

7- UCL Be Clean: CAV (Locker)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	1	4.4	0	1.8	0.8
Standard value	N/A	2.55	N/A	1.6^	0.65
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
^ Limiting SFP may be extended by the amounts specified in the Non-Domestic Building Services Compliance Guide if the system includes additional components as listed in the Guide.					

8- UCL Be Clean: AHU (FCUs)+rads (L5 teaching space)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	1	3.6	0	1.8	0.8
Standard value	N/A	2.55	N/A	1.6^	0.65
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
^ Limiting SFP may be extended by the amounts specified in the Non-Domestic Building Services Compliance Guide if the system includes additional components as listed in the Guide.					

1- UCL Be Clean: DHW (toilet)

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	1	0.005
Standard value	N/A	N/A

2- UCL Be Clean: DHW (teapoint)

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

Local mechanical ventilation, exhaust, and terminal units

ID	System type in Non-domestic Building Services Compliance Guide
A	Local supply or extract ventilation units serving a single area
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 supply and extract ventilation units serving a single room or zone with heating and heat recovery
E	Local supply and extract ventilation system serving a single area with heating and heat recovery
F	Other local ventilation units
G	Fan-assisted terminal VAV unit
H	Fan coil units
I	Zonal extract system where the fan is remote from the zone with grease filter

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	1.9	1.6	0.5	1.1	0.5	1	Zone	Standard
L9_ZC_CO_E_02	-	-	-	-	-	-	-	0.2	-	-	N/A
L9_ZC_CO_E_03	-	-	-	-	-	-	-	0.2	-	-	N/A
L9_ZC_CO_E_04	-	-	-	-	-	-	-	0.2	-	-	N/A
L9_ZC_CO_E_05	-	-	-	-	-	-	-	0.2	-	-	N/A
L9_ZC_CO_E_07	-	-	-	-	-	-	-	0.2	-	-	N/A
L9_ZC_CO_E_08	-	-	-	-	-	-	-	0.2	-	-	N/A
L9_ZC_CO_E_09	-	-	-	-	-	-	-	0.2	-	-	N/A
L9_ZC_CO_E_10	-	-	-	-	-	-	-	0.2	-	-	N/A

Key Features

The Building Control Body is advised to give particular attention to items whose specifications are better than typically expected.

Building fabric

Element	U _{i-Typ}	U _{i-Min}	Surface where the minimum value occurs*
Wall	0.23	0.3	L5000063:Surf[0]
Floor	0.2	0.25	L500000D:Surf[0]
Roof	0.15	0.18	L9000001:Surf[5]
Windows, roof windows, and rooflights	1.5	2.31	L9000001:Surf[0]
Personnel doors	1.5	-	No Personnel doors in building
Vehicle access & similar large doors	1.5	-	No Vehicle access doors in building
High usage entrance doors	1.5	-	No High usage entrance doors in building
U _{i-Typ} = Typical individual element U-values [W/(m²K)]		U _{i-Min} = Minimum individual element U-values [W/(m²K)]	
* There might be more than one surface where the minimum U-value occurs.			

Air Permeability	Typical value	This building
m³/(h.m²) at 50 Pa	5	10

Project name

220324 UCL_IOE_Clean Model

As designed

Date: Thu Mar 24 11:18:36 2022

Administrative information

Building Details

Address: Address 1, City, Postcode

Certification tool

Calculation engine: Apache

Calculation engine version: 7.0.13

Interface to calculation engine: IES Virtual Environment

Interface to calculation engine version: 7.0.13

BRUKL compliance check version: v5.6.b.0

Certifier details

Name: Name

Telephone number: Phone

Address: Street Address, City, Postcode

Criterion 1: The calculated CO₂ emission rate for the building must not exceed the target

The building does not comply with England Building Regulations Part L 2013

CO ₂ emission rate from the notional building, kgCO ₂ /m ² .annum	22.4
Target CO ₂ emission rate (TER), kgCO ₂ /m ² .annum	22.4
Building CO ₂ emission rate (BER), kgCO ₂ /m ² .annum	53.3
Are emissions from the building less than or equal to the target?	BER > TER
Are as built details the same as used in the BER calculations?	Separate submission

Criterion 2: The performance of the building fabric and fixed building services should achieve reasonable overall standards of energy efficiency

Values which do not achieve the standards in the Non-Domestic Building Services Compliance Guide and Part L are displayed in red.

Building fabric

Element	U _a -Limit	U _a -Calc	U _i -Calc	Surface where the maximum value occurs*
Wall**	0.35	0.3	0.3	L5000063:Surf[0]
Floor	0.25	0.25	0.25	L500000D:Surf[0]
Roof	0.25	0.18	0.18	L9000001:Surf[5]
Windows***, roof windows, and rooflights	2.2	2.31	2.31	L9000001:Surf[0]
Personnel doors	2.2	-	-	No Personnel doors in building
Vehicle access & similar large doors	1.5	-	-	No Vehicle access doors in building
High usage entrance doors	3.5	-	-	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)] * There might be more than one surface where the maximum U-value occurs. ** 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. N.B.: Neither roof ventilators (inc. smoke vents) nor swimming pool basins are modelled or checked against the limiting standards by the tool.				

Air Permeability	Worst acceptable standard	This building
m ³ /(h.m ²) at 50 Pa	10	10

Building services

The standard values listed below are minimum values for efficiencies and maximum values for SFPs. Refer to the Non-Domestic Building Services Compliance Guide for details.

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- UCL Be Clean: AHU (FCUs)+rads (L9)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	1	4.6	0	1.8	0.8
Standard value	N/A	2.55	N/A	1.6^	0.65
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
^ Limiting SFP may be extended by the amounts specified in the Non-Domestic Building Services Compliance Guide if the system includes additional components as listed in the Guide.					

2- UCL Be Clean: L9 Meeting Room/Quiet room

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	1	4.62	0	1.8	0.8
Standard value	N/A	2.55	N/A	1.6^	0.65
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
^ Limiting SFP may be extended by the amounts specified in the Non-Domestic Building Services Compliance Guide if the system includes additional components as listed in the Guide.					

3- UCL Be Clean: L5 VAV (Kitchen)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	1	4.6	0	1.8	0.8
Standard value	N/A	2.55	N/A	1.6^	0.65
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
^ Limiting SFP may be extended by the amounts specified in the Non-Domestic Building Services Compliance Guide if the system includes additional components as listed in the Guide.					

4- UCL Be Clean: L5 VAV (office)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	1	4.6	0	1.8	0.8
Standard value	N/A	2.55	N/A	1.6^	0.65
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
^ Limiting SFP may be extended by the amounts specified in the Non-Domestic Building Services Compliance Guide if the system includes additional components as listed in the Guide.					

5- UCL Be Clean: AHU (FCUs)+rads (L9 teapoint)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	1	4.6	0	1.8	0.8
Standard value	N/A	2.55	N/A	1.6^	0.65
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES
^ Limiting SFP may be extended by the amounts specified in the Non-Domestic Building Services Compliance Guide if the system includes additional components as listed in the Guide.					

6- UCL Be Clean: DX cooling_comms room

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	3.48	3.87	0	0	0.8
Standard value	2.5*	2.6	N/A	N/A	0.65
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. For types <=12 kW output, refer to EN 14825 for limiting standards.					