

Technical Data Sheet (Actual vs. Notional Building)

Building Global Parameters

	Actual	Notional
Area [m ²]	86542	86542
External area [m ²]	56689	56689
Weather	SWI	SWI
Infiltration [m ³ /hm ² @ 50Pa]	3	3
Average conductance [W/K]	34028	28935
Average U-value [W/m ² K]	0.6	0.51
Alpha value* [%]	39.9	39.9

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

Building Use

% Area Building Type

	A1/A2 Retail/Financial and Professional services
	A3/A4/A5 Restaurants and Cafes/Drinking Est./Takeaways
100	B1 Offices and Workshop businesses
	B2 to B7 General Industrial and Special Industrial Groups
	B8 Storage or Distribution
	C1 Hotels
	C2 Residential Institutions: Hospitals and Care Homes
	C2 Residential Institutions: Residential schools
	C2 Residential Institutions: Universities and colleges
	C2A Secure Residential Institutions
	Residential spaces
	D1 Non-residential Institutions: Community/Day Centre
	D1 Non-residential Institutions: Libraries, Museums, and Galleries
	D1 Non-residential Institutions: Education
	D1 Non-residential Institutions: Primary Health Care Building
	D1 Non-residential Institutions: Crown and County Courts
	D2 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	0.38	0.91
Cooling	5.04	9.31
Auxiliary	14.71	10.25
Lighting	12.39	19.58
Hot water	0.39	0.92
Equipment*	39.72	39.72
TOTAL**	32.92	40.97

* 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	0.07	0
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0

Energy & CO₂ Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m ²]	115.78	135.4
Primary energy* [kWh/m ²]	98.53	122.62
Total emissions [kg/m ²]	16.6	20.7

* Primary energy is net of any electrical energy displaced by CHP generators, if applicable.

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] Electricity, [CFT] Electricity									
Actual	7.8	124.7	0.4	6.2	17.3	6	5.6	6	5.6
Notional	6	147.9	0.7	11.4	11.9	2.43	3.6	----	----
[ST] Central heating using water: radiators, [HS] LTHW boiler, [HFT] Electricity, [CFT] Electricity									
Actual	12.2	0	0.6	0	1.1	6	0	6	0
Notional	18.8	0	2.1	0	1.1	2.43	0	----	----
[ST] Central heating using water: radiators, [HS] LTHW boiler, [HFT] Electricity, [CFT] Electricity									
Actual	18.6	0	0.9	0	14.4	6	0	6	0
Notional	43	0	4.9	0	11.7	2.43	0	----	----
[ST] Central heating using water: radiators, [HS] LTHW boiler, [HFT] Electricity, [CFT] Electricity									
Actual	19.8	0	0.9	0	7.7	6	0	6	0
Notional	18.1	0	2.1	0	6.4	2.43	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

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	0.14	External Wall
Floor	0.2	0.14	Exposed Floor
Roof	0.15	0.15	Roof
Windows, roof windows, and rooflights	1.5	1.21	External Wall (70% Glazed)
Personnel doors	1.5	-	No personal doors in project
Vehicle access & similar large doors	1.5	-	No vehicle doors in project
High usage entrance doors	1.5	-	No high usage entrance doors in project
U _{i-Typ} = Typical individual element U-values [W/(m ² K)]		U _{i-Min} = Minimum individual element U-values [W/(m ² K)]	
* There might be more than one surface where the minimum U-value occurs.			

Air Permeability	Typical value	This building
m ³ /(h.m ²) at 50 Pa	5	3