

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
01 - stairs		150	-	-
03 - plant		156	-	-
03 - escape stair		150	-	-
03 - protected lobby		120	-	-
00 - Office perimeter E01		130	-	-
00 - Office perimeter E02		130	-	-
00 - Office perimeter E03		130	-	-
00 - Circulation 03		120	-	-
00 - WC lobby 02		120	-	-
01 - Office perimeter E01		130	-	-
01 - Office perimeter N01		130	-	-
00 - Postroom (Security desk)		130	-	-
00 - protected lobby		120	-	-
00 - Acc. WC		137	-	-
00 - Meeting Room 03		130	-	-
00 - Changing Room		120	-	-
00 - Office 01		130	-	-
00 - Drying Space		130	-	-
00 - Showers 06		120	-	-
00 - Showers 07		120	-	-
00 - Showers 08		120	-	-
00 - Storage		130	-	-
00 - Hot Water Tank		156	-	-
00 - Meeting Room Wing W01		130	-	-
00 - Meeting Room Wing.01		130	-	-
00 - Office Perimeter S01		130	-	-
01 - Meeting Room Wing 01		130	-	-
01 - Meeting Room Wing 02		130	-	-
01 - Meeting Room Wing 03		130	-	-
01 - Meeting Room Wing 04		130	-	-
01 - Meeting Room Wing 05		130	-	-
01 - Meeting Room Wing 06		130	-	-
01 - Meeting Room Wing 07		130	-	-
01 - Circulation Bridge		120	-	-
00 - Office Wing		130	-	-
00 - Study Room		130	-	-
00 - Plant Space		156	-	-
01 - Meeting Room 01		130	-	-
01 - Meeting Room 02		130	-	-
01- Office perimeter W01		130	-	-
01 - Office Central 02		130	-	-
01 - Meeting Room Wing 08		130	-	-
01 - Circulation Wing Perimeter E01		120	-	-

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
01 - Office perimeter S01		130	-	-
01 - Office perimeter S02		130	-	-
01 - Office Central 01		130	-	-
01 - Study Room 01		130	-	-
01 - Booth 01		130	-	-
01 - Booth 02		130	-	-
01 - Study Room 02		130	-	-
01 - Furniture Storage		130	-	-
00 - Circulation Wing Perimeter E01		120	-	-
00 - IT/tech store		130	-	-
00 - Office perimeter N01		130	-	-
02 - Booth 02		130	-	-
02 - Study Room 02		130	-	-
02 - Study Room 01		130	-	-
02 - Booth 01		130	-	-
02 - Office perimeter W01		130	-	-
02 - Office perimeter S01		130	-	-
02 - meeting room 01		130	-	-
02 - meeting room 02		130	-	-
02 - Office central 01		130	-	-
02 - Office central 02		130	-	-

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?
00 - Meeting Room 01	N/A	N/A
00 - Meeting Room 02	N/A	N/A
02 - meeting room 04	N/A	N/A
02 - meeting room 05	N/A	N/A
02 - Office perimeter E01	NO (-65%)	NO
02 - Office perimeter N01	NO (-66.8%)	NO
00 - FM room	N/A	N/A
00 - Draft Lobby	NO (-57.7%)	NO
01 - meeting room	N/A	N/A
01 - meeting room	N/A	N/A
00 - Office perimeter E01	NO (-79.7%)	NO
00 - Office perimeter E02	NO (-83.2%)	NO
00 - Office perimeter E03	NO (-43.7%)	NO
01 - Office perimeter E01	NO (-65.6%)	NO
01 - Office perimeter N01	NO (-74%)	NO
00 - Meeting Room 03	N/A	N/A
00 - Office 01	NO (-80.3%)	NO
00 - Meeting Room Wing W01	NO (-75.3%)	NO
00 - Meeting Room Wing.01	N/A	N/A

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
00 - Office Perimeter S01	NO (-32.2%)	NO
01 - Meeting Room Wing 01	NO (-95.5%)	NO
01 - Meeting Room Wing 02	NO (-95.4%)	NO
01 - Meeting Room Wing 03	NO (-96.4%)	NO
01 - Meeting Room Wing 04	NO (-95.3%)	NO
01 - Meeting Room Wing 05	NO (-95.4%)	NO
01 - Meeting Room Wing 06	NO (-96.4%)	NO
01 - Meeting Room Wing 07	NO (-96.4%)	NO
00 - Office Wing	NO (-54%)	NO
01 - Meeting Room 01	NO (-42.8%)	NO
01 - Meeting Room 02	NO (-42%)	NO
01- Office perimeter W01	NO (-37.8%)	NO
01 - Office Central 02	NO (-82.4%)	NO
01 - Meeting Room Wing 08	N/A	N/A
01 - Office perimeter S01	NO (-79%)	NO
01 - Office perimeter S02	NO (-52.9%)	NO
01 - Office Central 01	NO (-85.6%)	NO
01 - Study Room 01	N/A	N/A
01 - Booth 01	N/A	N/A
01 - Booth 02	N/A	N/A
01 - Study Room 02	N/A	N/A
01 - Furniture Storage	N/A	N/A
00 - Circulation Wing Perimeter E01	NO (-61.6%)	NO
00 - IT/tech store	NO (-40.6%)	NO
00 - Office perimeter N01	NO (-59.1%)	NO
02 - Booth 02	N/A	N/A
02 - Study Room 02	N/A	N/A
02 - Study Room 01	N/A	N/A
02 - Booth 01	N/A	N/A
02 - Office perimeter W01	NO (-48.8%)	NO
02 - Office perimeter S01	NO (-60.9%)	NO
02 - meeting room 01	N/A	N/A
02 - meeting room 02	N/A	N/A
02 - Office central 01	NO (-67.4%)	NO
02 - Office central 02	NO (-80.1%)	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]	5207	5207
External area [m ²]	6524.5	6524.5
Weather	LON	LON
Infiltration [m ³ /hm ² @ 50Pa]	3	3
Average conductance [W/K]	1646.29	2027.59
Average U-value [W/m ² K]	0.25	0.31
Alpha value* [%]	25.46	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
100	Offices and Workshop Businesses
	General Industrial and Special Industrial Groups
	Storage or Distribution
	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/m²]

	Actual	Notional
Heating	1.74	1.3
Cooling	5.85	5.48
Auxiliary	6.72	8.71
Lighting	10.09	15.14
Hot water	6.61	4.89
Equipment*	52.56	52.56
TOTAL**	31	35.53

* 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	0	0
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0
<i>Displaced electricity</i>	<i>0</i>	<i>0</i>

Energy & CO₂ Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m ²]	97.4	104.44
Primary energy [kWh _{PE} /m ²]	45.53	52.23
Total emissions [kg/m ²]	4.14	4.76

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] Central heating using water: radiators, [HS] ASHP, [HFT] Electricity, [CFT] Electricity									
Actual	74.2	0	8.8	0	0.7	2.36	0	2.64	0
Notional	49.9	0	5	0	0.6	2.78	0	----	----
[ST] Fan coil systems, [HS] ASHP, [HFT] Electricity, [CFT] Electricity									
Actual	15.2	114.9	1.9	8.1	7.8	2.21	3.96	2.64	5.2
Notional	15.2	126	1.5	7.6	10.5	2.78	4.63	----	----
[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

Project name

Haringey Civic Centre New Annex Green**As designed****Date:** Thu Mar 09 14:08:08 2023

Administrative information

Building Details

Address: 255 High Road, London, N22 8LE

Certifier details

Name: Imogen Snell

Telephone number:

Address: , ,

Certification tool

Calculation engine: Apache

Calculation engine version: 7.0.19

Interface to calculation engine: IES Virtual Environment

Interface to calculation engine version: 7.0.19

BRUKL compliance module version: v6.1.e.0

Foundation area [m²]: 1329.43The 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	4.76
Building CO ₂ emission rate (BER), kgCO ₂ /m ² annum	2.3
Target primary energy rate (TPER), kWh _{PE} /m ² annum	52.23
Building primary energy rate (BPER), kWh _{PE} /m ² annum	24.47
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	00000023:Surf[0]
Floors	0.18	0.1	0.12	02000027:Surf[0]
Pitched roofs	0.16	-	-	No pitched roofs in building
Flat roofs	0.18	0.11	0.11	02000027:Surf[1]
Windows** and roof windows	1.6	1.21	1.21	00000018:Surf[0]
Rooflights***	2.2	-	-	No roof lights in building
Personnel doors^	1.6	1.15	1.15	00000048: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/(m²K)]U_{i-Calc} = Calculated maximum individual element U-values [W/(m²K)]U_{a-Calc} = Calculated area-weighted average U-values [W/(m²K)]

* 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/m²K

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	2.5

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	>0.95

1- A6_FCUs

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.5	4.65	0	1.3	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.					

2- A1_Heating single pipe rads

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.5	-	0.2	-	-
Standard value	2.5*	N/A	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.					

1- AX_DHW Building

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	1	0.013
Standard value	1	N/A

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			
00 - Meeting Room 01	-	-	-	-	-	-	-	0.2	-	-	-	N/A
00 - Meeting Room 02	-	-	-	-	-	-	-	0.2	-	-	-	N/A
02 - meeting room 04	-	-	-	-	-	-	-	0.2	-	-	-	N/A
02 - meeting room 05	-	-	-	-	-	-	-	0.2	-	-	-	N/A
02 - Office perimeter E01	-	-	-	-	-	-	-	0.2	-	-	-	N/A
02 - Office perimeter N01	-	-	-	-	-	-	-	0.2	-	-	-	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
00 - Draft Lobby	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - meeting room	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - meeting room	-	-	-	-	-	-	-	0.2	-	-	N/A
00 - Office perimeter E01	-	-	-	-	-	-	-	0.2	-	-	N/A
00 - Office perimeter E02	-	-	-	-	-	-	-	0.2	-	-	N/A
00 - Office peirmeter E03	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Office perimeter E01	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Office perimeter N01	-	-	-	-	-	-	-	0.2	-	-	N/A
00 - Meeting Room 03	-	-	-	-	-	-	-	0.2	-	-	N/A
00 - Office 01	-	-	-	-	-	-	-	0.2	-	-	N/A
00 - Meeting Room Wing W01	-	-	-	-	-	-	-	0.2	-	-	N/A
00 - Meeting Room Wing.01	-	-	-	-	-	-	-	0.2	-	-	N/A
00 - Office Perimeter S01	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Meeting Room Wing 01	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Meeting Room Wing 02	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Meeting Room Wing 03	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Meeting Room Wing 04	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Meeting Room Wing 05	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Meeting Room Wing 06	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Meeting Room Wing 07	-	-	-	-	-	-	-	0.2	-	-	N/A
00 - Office Wing	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Meeting Room 01	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Meeting Room 02	-	-	-	-	-	-	-	0.2	-	-	N/A
01- Office perimeter W01	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Office Central 02	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Meeting Room Wing 08	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Office perimeter S01	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Office perimeter S02	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Office Central 01	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Study Room 01	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Booth 01	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Booth 02	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Study Room 02	-	-	-	-	-	-	-	0.2	-	-	N/A
01 - Furniture Storage	-	-	-	-	-	-	-	0.2	-	-	N/A
00 - Circulation Wing Perimeter E01	-	-	-	-	-	-	-	0.2	-	-	N/A
00 - IT/tech store	-	-	-	-	-	-	-	0.2	-	-	N/A
00 - Office perimeter N01	-	-	-	-	-	-	-	0.2	-	-	N/A
02 - Booth 02	-	-	-	-	-	-	-	0.2	-	-	N/A
02 - Study Room 02	-	-	-	-	-	-	-	0.2	-	-	N/A
02 - Study Room 01	-	-	-	-	-	-	-	0.2	-	-	N/A
02 - Booth 01	-	-	-	-	-	-	-	0.2	-	-	N/A
02 - Office perimeter W01	-	-	-	-	-	-	-	0.2	-	-	N/A
02 - Office perimeter S01	-	-	-	-	-	-	-	0.2	-	-	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
02 - meeting room 01	-	-	-	-	-	-	-	0.2	-	-	N/A
02 - meeting room 02	-	-	-	-	-	-	-	0.2	-	-	N/A
02 - Office central 01	-	-	-	-	-	-	-	0.2	-	-	N/A
02 - Office central 02	-	-	-	-	-	-	-	0.2	-	-	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
00 - Meeting Room 01		130	-	-
00 - Meeting Room 02		130	-	-
00 - Protected Lobby 02		120	-	-
00 - Stairs 01		150	-	-
00 - Showers 01		137	-	-
00 - Showers 02		137	-	-
00 - Showers 03		137	-	-
00 - Showers 04		137	-	-
00 - Showers 05		137	-	-
00 - Break water tank		156	-	-
00 - Refuse Store		150	-	-
00 - Lobby		120	-	-
00 - Acc. Showers		120	-	-
00 - Protected Lobby 01		120	-	-
00 - protected lobby		120	-	-
02 - Comms Room		156	-	-
02 - stairs 01		150	-	-
02 - toilet 01		137	-	-
02 - toilet 02		137	-	-
02 - toilet 03		137	-	-
02 - toilet 04		137	-	-
02 - toilet 05		137	-	-
02 - toilet 06		137	-	-
02 - toilet 07		137	-	-
02 - WC lobby 01		120	-	-
02 - toilet 08		137	-	-
02 - toilet 09		137	-	-
02 - toilet 10		137	-	-
02 - toilet 11		137	-	-
02 - toilet 12		137	-	-
02 - store		150	-	-
02 - stairs 02		150	-	-
02 - meeting room 04		130	-	-
02 - meeting room 05		130	-	-
02 - protected lobby 01		120	-	-

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
02 - protected lobby 02		120	-	-
02 - Office perimeter E01		130	-	-
02 - Office perimeter N01		130	-	-
00 - Toilet 13		137	-	-
00 - Toilet 12		137	-	-
00 - Toilet 11		137	-	-
00 - Toilet 10		137	-	-
00 - Toilet 09		137	-	-
00 - WC 01		137	-	-
00 - Circulation 01		120	-	-
00 - WC 02		137	-	-
00 - WC 03		137	-	-
00 - WC 04		137	-	-
00 - Stairs 02		150	-	-
00 - Circulation 02		150	-	-
00 - protected lobby		120	-	-
00 - LV room		156	-	-
00 - FM room		130	-	-
00 - Comms Room		156	-	-
00 - Protected Lobby 03		120	-	-
00 - Draft Lobby		120	-	-
01 - comms room		156	-	-
01 - stairs		150	-	-
01 - protected lobby		120	-	-
01 - meeting room		130	-	-
01 - meeting room		130	-	-
01 - protected lobby		120	-	-
01 - cupboard		130	-	-
01 - WC		137	-	-
01 - WC		137	-	-
01 - WC		137	-	-
01 - WC		137	-	-
01 - WC		137	-	-
01 - WC		137	-	-
01 - WC		137	-	-
01 - WC		137	-	-
01 - WC		137	-	-
01 - WC		137	-	-
01 - WC		137	-	-
01 - cupboard		130	-	-
01 - WC Circulation		150	-	-
01 - stairs		150	-	-
03 - plant		156	-	-

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
03 - escape stair		150	-	-
03 - protected lobby		120	-	-
00 - Office perimeter E01		130	-	-
00 - Office perimeter E02		130	-	-
00 - Office peirmeter E03		130	-	-
00 - Circulation 03		120	-	-
00 - WC lobby 02		120	-	-
01 - Office perimeter E01		130	-	-
01 - Office perimeter N01		130	-	-
00 - Postroom (Security desk)		130	-	-
00 - protected lobby		120	-	-
00 - Acc. WC		137	-	-
00 - Meeting Room 03		130	-	-
00 - Changing Room		120	-	-
00 - Office 01		130	-	-
00 - Drying Space		130	-	-
00 - Showers 06		120	-	-
00 - Showers 07		120	-	-
00 - Showers 08		120	-	-
00 - Storage		130	-	-
00 - Hot Water Tank		156	-	-
00 - Meeting Room Wing W01		130	-	-
00 - Meeting Room Wing.01		130	-	-
00 - Office Perimeter S01		130	-	-
01 - Meeting Room Wing 01		130	-	-
01 - Meeting Room Wing 02		130	-	-
01 - Meeting Room Wing 03		130	-	-
01 - Meeting Room Wing 04		130	-	-
01 - Meeting Room Wing 05		130	-	-
01 - Meeting Room Wing 06		130	-	-
01 - Meeting Room Wing 07		130	-	-
01 - Circulation Bridge		120	-	-
00 - Office Wing		130	-	-
00 - Study Room		130	-	-
00 - Plant Space		156	-	-
01 - Meeting Room 01		130	-	-
01 - Meeting Room 02		130	-	-
01- Office perimeter W01		130	-	-
01 - Office Central 02		130	-	-
01 - Meeting Room Wing 08		130	-	-
01 - Circulation Wing Perimeter E01		120	-	-
01 - Office perimeter S01		130	-	-
01 - Office perimeter S02		130	-	-

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
01 - Office Central 01		130	-	-
01 - Study Room 01		130	-	-
01 - Booth 01		130	-	-
01 - Booth 02		130	-	-
01 - Study Room 02		130	-	-
01 - Furniture Storage		130	-	-
00 - Circulation Wing Perimeter E01		120	-	-
00 - IT/tech store		130	-	-
00 - Office perimeter N01		130	-	-
02 - Booth 02		130	-	-
02 - Study Room 02		130	-	-
02 - Study Room 01		130	-	-
02 - Booth 01		130	-	-
02 - Office perimeter W01		130	-	-
02 - Office perimeter S01		130	-	-
02 - meeting room 01		130	-	-
02 - meeting room 02		130	-	-
02 - Office central 01		130	-	-
02 - Office central 02		130	-	-

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?
00 - Meeting Room 01	N/A	N/A
00 - Meeting Room 02	N/A	N/A
02 - meeting room 04	N/A	N/A
02 - meeting room 05	N/A	N/A
02 - Office perimeter E01	NO (-65%)	NO
02 - Office perimeter N01	NO (-66.8%)	NO
00 - FM room	N/A	N/A
00 - Draft Lobby	NO (-57.7%)	NO
01 - meeting room	N/A	N/A
01 - meeting room	N/A	N/A
00 - Office perimeter E01	NO (-79.7%)	NO
00 - Office perimeter E02	NO (-83.2%)	NO
00 - Office perimeter E03	NO (-43.7%)	NO
01 - Office perimeter E01	NO (-65.6%)	NO
01 - Office perimeter N01	NO (-74%)	NO
00 - Meeting Room 03	N/A	N/A
00 - Office 01	NO (-80.3%)	NO
00 - Meeting Room Wing W01	NO (-75.3%)	NO
00 - Meeting Room Wing.01	N/A	N/A
00 - Office Perimeter S01	NO (-32.2%)	NO
01 - Meeting Room Wing 01	NO (-95.5%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
01 - Meeting Room Wing 02	NO (-95.4%)	NO
01 - Meeting Room Wing 03	NO (-96.4%)	NO
01 - Meeting Room Wing 04	NO (-95.3%)	NO
01 - Meeting Room Wing 05	NO (-95.4%)	NO
01 - Meeting Room Wing 06	NO (-96.4%)	NO
01 - Meeting Room Wing 07	NO (-96.4%)	NO
00 - Office Wing	NO (-54%)	NO
01 - Meeting Room 01	NO (-42.8%)	NO
01 - Meeting Room 02	NO (-42%)	NO
01- Office perimeter W01	NO (-37.8%)	NO
01 - Office Central 02	NO (-82.4%)	NO
01 - Meeting Room Wing 08	N/A	N/A
01 - Office perimeter S01	NO (-79%)	NO
01 - Office perimeter S02	NO (-52.9%)	NO
01 - Office Central 01	NO (-85.6%)	NO
01 - Study Room 01	N/A	N/A
01 - Booth 01	N/A	N/A
01 - Booth 02	N/A	N/A
01 - Study Room 02	N/A	N/A
01 - Furniture Storage	N/A	N/A
00 - Circulation Wing Perimeter E01	NO (-61.6%)	NO
00 - IT/tech store	NO (-40.6%)	NO
00 - Office perimeter N01	NO (-59.1%)	NO
02 - Booth 02	N/A	N/A
02 - Study Room 02	N/A	N/A
02 - Study Room 01	N/A	N/A
02 - Booth 01	N/A	N/A
02 - Office perimeter W01	NO (-48.8%)	NO
02 - Office perimeter S01	NO (-60.9%)	NO
02 - meeting room 01	N/A	N/A
02 - meeting room 02	N/A	N/A
02 - Office central 01	NO (-67.4%)	NO
02 - Office central 02	NO (-80.1%)	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]	5207	5207
External area [m ²]	6524.5	6524.5
Weather	LON	LON
Infiltration [m ³ /hm ² @ 50Pa]	3	3
Average conductance [W/K]	1647.15	2027.59
Average U-value [W/m ² K]	0.25	0.31
Alpha value* [%]	25.46	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
100	Offices and Workshop Businesses
	General Industrial and Special Industrial Groups
	Storage or Distribution
	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/m²]

	Actual	Notional
Heating	1.31	1.3
Cooling	6.54	5.48
Auxiliary	6.81	8.71
Lighting	10.09	15.14
Hot water	5.64	4.89
Equipment*	52.56	52.56
TOTAL**	30.39	35.53

* 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	13.71	0
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0
<i>Displaced electricity</i>	<i>13.71</i>	<i>0</i>

Energy & CO₂ Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m ²]	97.41	104.44
Primary energy [kWh _{PE} /m ²]	24.47	52.23
Total emissions [kg/m ²]	2.3	4.76

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] Central heating using water: radiators, [HS] ASHP, [HFT] Electricity, [CFT] Electricity									
Actual	74.6	0	6.6	0	0.7	3.12	0	3.5	0
Notional	49.9	0	5	0	0.6	2.78	0	----	----
[ST] Fan coil systems, [HS] ASHP, [HFT] Electricity, [CFT] Electricity									
Actual	15.2	114.9	1.4	9	7.8	2.93	3.54	3.5	4.65
Notional	15.2	126	1.5	7.6	10.5	2.78	4.63	----	----
[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

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