

Project name

Whiston Decontamination**As designed****Date:** Mon Dec 05 08:37:38 2022**Administrative information****Building Details****Address:** Warrington Road, Liverpool, L35 5DR**Certifier details****Name:****Telephone number:****Address:** , ,**Certification tool****Calculation engine:** Apache**Calculation engine version:** 7.0.16**Interface to calculation engine:** IES Virtual Environment**Interface to calculation engine version:** 7.0.16**BRUKL compliance module version:** v6.1.c.0**Foundation area [m²]:** 568.4**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	4.55
Building CO ₂ emission rate (BER), kgCO ₂ /m ² annum	3.63
Target primary energy rate (TPER), kWh/m ² annum	48.96
Building primary energy rate (BPER), kWh/m ² annum	38.65
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	0.17	0.17	0100001A:Surf[6]
Floors	0.18	0.13	0.13	01000019:Surf[0]
Pitched roofs	0.16	-	-	No Pitched roofs in building
Flat roofs	0.18	0.13	0.13	04000004:Surf[0]
Windows** and roof windows	1.6	1.4	1.4	0100001A:Surf[3]
Rooflights***	2.2	-	-	No roof lights in building
Personnel doors^	1.6	1.6	1.6	01000004:Surf[1]
Vehicle access & similar large doors	1.3	-	-	No Vehicle access doors in building
High usage entrance doors	3	3	3	01000000:Surf[3]

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	3

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	<0.9

1- Heater Battery AHU1

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4	-	0	-	0.75
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.					

2- Radiant Panel Heater Natural Ventilation

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4	-	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.					

3- Heater Battery Natural Ventilation

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4	-	0	-	-
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.					

4- Heater Battery AHU2

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4	-	0	-	0.75
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.					

5- Heater Battery AHU3

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4	-	0	-	0.75
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.					

6- Heater Battery AHU4

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4	-	0	-	0.75
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- DHW - Heat Pump

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	2.8	0.005
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
01-Bin Store 002	-	-	0.4	-	-	-	-	-	-	-	-	N/A
01-Chemical Store 024	-	-	0.4	-	-	-	-	-	-	-	-	N/A
01-Clean Room 013	-	-	-	1.5	-	-	-	-	-	-	-	N/A
01-Cleaners 010	-	-	0.4	-	-	-	-	-	-	-	-	N/A
01-Cleaners Store 014	-	-	0.4	-	-	-	-	-	-	-	-	N/A
01-Cleaners Store 035	-	-	0.4	-	-	-	-	-	-	-	-	N/A
01-Clear Lobby 012	-	-	-	1.5	-	-	-	-	-	-	-	N/A
01-Consumables Store 015	-	-	-	1.5	-	-	-	-	-	-	-	N/A
01-Consumables Store G015	-	-	-	1.5	-	-	-	-	-	-	-	N/A
01-Dirty Lobby 033	-	-	-	1.5	-	-	-	-	-	-	-	N/A
01-Dirty Room 001	-	-	0.4	-	-	-	-	-	-	-	-	N/A
01-Dirty Room 034	-	-	-	1.5	-	-	-	-	-	-	-	N/A
01-Female Change 004	-	-	-	1.5	-	-	-	-	-	-	-	N/A
01-Male Change 007	-	-	-	1.5	-	-	-	-	-	-	-	N/A
01-Office 016	-	-	-	1.5	-	-	-	-	-	-	-	N/A
01-Office 016	-	-	-	1.5	-	-	-	-	-	-	-	N/A
01>Returns 020	-	-	-	1.5	-	-	-	-	-	-	-	N/A
01-Satellite Store 024	-	-	-	1.5	-	-	-	-	-	-	-	N/A
01-Shower Room 006	-	-	0.4	-	-	-	-	-	-	-	-	N/A
01-Staff Rest/Seminar G010	-	-	-	1.5	-	-	-	-	-	-	-	N/A
01-Switch 017	-	-	-	1.5	-	-	-	-	-	-	-	N/A
01-WC 005	-	-	0.4	-	-	-	-	-	-	-	-	N/A
01-WC 006	-	-	0.4	-	-	-	-	-	-	-	-	N/A
02-Acc Toilet 004	-	-	0.4	-	-	-	-	-	-	-	-	N/A
02-Acc WC 015	-	-	-	1.5	-	-	-	-	-	-	-	N/A
02-Acc WC 40	-	-	0.4	-	-	-	-	-	-	-	-	N/A

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		
02-Acc WC 042	-	-	0.4	-	-	-	-	-	-	-	N/A
02-Access Change 014	-	-	0.4	-	-	-	-	-	-	-	N/A
02-Change 011	-	-	0.4	-	-	-	-	-	-	-	N/A
02-Change 012	-	-	0.4	-	-	-	-	-	-	-	N/A
02-Change 016	-	-	-	1.5	-	-	-	-	-	-	N/A
02-Change 020	-	-	0.4	-	-	-	-	-	-	-	N/A
02-Change 021	-	-	0.4	-	-	-	-	-	-	-	N/A
02-Clean Scope Store 035	-	-	-	1.5	-	-	-	-	-	-	N/A
02-Clean Utility 024	-	-	-	1.5	-	-	-	-	-	-	N/A
02-Cleaners Store 009	-	-	0.4	-	-	-	-	-	-	-	N/A
02-Consumables Store 028	-	-	-	1.5	-	-	-	-	-	-	N/A
02-Dirty Utility 031	-	-	-	1.5	-	-	-	-	-	-	N/A
02-Disp Hold 005	-	-	0.4	-	-	-	-	-	-	-	N/A
02-Equipment Store 008	-	-	-	1.5	-	-	-	-	-	-	N/A
02-Female Wait 018	-	-	-	1.5	-	-	-	-	-	-	N/A
02-Interview 1 007	-	-	-	1.5	-	-	-	-	-	-	N/A
02-Interview 2 006	-	-	-	1.5	-	-	-	-	-	-	N/A
02-Large Treatment 026	-	-	-	1.5	-	-	-	-	-	-	N/A
02-Male Wait 010	-	-	-	1.5	-	-	-	-	-	-	N/A
02-Nurse Station 038	-	-	-	1.5	-	-	-	-	-	-	N/A
02-Office 032	-	-	-	1.5	-	-	-	-	-	-	N/A
02-Reception 002	-	-	-	1.5	-	-	-	-	-	-	N/A
02-Recovery Stage 1 040	-	-	-	1.5	-	-	-	-	-	-	N/A
02-Recovery Stage 2 039	-	-	-	1.5	-	-	-	-	-	-	N/A
02-Shower 030	-	-	0.4	-	-	-	-	-	-	-	N/A
02-Small Treatment 035	-	-	-	1.5	-	-	-	-	-	-	N/A
02-Small Treatment 042	-	-	-	1.5	-	-	-	-	-	-	N/A
02-Staff Change 033	-	-	-	1.5	-	-	-	-	-	-	N/A
02-Staff Rest/Seminar 034	-	-	-	1.5	-	-	-	-	-	-	N/A
02-Staff WC 036	-	-	0.4	-	-	-	-	-	-	-	N/A
02-WC 013	-	-	0.4	-	-	-	-	-	-	-	N/A
02-WC 017	-	-	0.4	-	-	-	-	-	-	-	N/A
02-WC 019	-	-	0.4	-	-	-	-	-	-	-	N/A
02-WC 029	-	-	0.4	-	-	-	-	-	-	-	N/A
03-Acc WC 024	-	-	0.4	-	-	-	-	-	-	-	N/A
03-Cleaners Store 011	-	-	0.4	-	-	-	-	-	-	-	N/A
03-Collaboration / Break out 062	-	-	-	1.5	-	-	-	-	-	-	N/A
03-Female Toilet 023	-	-	-	1.9	-	-	-	-	-	-	N/A
03-Male Toilet 026	-	-	-	1.9	-	-	-	-	-	-	N/A
03-Mtg Room	-	-	-	1.5	-	-	-	-	-	-	N/A
03-Mtg Room 058	-	-	-	1.5	-	-	-	-	-	-	N/A
03-Office 001	-	-	-	1.5	-	-	-	-	-	-	N/A
03-Office 002	-	-	-	1.5	-	-	-	-	-	-	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	
03-Office 003	-	-	-	1.5	-	-	-	-	-	-	N/A	
03-Office 005	-	-	-	1.5	-	-	-	-	-	-	N/A	
03-Office 006	-	-	-	1.5	-	-	-	-	-	-	N/A	
03-Office 010	-	-	-	1.5	-	-	-	-	-	-	N/A	
03-Office 015	-	-	-	1.5	-	-	-	-	-	-	N/A	
03-Office 017	-	-	-	1.5	-	-	-	-	-	-	N/A	
03-Office 019	-	-	-	1.5	-	-	-	-	-	-	N/A	
03-Office 022	-	-	-	1.5	-	-	-	-	-	-	N/A	
03-Office 025	-	-	-	1.5	-	-	-	-	-	-	N/A	
03-Office 047	-	-	-	1.5	-	-	-	-	-	-	N/A	
03-Office 048	-	-	-	1.5	-	-	-	-	-	-	N/A	
03-Office 052	-	-	-	1.5	-	-	-	-	-	-	N/A	
03-Office 054	-	-	-	1.5	-	-	-	-	-	-	N/A	
03-Office 055	-	-	-	1.5	-	-	-	-	-	-	N/A	
03-Office 056	-	-	-	1.5	-	-	-	-	-	-	N/A	
03-Quiet Pod 021	-	-	-	1.5	-	-	-	-	-	-	N/A	
03-Quiet Pod 050	-	-	-	1.5	-	-	-	-	-	-	N/A	
03-Quiet Pod 051	-	-	-	1.5	-	-	-	-	-	-	N/A	
03-Shower 049	-	-	0.4	-	-	-	-	-	-	-	N/A	
03-Staff Rest 013	-	-	-	1.5	-	-	-	-	-	-	N/A	
04-Acc WC 081	-	-	0.4	-	-	-	-	-	-	-	N/A	
04-Admin Support 7 008	-	-	-	1.5	-	-	-	-	-	-	N/A	
04-Anaesth Clinical Dir 020	-	-	-	1.5	-	-	-	-	-	-	N/A	
04-Ass Dir Finance 009	-	-	-	1.5	-	-	-	-	-	-	N/A	
04-Ass Director of Ops 016	-	-	-	1.5	-	-	-	-	-	-	N/A	
04-Bev/Recycling Bay 009	-	-	0.4	-	-	-	-	-	-	-	N/A	
04-Breast Surgery	-	-	-	1.5	-	-	-	-	-	-	N/A	
04-Female Toilet 081	-	-	-	1.9	-	-	-	-	-	-	N/A	
04-Head of Qual/Nursing 002	-	-	-	1.5	-	-	-	-	-	-	N/A	
04-Male Toilet 080	-	-	-	1.9	-	-	-	-	-	-	N/A	
04-Management 16 015	-	-	-	1.5	-	-	-	-	-	-	N/A	
04-Mgt Room 071	-	-	-	1.5	-	-	-	-	-	-	N/A	
04-Mtg Room 012	-	-	-	1.5	-	-	-	-	-	-	N/A	
04-Pain Team 5 Desks	-	-	-	1.5	-	-	-	-	-	-	N/A	
04-Quiet Pod 011	-	-	-	1.5	-	-	-	-	-	-	N/A	
04-Quiet Pod 019	-	-	-	1.5	-	-	-	-	-	-	N/A	
04-Shared / Hotdesks 008	-	-	-	1.5	-	-	-	-	-	-	N/A	
04-Shower 082	-	-	-	1.5	-	-	-	-	-	-	N/A	
04-T&O 017	-	-	-	1.5	-	-	-	-	-	-	N/A	

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-Bin Store 002		110	-	-

General lighting and display lighting		General luminaire		Display light source	
Zone name		Efficacy [lm/W]	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
	Standard value	95	80		0.3
01-Chemical Store 024		110	-		-
01-Circulation 003		110	-		-
01-Circulation 015		110	-		-
01-Circulation 023		110	-		-
01-Clean Room 013		110	-		-
01-Cleaners 010		110	-		-
01-Cleaners Store 014		110	-		-
01-Cleaners Store 035		110	-		-
01-Clear Lobby 012		110	-		-
01-Consumables Store 015		110	-		-
01-Consumables Store G015		110	-		-
01-Dirty Lobby 033		110	-		-
01-Dirty Room 001		110	-		-
01-Dirty Room 034		110	-		-
01-Escape 009		110	-		-
01-Female Change 004		110	-		-
01-Male Change 007		110	-		-
01-Office 016		110	-		-
01-Office 016		110	-		-
01>Returns 020		110	-		-
01-Satellite Store 024		110	-		-
01-Shower Room 006		110	-		-
01-Space 79		110	-		-
01-Staff Rest/Seminar G010		110	-		-
01-Stairwell 1		110	-		-
01-Switch 017		110	-		-
01-Water Treatment 025		110	-		-
01-WC 005		110	-		-
01-WC 006		110	-		-
02-Acc Toilet 004		110	-		-
02-Acc WC 015		110	-		-
02-Acc WC 40		110	-		-
02-Acc WC 042		110	-		-
02-Access Change 014		110	-		-
02-Change 011		110	-		-
02-Change 012		110	-		-
02-Change 016		110	-		-
02-Change 020		110	-		-
02-Change 021		110	-		-
02-Circulation 022		110	-		-
02-Circulation 027		110	-		-
02-Circulation 023		110	-		-
02-Clean Scope Store 035		110	-		-

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
02-Clean Utility 024		110	-	-
02-Cleaners Store 009		110	-	-
02-Consumables Store 028		110	-	-
02-Dirty Utility 031		110	-	-
02-Disp Hold 005		110	-	-
02-Dist Board 040		110	-	-
02-Entrance Circulation 001		110	-	-
02-Equipment Store 008		110	-	-
02-Female Wait 018		110	95	1.421
02-Interview 1 007		110	-	-
02-Interview 2 006		110	-	-
02-Large Treatment 026		110	-	-
02-Linen Store 025		110	-	-
02-Male Wait 010		110	95	1.421
02-Nurse Station 038		110	-	-
02-Office 032		110	-	-
02-Reception 002		110	95	1.421
02-Recovery Stage 1 040		110	-	-
02-Recovery Stage 2 039		110	-	-
02-Shower 030		110	-	-
02-Small Treatment 035		110	-	-
02-Small Treatment 042		110	-	-
02-Staff Change 033		110	-	-
02-Staff Rest/Seminar 034		110	-	-
02-Staff WC 036		110	-	-
02-Stairwell 1		110	-	-
02-Switch 030		110	-	-
02-WC 013		110	-	-
02-WC 017		110	-	-
02-WC 019		110	-	-
02-WC 029		110	-	-
03-Acc WC 024		110	-	-
03-Circulation 004		110	-	-
03-Circulation 005		110	-	-
03-Cleaners Store 011		110	-	-
03-Cloak Room 023		110	-	-
03-Collaboration / Break out 062		110	-	-
03-Comm Store 020		110	-	-
03-Female Toilet 023		110	-	-
03-Lobby 064		110	-	-
03-Male Toilet 026		110	-	-
03-Mtg Room		110	-	-
03-Mtg Room 058		110	-	-

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	
03-Office 001		110	-	-	
03-Office 002		110	-	-	
03-Office 003		110	-	-	
03-Office 005		110	-	-	
03-Office 006		110	-	-	
03-Office 010		110	-	-	
03-Office 015		110	-	-	
03-Office 017		110	-	-	
03-Office 019		110	-	-	
03-Office 022		110	-	-	
03-Office 025		110	-	-	
03-Office 047		110	-	-	
03-Office 048		110	-	-	
03-Office 052		110	-	-	
03-Office 054		110	-	-	
03-Office 055		110	-	-	
03-Office 056		110	-	-	
03-Open Plan and Waiting 057		110	95	1.421	
03-Quiet Pod 021		110	-	-	
03-Quiet Pod 050		110	-	-	
03-Quiet Pod 051		110	-	-	
03-Shower 049		110	-	-	
03-Space 01		110	-	-	
03-Space 02		110	-	-	
03-Staff Rest 013		110	-	-	
03-Stairwell 1		110	-	-	
03-Store 1 R03		110	-	-	
03-Store 025		110	-	-	
03-Switch 018		110	-	-	
04-Acc WC 081		110	-	-	
04-Admin Support 7 008		110	-	-	
04-Anaesth Clinical Dir 020		110	-	-	
04-Ass Dir Finance 009		110	-	-	
04-Ass Director of Ops 016		110	-	-	
04-Bev/Recycling Bay 009		110	-	-	
04-Breast Surgery		110	-	-	
04-Circulation 01		110	-	-	
04-Circulation 02		110	-	-	
04-Circulation 004		110	-	-	
04-Cloakroom 078		110	-	-	
04-Female Toilet 081		110	-	-	
04-Head of Qual/Nursing 002		110	-	-	
04-Lobby 007		110	-	-	

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
04-Male Toilet 080		110	-	-
04-Management 16 015		110	-	-
04-Mgt Room 071		110	-	-
04-Mtg Room 012		110	-	-
04-Pain Team 5 Desks		110	-	-
04-Quiet Pod 011		110	-	-
04-Quiet Pod 019		110	-	-
04-Shared / Hotdesks 008		110	-	-
04-Shower 082		110	-	-
04-Space 1		110	-	-
04-Space 2		110	-	-
04-Stairwell 1		110	-	-
04-Store 013		110	-	-
04-Store 024		110	-	-
04-T&O 017		110	-	-
05-Stairwell 1		110	-	-
05-Store 003		110	-	-
B-By-pass Route 004		110	-	-
B-Lobby 001		110	-	-
B-Stairwell 1		110	-	-
B-Store 005		110	-	-
B-Switch Room 003		110	-	-
B-Tank Room 002		110	-	-
05-Plant Room 001		110	-	-

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?
01-Clean Room 013	N/A	N/A
01-Dirty Room 001	N/A	N/A
01-Dirty Room 034	NO (-27.5%)	NO
01-Office 016	N/A	N/A
01-Office 016	N/A	N/A
01-Staff Rest/Seminar G010	NO (-72.9%)	NO
02-Female Wait 018	NO (-37.6%)	NO
02-Interview 1 007	N/A	N/A
02-Interview 2 006	N/A	N/A
02-Large Treatment 026	NO (-44.9%)	NO
02-Male Wait 010	NO (-41.1%)	NO
02-Nurse Station 038	N/A	N/A
02-Office 032	NO (-40.7%)	NO
02-Reception 002	N/A	N/A
02-Recovery Stage 1 040	NO (-93.3%)	NO
02-Recovery Stage 2 039	NO (-49.3%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
02-Small Treatment 035	N/A	N/A
02-Small Treatment 042	NO (-43.1%)	NO
02-Staff Rest/Seminar 034	NO (-57.5%)	NO
03-Collaboration / Break out 062	NO (-59.9%)	NO
03-Mtg Room	N/A	N/A
03-Mtg Room 058	NO (-35.8%)	NO
03-Office 001	N/A	N/A
03-Office 002	NO (-52.5%)	NO
03-Office 003	N/A	N/A
03-Office 005	NO (-53%)	NO
03-Office 006	NO (-69%)	NO
03-Office 010	YES (+11.9%)	NO
03-Office 015	NO (-50.1%)	NO
03-Office 017	NO (-81.8%)	NO
03-Office 019	NO (-52.7%)	NO
03-Office 022	NO (-48.4%)	NO
03-Office 025	NO (-52.9%)	NO
03-Office 047	NO (-50.5%)	NO
03-Office 048	NO (-51.3%)	NO
03-Office 052	NO (-50.5%)	NO
03-Office 054	NO (-28.2%)	NO
03-Office 055	NO (-24%)	NO
03-Office 056	NO (-23.7%)	NO
03-Open Plan and Waiting 057	N/A	N/A
03-Quiet Pod 021	N/A	N/A
03-Quiet Pod 050	N/A	N/A
03-Quiet Pod 051	N/A	N/A
03-Staff Rest 013	N/A	N/A
04-Admin Support 7 008	NO (-94%)	NO
04-Anaesth Clinical Dir 020	NO (-53.3%)	NO
04-Ass Dir Finance 009	NO (-44.2%)	NO
04-Ass Director of Ops 016	NO (-49.5%)	NO
04-Head of Qual/Nursing 002	NO (-46.2%)	NO
04-Management 16 015	NO (-67.5%)	NO
04-Mgt Room 071	NO (-78%)	NO
04-Mtg Room 012	N/A	N/A
04-Pain Team 5 Desks	NO (-88%)	NO
04-Quiet Pod 011	N/A	N/A
04-Quiet Pod 019	N/A	N/A
04-Shared / Hotdesks 008	NO (-58.7%)	NO
04-T&O 017	NO (-63.4%)	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?	YES
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]	3410.4	3410.4
External area [m ²]	4246.5	4246.5
Weather	MAN	MAN
Infiltration [m ³ /hm ² @ 50Pa]	3	3
Average conductance [W/K]	1259.94	1575.93
Average U-value [W/m ² K]	0.3	0.37
Alpha value* [%]	12.29	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
2	Offices and Workshop Businesses
	General Industrial and Special Industrial Groups
	Storage or Distribution
	Hotels
98	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	2.32	4.87
Cooling	0	0
Auxiliary	11.38	6.59
Lighting	16.76	18.9
Hot water	3.63	2.58
Equipment*	135.35	135.35
TOTAL **	34.08	32.94

* 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	8.88	0
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0
<i>Displaced electricity</i>	<i>8.88</i>	<i>0</i>

Energy & CO₂ Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m ²]	33.35	48.69
Primary energy [kWh/m ²]	38.65	48.96
Total emissions [kg/m ²]	3.63	4.55

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 - unfanned, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	22.7	0	1.6	0	26.7	4	0	4	0	
Notional	59.9	0	6	0	18.5	2.78	0	----	----	
[ST] Other local room heater - unfanned, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	19.2	0	1.3	0	0	4	0	4	0	
Notional	43.8	0	4.4	0	0	2.78	0	----	----	
[ST] Other local room heater - unfanned, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	22.6	0	1.6	0	21.9	4	0	4	0	
Notional	24.9	0	2.5	0	22.2	2.78	0	----	----	
[ST] Other local room heater - unfanned, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	9.8	0	0.7	0	8.4	4	0	4	0	
Notional	290	0	29	0	16.9	2.78	0	----	----	
[ST] Other local room heater - unfanned, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	1.8	0	0.1	0	11.5	4	0	4	0	
Notional	0.3	0	0	0	84.5	2.78	0	----	----	
[ST] Central heating using water: radiators, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	99.2	0	6.9	0	4.9	4	0	4	0	
Notional	141	0	14.1	0	2.3	2.78	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