (-69.3%)	NO
L05-Cluster-Bedroom	NO (-62.7%)	NO
L05-Cluster-Bedroom	NO (-39.6%)	NO
L05-Cluster-Bedroom	NO (-38.4%)	NO
L05-Cluster-Bedroom	NO (-55%)	NO
L05-Cluster-Bedroom	NO (-58.9%)	NO
L05-Cluster-Bedroom	NO (-49.6%)	NO
L05-Cluster-Bedroom	NO (-79.9%)	NO
L05-Cluster-Bedroom	NO (-37.8%)	NO
L05-Creative Work Shop	N/A	N/A
L05-Group Study	N/A	N/A
L05-Studio (acc. convertible)	NO (-68.5%)	NO
L06- Acc. Cluster-Bedroom	NO (-56.2%)	NO
L06-Acc. Cluster-Bedroom	NO (-28.7%)	NO
L06-Acc. Cluster-Bedroom	NO (-84.6%)	NO
L06-Acc. Cluster-Bedroom	NO (-68.9%)	NO
L06-Acc. Cluster-Bedroom	NO (-50.7%)	NO
L06-Acc. Cluster-Bedroom	N/A	N/A
L06-Acc. Cluster-Bedroom	NO (-75.7%)	NO
L06-Acc. Studio	NO (-44.8%)	NO
L06-Cluster-Bedroom	NO (-71.8%)	NO
L06-Cluster-Bedroom	NO (-57.2%)	NO
L06-Cluster-Bedroom	NO (-36.3%)	NO
L06-Cluster-Bedroom	NO (-37.1%)	NO
L06-Cluster-Bedroom	NO (-47%)	NO
L06-Cluster-Bedroom	NO (-50.7%)	NO
L06-Cluster-Bedroom	NO (-78.1%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
L06-Cluster-Bedroom	NO (-48.5%)	NO
L06-Cluster-Bedroom	NO (-54.6%)	NO
L06-Cluster-Bedroom	NO (-44%)	NO
L06-Cluster-Bedroom	NO (-56.1%)	NO
L06-Cluster-Bedroom	NO (-61.6%)	NO
L06-Cluster-Bedroom	NO (-62.7%)	NO
L06-Cluster-Bedroom	NO (-39.5%)	NO
L06-Cluster-Bedroom	NO (-55%)	NO
L06-Cluster-Bedroom	NO (-76.9%)	NO
L06-Cluster-Bedroom	NO (-38.4%)	NO
L06-Cluster-Bedroom	NO (-29.6%)	NO
L06-Cluster-Bedroom	NO (-36.6%)	NO
L06-Creative Work Shop	N/A	N/A
L06-Group Study	N/A	N/A
L06-Studio (acc. convertible)	NO (-68.5%)	NO
L07- Acc. Cluster-Bedroom	NO (-56.2%)	NO
L07-Acc. Cluster-Bedroom	NO (-67.1%)	NO
L07-Acc. Cluster-Bedroom	NO (-39.3%)	NO
L07-Acc. Cluster-Bedroom	NO (-25.7%)	NO
L07-Cluster-Bedroom	NO (-46.9%)	NO
L07-Cluster-Bedroom	NO (-50.7%)	NO
L07-Cluster-Bedroom	NO (-25.7%)	NO
L07-Cluster-Bedroom	NO (-50.7%)	NO
L07-Cluster-Bedroom	NO (-54%)	NO
L07-Cluster-Bedroom	NO (-44%)	NO
L07-Cluster-Bedroom	NO (-48.4%)	NO
L07-Cluster-Bedroom	NO (-62.7%)	NO
L07-Cluster-Bedroom	NO (-59.1%)	NO
L07-Gym	NO (-74.1%)	NO
L07-Multi Faith	NO (-9.9%)	NO
L07-Yoga Lounge	NO (-10.6%)	NO
L08- Acc. Cluster-Bedroom	NO (-56.2%)	NO
L08-Acc. Cluster-Bedroom	NO (-39.3%)	NO
L08-Acc. Cluster-Bedroom	NO (-20%)	NO
L08-Acc. Cluster-Bedroom	NO (-63.4%)	NO
L08-Acc. Cluster-Bedroom	NO (-66.5%)	NO
L08-Acc. Cluster-Bedroom	NO (-50.5%)	NO
L08-Acc. Cluster-Bedroom	NO (-91.2%)	NO
L08-Cluster-Bedroom	NO (-21.7%)	NO
L08-Cluster-Bedroom	NO (-44.8%)	NO
L08-Cluster-Bedroom	NO (-44%)	NO
L08-Cluster-Bedroom	NO (-48.4%)	NO
L08-Cluster-Bedroom	NO (-59.1%)	NO
L08-Cluster-Bedroom	NO (-50.7%)	NO
L08-Cluster-Bedroom	NO (-62.7%)	NO
L08-Cluster-Bedroom	NO (-51.5%)	NO
L08-Cluster-Bedroom	NO (-46.8%)	NO
L09- Acc. Cluster-Bedroom	NO (-56.2%)	NO
L09-Acc. Cluster-Bedroom	NO (-50.5%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
L09-Acc. Cluster-Bedroom	NO (-54.4%)	NO
L09-Acc. Cluster-Bedroom	NO (-89.6%)	NO
L09-Acc. Cluster-Bedroom	NO (-66.5%)	NO
L09-Acc. Cluster-Bedroom	NO (-17.9%)	NO
L09-Acc. Cluster-Bedroom	NO (-39.3%)	NO
L09-Cluster-Bedroom	NO (-59.1%)	NO
L09-Cluster-Bedroom	NO (-62.7%)	NO
L09-Cluster-Bedroom	NO (-50.7%)	NO
L09-Cluster-Bedroom	NO (-48.3%)	NO
L09-Cluster-Bedroom	NO (-37.9%)	NO
L09-Cluster-Bedroom	NO (-46.7%)	NO
L09-Cluster-Bedroom	NO (-44%)	NO
L09-Cluster-Bedroom	NO (-20%)	NO
L09-Cluster-Bedroom	NO (-50.1%)	NO
L10-Cluster-Bedroom	NO (-32.1%)	NO
L10-Cluster-Bedroom	NO (-37.7%)	NO
L10-Cluster-Bedroom	NO (-48.4%)	NO
L10-Cluster-Bedroom	NO (-47.3%)	NO
L11-Cluster-Bedroom	NO (-32.1%)	NO
L11-Cluster-Bedroom	NO (-47.3%)	NO
L11-Cluster-Bedroom	NO (-37.7%)	NO
L11-Cluster-Bedroom	NO (-48.4%)	NO
L12-Cluster-Bedroom	NO (-47.3%)	NO
L12-Cluster-Bedroom	NO (-32.1%)	NO
L12-Cluster-Bedroom	NO (-37.7%)	NO
L12-Cluster-Bedroom	NO (-48.4%)	NO
L13-Cluster-Bedroom	NO (-48.4%)	NO
L13-Cluster-Bedroom	NO (-47.3%)	NO
L13-Cluster-Bedroom	NO (-32.1%)	NO
L13-Cluster-Bedroom	NO (-37.7%)	NO
L14-Cluster-Bedroom	NO (-32.1%)	NO
L14-Cluster-Bedroom	NO (-48.4%)	NO
L14-Cluster-Bedroom	NO (-47.3%)	NO
L14-Cluster-Bedroom	NO (-37.7%)	NO
L15-Cluster-Bedroom	NO (-37.7%)	NO
L15-Cluster-Bedroom	NO (-32.1%)	NO
L15-Cluster-Bedroom	NO (-47.3%)	NO
L15-Cluster-Bedroom	NO (-48.4%)	NO
L16-Cluster-Bedroom	NO (-32.1%)	NO
L16-Cluster-Bedroom	NO (-37.7%)	NO
L16-Cluster-Bedroom	NO (-47.3%)	NO
L16-Cluster-Bedroom	NO (-48.4%)	NO
L17-Cluster-Bedroom	NO (-48.4%)	NO
L17-Cluster-Bedroom	NO (-47.3%)	NO
L17-Cluster-Bedroom	NO (-37.7%)	NO
L17-Cluster-Bedroom	NO (-32.1%)	NO
L18-Cluster-Bedroom	NO (-37.7%)	NO
L18-Cluster-Bedroom	NO (-32.1%)	NO
L18-Cluster-Bedroom	NO (-48.4%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
L18-Cluster-Bedroom	NO (-47.3%)	NO
L19-Cluster-Bedroom	NO (-47.3%)	NO
L19-Cluster-Bedroom	NO (-48.4%)	NO
L19-Cluster-Bedroom	NO (-37.7%)	NO
L19-Cluster-Bedroom	NO (-32.1%)	NO
L20-Cluster-Bedroom	NO (-47.3%)	NO
L20-Cluster-Bedroom	NO (-37.7%)	NO
L20-Cluster-Bedroom	NO (-48.4%)	NO
L20-Cluster-Bedroom	NO (-32.1%)	NO
L21-Cluster-Bedroom	NO (-32.1%)	NO
L21-Cluster-Bedroom	NO (-37.7%)	NO
L21-Cluster-Bedroom	NO (-48.4%)	NO
L21-Cluster-Bedroom	NO (-47.3%)	NO
L22-Cluster-Bedroom	NO (-48.4%)	NO
L22-Cluster-Bedroom	NO (-47.3%)	NO
L22-Cluster-Bedroom	NO (-32.1%)	NO
L22-Cluster-Bedroom	NO (-37.7%)	NO

Regulation 25A: Consideration of high efficiency 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?	NO
Are any such measures included in the proposed design?	YES

Technical Data Sheet (Actual vs. Notional Building)

Building Global Parameters

	Actual	Notional
Floor area [m ²]	27995.1	27995.1
External area [m ²]	19338.1	19338.1
Weather	MAN	MAN
Infiltration [m ³ /hm ² @ 50Pa]	2	3
Average conductance [W/K]	4946.55	10015.8
Average U-value [W/m ² K]	0.26	0.52
Alpha value* [%]	9.69	10

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

Building Use

% Area Building Type

1	Retail/Financial and Professional Services
	Restaurants and Cafes/Drinking Establishments/Takeaways
	Offices and Workshop Businesses
	General Industrial and Special Industrial Groups
	Storage or Distribution
	Hotels
	Residential Institutions: Hospitals and Care Homes
	Residential Institutions: Residential Schools
99	Residential Institutions: Universities and Colleges
	Secure Residential Institutions
	Residential Spaces
	Non-residential Institutions: Community/Day Centre
	Non-residential Institutions: Libraries, Museums, and Galleries
	Non-residential Institutions: Education
	Non-residential Institutions: Primary Health Care Building
	Non-residential Institutions: Crown and County Courts
	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/m²]

	Actual	Notional
Heating	16.58	15.44
Cooling	0.31	0.09
Auxiliary	2.32	2.51
Lighting	7.46	9.24
Hot water	5.91	6.69
Equipment*	26.17	26.17
TOTAL **	32.58	33.97

* 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/m²]

	Actual	Notional
Photovoltaic systems	4.51	0.92
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0
<i>Displaced electricity</i>	<i>4.51</i>	<i>0.92</i>

Energy & CO₂ Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m ²]	63.1	82.06
Primary energy [kWh _{PE} /m ²]	42.41	49.56
Total emissions [kg/m ²]	4.09	4.69

HVAC Systems Performance										
System Type	Heat dem MJ/m2	Cool dem MJ/m2	Heat con kWh/m2	Cool con kWh/m2	Aux con kWh/m2	Heat SSEFF	Cool SSEER	Heat gen SEFF	Cool gen SEER	
[ST] Other local room heater - fanned, [HS] Direct or storage electric heater, [HFT] Electricity, [CFT] Electricity										
Actual	100.1	0	29.3	0	3.4	0.95	0	1	0	
Notional	127.5	0	25.1	0	3	1.41	0	----	----	
[ST] Variable refrigerant flow, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	35	101.4	2.4	6.3	6.1	4.1	4.45	4.3	6.8	
Notional	85.9	31.4	8.6	1.9	13.5	2.78	4.63	----	----	
[ST] Split or multi-split system, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	0	0	0	0	0	4.01	4.83	4.3	6.8	
Notional	0	0	0	0	0	2.78	4.63	----	----	
[ST] Other local room heater - fanned, [HS] Direct or storage electric heater, [HFT] Electricity, [CFT] Electricity										
Actual	38.6	0	11.3	0	1	0.95	0	1	0	
Notional	84.7	0	16.7	0	1.1	1.41	0	----	----	
[ST] No Heating or Cooling										
Actual	0	0	0	0	0	0	0	0	0	
Notional	0	0	0	0	0	0	0	----	----	

Key to terms

Heat dem [MJ/m2]	= Heating energy demand
Cool dem [MJ/m2]	= Cooling energy demand
Heat con [kWh/m2]	= Heating energy consumption
Cool con [kWh/m2]	= Cooling energy consumption
Aux con [kWh/m2]	= 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