

## Project name

Baseline Holiday inn

As built

Date: Fri Jun 07 08:59:04 2024

## Administrative information

## Building Details

Address: 30 Jamestown Road, London , NW1 7BY

## Certifier details

Name: Name

Telephone number: Phone

Address: Street Address, City, Postcode

## Certification tool

Calculation engine: Apache

Calculation engine version: 7.0.26

Interface to calculation engine: IES Virtual Environment

Interface to calculation engine version: 7.0.26

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

Foundation area [m<sup>2</sup>]: 906.18The CO<sub>2</sub> emission and primary energy rates of the building must not exceed the targets

The building does not comply with England Building Regulations Part L 2021

Target CO <sub>2</sub> emission rate (TER), kgCO <sub>2</sub> /m <sup>2</sup> annum	39.42
Building CO <sub>2</sub> emission rate (BER), kgCO <sub>2</sub> /m <sup>2</sup> annum	60.38
Target primary energy rate (TPER), kWh <sub>PE</sub> /m <sup>2</sup> annum	235.12
Building primary energy rate (BPER), kWh <sub>PE</sub> /m <sup>2</sup> annum	378.48
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 <sub>a-Limit</sub>	U <sub>a-Calc</sub>	U <sub>i-Calc</sub>	First surface with maximum value
Walls*	0.26	0.35	0.35	BS000002:Surf[1]
Floors	0.18	0.25	0.25	BS000002:Surf[0]
Pitched roofs	0.16	-	-	No pitched roofs in building
Flat roofs	0.18	0.25	0.25	BS00000A:Surf[1]
Windows** and roof windows	1.6	2.2	2.2	BS000026:Surf[1]
Rooflights***	2.2	-	-	No roof lights in building
Personnel doors^	1.6	-	-	No personnel doors in building
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<sub>a-Limit</sub> = Limiting area-weighted average U-values [W/(m<sup>2</sup>K)]U<sub>i-Calc</sub> = Calculated maximum individual element U-values [W/(m<sup>2</sup>K)]U<sub>a-Calc</sub> = Calculated area-weighted average U-values [W/(m<sup>2</sup>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<sup>2</sup>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 <sup>3</sup> /(h.m <sup>2</sup> ) at 50 Pa	8	10

## 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	YES
Whole building electric power factor achieved by power factor correction	<0.9

1- Main system ( Baseline)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
<b>This system</b>	0.85	3	0	2.9	-
<b>Standard value</b>	0.93*	4.5**	N/A	2^	N/A

**Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system** NO

\* Standard shown is for gas single boiler systems <=2 MW output and overall for multi-boiler systems. For single boiler systems >2 MW or any individual boiler in a multi-boiler system, limiting efficiency is 0.88.

\*\* Standard shown is for air-cooled chillers >=400 kW. For chillers <400 kW, limiting SEER is 4.

^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.

"No HWS in project, or hot water is provided by HVAC system"

### 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		Zone	Standard
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1			
Corridor	-	-	-	-	-	-	-	0.3	-	-	-	N/A
Corridor	-	-	-	-	-	-	-	0.3	-	-	-	N/A
Corridor	-	-	-	-	-	-	-	0.3	-	-	-	N/A
GYM	-	-	-	-	-	-	-	0.3	-	-	-	N/A
office	-	-	-	-	-	-	-	0.3	-	-	-	N/A
Restaurant	-	-	-	-	-	-	-	0.3	-	-	-	N/A
Buffet area	-	-	-	-	-	-	-	0.3	-	-	-	N/A
Plant Room	-	-	-	-	-	-	-	0.3	-	-	-	N/A
Store	-	-	-	-	-	-	-	0.3	-	-	-	N/A
office	-	-	-	-	-	-	-	0.3	-	-	-	N/A
Stairwell	-	-	-	-	-	-	-	0.3	-	-	-	N/A
Corridor	-	-	-	-	-	-	-	0.3	-	-	-	N/A
Store	-	-	-	-	-	-	-	0.3	-	-	-	N/A
Server Room	-	-	-	-	-	-	-	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		
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard
Lobby	-	-	-	-	-	-	-	0.3	-	-	N/A
Corridor	-	-	-	-	-	-	-	0.3	-	-	N/A
Lobby	-	-	-	-	-	-	-	0.3	-	-	N/A
WC	-	-	-	-	-	-	-	0.3	-	-	N/A
WC	-	-	-	-	-	-	-	0.3	-	-	N/A
WC	-	-	-	-	-	-	-	0.3	-	-	N/A
Stairwell	-	-	-	-	-	-	-	0.3	-	-	N/A
Corridor	-	-	-	-	-	-	-	0.3	-	-	N/A
WC	-	-	-	-	-	-	-	0.3	-	-	N/A
WC	-	-	-	-	-	-	-	0.3	-	-	N/A
UKPN Sub Station	-	-	-	-	-	-	-	0.3	-	-	N/A
Switch room	-	-	-	-	-	-	-	0.3	-	-	N/A
pantry	-	-	-	-	-	-	-	0.3	-	-	N/A
dish left	-	-	-	-	-	-	-	0.3	-	-	N/A
Dish Wash/Pantry	-	-	-	-	-	-	-	0.3	-	-	N/A
Store	-	-	-	-	-	-	-	0.3	-	-	N/A
Double Height Event Space	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Corridor	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Stairs	-	-	-	-	-	-	-	0.3	-	-	N/A
Office	-	-	-	-	-	-	-	0.3	-	-	N/A
store	-	-	-	-	-	-	-	0.3	-	-	N/A
Office	-	-	-	-	-	-	-	0.3	-	-	N/A
Lobby	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Stairs	-	-	-	-	-	-	-	0.3	-	-	N/A
plant room	-	-	-	-	-	-	-	0.3	-	-	N/A
Store	-	-	-	-	-	-	-	0.3	-	-	N/A
Bar	-	-	-	-	-	-	-	0.3	-	-	N/A
Store	-	-	-	-	-	-	-	0.3	-	-	N/A
WC	-	-	-	-	-	-	-	0.3	-	-	N/A
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		
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard
WC	-	-	-	-	-	-	-	0.3	-	-	N/A
Store	-	-	-	-	-	-	-	0.3	-	-	N/A
GF	-	-	-	-	-	-	-	0.3	-	-	N/A
office (RECEP)	-	-	-	-	-	-	-	0.3	-	-	N/A
(plant Room) shutter area	-	-	-	-	-	-	-	0.3	-	-	N/A
Corridor	-	-	-	-	-	-	-	0.3	-	-	N/A
Stairs	-	-	-	-	-	-	-	0.3	-	-	N/A
Lobby	-	-	-	-	-	-	-	0.3	-	-	N/A
Meeting Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Refuse area	-	-	-	-	-	-	-	0.3	-	-	N/A
Corridor	-	-	-	-	-	-	-	0.3	-	-	N/A
office (BOH)	-	-	-	-	-	-	-	0.3	-	-	N/A
Service Area	-	-	-	-	-	-	-	0.3	-	-	N/A
store	-	-	-	-	-	-	-	0.3	-	-	N/A
store	-	-	-	-	-	-	-	0.3	-	-	N/A
office (HR)	-	-	-	-	-	-	-	0.3	-	-	N/A
GF	-	-	-	-	-	-	-	0.3	-	-	N/A
Lobby	-	-	-	-	-	-	-	0.3	-	-	N/A
Corridor	-	-	-	-	-	-	-	0.3	-	-	N/A
Kitchen	-	-	-	-	-	-	-	0.3	-	-	N/A
store	-	-	-	-	-	-	-	0.3	-	-	N/A
Stairs	-	-	-	-	-	-	-	0.3	-	-	N/A
store	-	-	-	-	-	-	-	0.3	-	-	N/A
store	-	-	-	-	-	-	-	0.3	-	-	N/A
Glass House	-	-	-	-	-	-	-	0.3	-	-	N/A
Bar	-	-	-	-	-	-	-	0.3	-	-	N/A
store	-	-	-	-	-	-	-	0.3	-	-	N/A
Corridor	-	-	-	-	-	-	-	0.3	-	-	N/A
Corridor	-	-	-	-	-	-	-	0.3	-	-	N/A
seating area	-	-	-	-	-	-	-	0.3	-	-	N/A
store	-	-	-	-	-	-	-	0.3	-	-	N/A
Lobby	-	-	-	-	-	-	-	0.3	-	-	N/A
Lobby	-	-	-	-	-	-	-	0.3	-	-	N/A
Lounge Transitional zone	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Stairs	-	-	-	-	-	-	-	0.3	-	-	N/A
Corridor	-	-	-	-	-	-	-	0.3	-	-	N/A
Lobby	-	-	-	-	-	-	-	0.3	-	-	N/A
Corridor	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Stairs	-	-	-	-	-	-	-	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		
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard
Services	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Store	-	-	-	-	-	-	-	0.3	-	-	N/A
Stairs	-	-	-	-	-	-	-	0.3	-	-	N/A
Service	-	-	-	-	-	-	-	0.3	-	-	N/A
Stairs	-	-	-	-	-	-	-	0.3	-	-	N/A
Lobby	-	-	-	-	-	-	-	0.3	-	-	N/A
Corridor	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Stairs	-	-	-	-	-	-	-	0.3	-	-	N/A
corridor	-	-	-	-	-	-	-	0.3	-	-	N/A
lobby	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Stairs	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
corridor	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Store	-	-	-	-	-	-	-	0.3	-	-	N/A
Stairs	-	-	-	-	-	-	-	0.3	-	-	N/A
Service	-	-	-	-	-	-	-	0.3	-	-	N/A
Stairs	-	-	-	-	-	-	-	0.3	-	-	N/A
Lobby	-	-	-	-	-	-	-	0.3	-	-	N/A
Corridor	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Stairs	-	-	-	-	-	-	-	0.3	-	-	N/A
Corridor	-	-	-	-	-	-	-	0.3	-	-	N/A
Lobby	-	-	-	-	-	-	-	0.3	-	-	N/A
Corridor	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Stairs	-	-	-	-	-	-	-	0.3	-	-	N/A
Services	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest room	-	-	-	-	-	-	-	0.3	-	-	N/A
Reception	-	-	-	-	-	-	-	0.3	-	-	N/A
Reception	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	0.3	-	-	N/A
Guest Room	-	-	-	-	-	-	-	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		
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard
plant room	-	-	-	-	-	-	-	0.3	-	-	N/A

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
Corridor		101	-	-
Corridor		88	-	-
Corridor		101	-	-
GYM		65	-	-
office		56	-	-
Restaurant		58	15	10
Buffet area		65	15	10
Plant Room		42	-	-
Store		49	-	-
office		47	-	-
Stairwell		74	-	-
Corridor		120	-	-
Store		52	-	-
Server Room		54	-	-
Lobby		108	-	-
Corridor		82	-	-
Lobby		174	-	-
WC		117	-	-
WC		107	-	-
WC		108	-	-
Stairwell		74	-	-
Corridor		96	-	-
WC		75	-	-
WC		76	-	-
UKPN Sub Station		49	-	-
Switch room		52	-	-
pantry		62	-	-
dish left		169	-	-
Dish Wash/Pantry		68	-	-
Store		72	-	-
Double Height Event Space		64	-	-
Guest Room		64	-	-
Guest Room		68	-	-
Guest Room		68	-	-
Corridor		82	-	-
Guest Room		66	-	-
Guest Room		67	-	-
Guest Room		67	-	-

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
Guest Room		67	-	-
Guest Room		66	-	-
Guest Room		68	-	-
Stairs		68	-	-
Office		46	-	-
store		54	-	-
Office		45	-	-
Lobby		97	-	-
Guest Room		69	-	-
Guest Room		69	-	-
Guest Room		67	-	-
Guest Room		68	-	-
Stairs		71	-	-
plant room		42	-	-
Store		62	-	-
Bar		78	15	10
Store		54	-	-
WC		77	-	-
WC		80	-	-
WC		119	-	-
Store		49	-	-
GF		89	-	-
office (RECEP)		46	-	-
(plant Room) shutter area		49	-	-
Corridor		101	-	-
Stairs		71	-	-
Lobby		98	-	-
Meeting Room		47	-	-
Refuse area		47	-	-
Corridor		103	-	-
office (BOH)		45	-	-
Service Area		44	-	-
store		75	-	-
store		92	-	-
office (HR)		76	-	-
GF		120	-	-
Lobby		144	-	-
Corridor		107	-	-
Kitchen		60	-	-
store		102	-	-
Stairs		96	-	-
store		73	-	-
store		77	-	-

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
Glass House		62	-	-
Bar		68	15	10
store		57	-	-
Corridor		99	-	-
Corridor		79	-	-
seating area		58	-	-
store		65	-	-
Lobby		174	-	-
Lobby		111	-	-
Lounge Transitional zone		58	-	-
Guest Room		58	-	-
Guest Room		58	-	-
Guest Room		61	-	-
Stairs		76	-	-
Corridor		112	-	-
Lobby		98	-	-
Corridor		85	-	-
Guest Room		60	-	-
Stairs		83	-	-
Services		69	-	-
Guest Room		58	-	-
Guest Room		61	-	-
Guest Room		58	-	-
Store		48	-	-
Stairs		85	-	-
Service		70	-	-
Stairs		80	-	-
Lobby		100	-	-
Corridor		82	-	-
Guest Room		58	-	-
Guest Room		59	-	-
Stairs		69	-	-
corridor		91	-	-
lobby		83	-	-
Guest Room		63	-	-
Stairs		71	-	-
Guest Room		59	-	-
corridor		76	-	-
Guest Room		58	-	-
Guest Room		61	-	-
Store		48	-	-
Stairs		85	-	-
Service		70	-	-



General lighting and display lighting		General luminaire	Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m <sup>2</sup> ]
	Standard value	95	80	0.3
Stairs		80	-	-
Lobby		100	-	-
Corridor		82	-	-
Guest Room		58	-	-
Guest Room		58	-	-
Guest Room		61	-	-
Stairs		76	-	-
Corridor		112	-	-
Lobby		98	-	-
Corridor		85	-	-
Guest Room		60	-	-
Stairs		83	-	-
Services		69	-	-
Guest room		67	-	-
Reception		103	15	9
Reception		174	15	9
Guest Room		61	-	-
Guest Room		60	-	-
Guest Room		58	-	-
plant room		39	-	-

**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?
Corridor	N/A	N/A
Corridor	N/A	N/A
Corridor	N/A	N/A
GYM	N/A	N/A
office	N/A	N/A
Restaurant	N/A	N/A
Buffet area	N/A	N/A
Plant Room	N/A	N/A
Store	N/A	N/A
office	N/A	N/A
Stairwell	N/A	N/A
Corridor	N/A	N/A
Store	N/A	N/A
Server Room	N/A	N/A
Lobby	N/A	N/A
Corridor	N/A	N/A
Lobby	N/A	N/A
WC	N/A	N/A
WC	N/A	N/A
WC	N/A	N/A

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
Stairwell	N/A	N/A
Corridor	N/A	N/A
WC	N/A	N/A
WC	N/A	N/A
UKPN Sub Station	N/A	N/A
Switch room	N/A	N/A
pantry	N/A	N/A
dish left	N/A	N/A
Dish Wash/Pantry	N/A	N/A
Store	N/A	N/A
Double Height Event Space	YES (+237.3%)	NO
Guest Room	YES (+50.1%)	NO
Guest Room	YES (+56.1%)	NO
Guest Room	NO (-49.1%)	NO
Corridor	N/A	N/A
Guest Room	NO (-62.9%)	NO
Guest Room	NO (-61.3%)	NO
Guest Room	NO (-62.3%)	NO
Guest Room	NO (-60.4%)	NO
Guest Room	NO (-65.2%)	NO
Guest Room	NO (-56.2%)	NO
Stairs	N/A	N/A
Office	N/A	N/A
store	N/A	N/A
Office	N/A	N/A
Lobby	N/A	N/A
Guest Room	NO (-98.6%)	NO
Guest Room	NO (-97.5%)	NO
Guest Room	NO (-75.7%)	NO
Guest Room	NO (-79.4%)	NO
Stairs	N/A	N/A
plant room	NO (-38.4%)	NO
Store	N/A	N/A
Bar	N/A	N/A
Store	N/A	N/A
WC	N/A	N/A
WC	N/A	N/A
WC	N/A	N/A
Store	N/A	N/A
GF	N/A	N/A
office (RECEP)	N/A	N/A
(plant Room) shutter area	N/A	N/A
Corridor	N/A	N/A
Stairs	N/A	N/A
Lobby	N/A	N/A
Meeting Room	N/A	N/A
Refuse area	N/A	N/A
Corridor	N/A	N/A
office (BOH)	N/A	N/A

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
Service Area	N/A	N/A
store	N/A	N/A
store	N/A	N/A
office (HR)	N/A	N/A
GF	N/A	N/A
Lobby	N/A	N/A
Corridor	N/A	N/A
Kitchen	N/A	N/A
store	N/A	N/A
Stairs	N/A	N/A
store	N/A	N/A
store	N/A	N/A
Glass House	N/A	N/A
Bar	N/A	N/A
store	NO (-12.6%)	NO
Corridor	N/A	N/A
Corridor	NO (-68%)	NO
seating area	YES (+75.8%)	NO
store	N/A	N/A
Lobby	N/A	N/A
Lobby	N/A	N/A
Lounge Transitional zone	YES (+53.4%)	NO
Guest Room	NO (-40.4%)	NO
Guest Room	NO (-71.9%)	NO
Guest Room	NO (-54%)	NO
Stairs	N/A	N/A
Corridor	N/A	N/A
Lobby	N/A	N/A
Corridor	N/A	N/A
Guest Room	NO (-89.6%)	NO
Stairs	N/A	N/A
Services	N/A	N/A
Guest Room	NO (-76.9%)	NO
Guest Room	NO (-89.4%)	NO
Guest Room	NO (-53%)	NO
Store	N/A	N/A
Stairs	N/A	N/A
Service	N/A	N/A
Stairs	N/A	N/A
Lobby	N/A	N/A
Corridor	N/A	N/A
Guest Room	YES (+7.8%)	NO
Guest Room	NO (-60.1%)	NO
Stairs	N/A	N/A
corridor	N/A	N/A
lobby	N/A	N/A
Guest Room	NO (-88.2%)	NO
Stairs	N/A	N/A
Guest Room	NO (-84.2%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
corridor	N/A	N/A
Guest Room	NO (-81.5%)	NO
Guest Room	NO (-89.4%)	NO
Store	N/A	N/A
Stairs	N/A	N/A
Service	N/A	N/A
Stairs	N/A	N/A
Lobby	N/A	N/A
Corridor	N/A	N/A
Guest Room	NO (-40.2%)	NO
Guest Room	NO (-71.9%)	NO
Guest Room	NO (-54%)	NO
Stairs	N/A	N/A
Corridor	N/A	N/A
Lobby	N/A	N/A
Corridor	N/A	N/A
Guest Room	NO (-89.6%)	NO
Stairs	N/A	N/A
Services	N/A	N/A
Guest room	YES (+59%)	NO
Reception	YES (+108.6%)	NO
Reception	NO (-18.8%)	NO
Guest Room	NO (-62.2%)	NO
Guest Room	NO (-60.1%)	NO
Guest Room	NO (-37.4%)	NO
plant room	N/A	N/A

## Regulation 25A: Consideration of high efficiency alternative energy systems

Were alternative energy systems considered and analysed as part of the design process?	NO
Is evidence of such assessment available as a separate submission?	NO
Are any such measures included in the proposed design?	NO

# Technical Data Sheet (Actual vs. Notional Building)

## Building Global Parameters

	Actual	Notional
Floor area [m <sup>2</sup> ]	8155.6	8155.6
External area [m <sup>2</sup> ]	6408	6407.4
Weather	LON	LON
Infiltration [m <sup>3</sup> /hm <sup>2</sup> @ 50Pa]	10	3
Average conductance [W/K]	3561.5	2346.66
Average U-value [W/m <sup>2</sup> K]	0.56	0.37
Alpha value* [%]	25	10

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

## Building Use

### % Area Building Type

Retail/Financial and Professional Services  
 Restaurants and Cafes/Drinking Establishments/Takeaways  
 Offices and Workshop Businesses  
 General Industrial and Special Industrial Groups  
 Storage or Distribution

### 100 Hotels

Residential Institutions: Hospitals and Care Homes  
 Residential Institutions: Residential Schools  
 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/m<sup>2</sup>]

	Actual	Notional
Heating	47.63	2.92
Cooling	10.86	7.24
Auxiliary	41.4	19.94
Lighting	18.57	7.89
Hot water	193.92	164.96
Equipment*	75	75
<b>TOTAL **</b>	<b>312.38</b>	<b>202.95</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	3.66
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0
<i>Displaced electricity</i>	<i>0</i>	<i>3.66</i>

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

	Actual	Notional
Heating + cooling demand [MJ/m <sup>2</sup> ]	213.71	130.19
Primary energy [kWh <sub>PE</sub> /m <sup>2</sup> ]	378.48	235.12
Total emissions [kg/m <sup>2</sup> ]	60.38	39.42

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] Fan coil systems, [HS] LTHW boiler, [HFT] Natural Gas, [CFT] Electricity										
	Actual	134.3	79.4	47.6	10.9	41.4	0.78	2.03	0.85	3
	Notional	9.5	120.7	2.9	7.2	19.7	0.91	4.63	----	----

### 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