

Project name

Existing Haringey Civic Centre Baseline
Stage 3+

As designed

Date: Mon Sep 04 09:54:55 2023

Administrative information

Building Details

Address: River Park House, 225 High Rd, London, N22 8HQ

Certifier details

Name: David Richard Kingstone

Telephone number: 07753829637

Address: Buro Happold, 3 Wellington Place, Leeds, LS1 4AP

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]: 1236.74The CO₂ 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 ₂ emission rate (TER), kgCO ₂ /m ² annum	3.51
Building CO ₂ emission rate (BER), kgCO ₂ /m ² annum	8.13
Target primary energy rate (TPER), kWh _{PE} /m ² annum	38.16
Building primary energy rate (BPER), kWh _{PE} /m ² annum	88.11
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	0.5	0.55	0000001C:Surf[7]
Floors	0.18	0.25	0.25	0000001C:Surf[0]
Pitched roofs	0.16	-	-	No pitched roofs in building
Flat roofs	0.18	0.18	0.18	0100003D:Surf[1]
Windows** and roof windows	1.6	1.4	1.4	0000001C:Surf[1]
Rooflights***	2.2	-	-	No roof lights in building
Personnel doors^	1.6	1.3	1.3	01000003: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	25

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- 02. FCUs_MVHR

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	2.64	4.5	0	2.6	0.7
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- 03. Open office FCUs

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	2.64	4.5	0	2.6	0.7
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.					

3- 05. Radiators circ and store

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	2.64	-	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.					

4- 06. Toilet mech vent

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	2.64	-	0.2	-	0.7
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- 04. DX (Comms)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	2.64	5.55	-	-	-
Standard value	2.5*	5	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- 01. Aud All air AHU

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	2.64	4.5	0	2.6	0.7
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.					

1- 07. DHW Building

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	1	0.005
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			
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1		Zone	Standard
00 - Changing Places Space	-	-	-	-	-	-	-	0.2	-	-	-	N/A
00 - Civic Bridge Welcome Area/Circulation	-	-	-	-	-	-	-	0.2	-	-	-	N/A
00 - Entrance Lobby/Reception 02	-	-	-	-	-	-	-	0.2	-	-	-	N/A
00 - Entrance Lobby/Reception 03	-	-	-	-	-	-	-	0.2	-	-	-	N/A
00 - Flexible Meeting/Event Space	-	-	-	-	-	-	-	0.2	-	-	-	N/A
00 - Meeting Room 01	-	-	-	-	-	-	-	0.2	-	-	-	N/A
00 - Meeting Room 02	-	-	-	-	-	-	-	0.2	-	-	-	N/A
00 - Meeting Room 04	-	-	-	-	-	-	-	0.2	-	-	-	N/A
00 - Meeting Room 05	-	-	-	-	-	-	-	0.2	-	-	-	N/A
00 - Meeting Room 06	-	-	-	-	-	-	-	0.2	-	-	-	N/A
00 - Meeting Room 07	-	-	-	-	-	-	-	0.2	-	-	-	N/A
00 - Meeting Room 08	-	-	-	-	-	-	-	0.2	-	-	-	N/A
00 - Meeting Room 09	-	-	-	-	-	-	-	0.2	-	-	-	N/A
00 - Open Office 01	-	-	-	-	-	-	-	0.2	-	-	-	N/A
00 - Open Office 02	-	-	-	-	-	-	-	0.2	-	-	-	N/A
00 - Quiet Room	-	-	-	-	-	-	-	0.2	-	-	-	N/A
00 - Study Room	-	-	-	-	-	-	-	0.2	-	-	-	N/A
01 - Committee 01 & 2	-	-	-	-	-	-	-	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	
01 - Committee 03	-	-	-	-	-	-	-	0.2	-	-	N/A	
01 - Mayor Robing	-	-	-	-	-	-	-	0.2	-	-	N/A	
01 - Mayor's Aid & Wating Area	-	-	-	-	-	-	-	0.2	-	-	N/A	
01 - Mayors Parlour	-	-	-	-	-	-	-	0.2	-	-	N/A	
01 - Meeting 01	-	-	-	-	-	-	-	0.2	-	-	N/A	
01 - Meeting 02	-	-	-	-	-	-	-	0.2	-	-	N/A	
01 - Meeting 03	-	-	-	-	-	-	-	0.2	-	-	N/A	
01 - Meeting 04	-	-	-	-	-	-	-	0.2	-	-	N/A	
01 - Meeting 05	-	-	-	-	-	-	-	0.2	-	-	N/A	
01 - Open Office 01	-	-	-	-	-	-	-	0.2	-	-	N/A	
01 - Open Office 02	-	-	-	-	-	-	-	0.2	-	-	N/A	
01 - Open Office 03	-	-	-	-	-	-	-	0.2	-	-	N/A	
01 - Open Office 03	-	-	-	-	-	-	-	0.2	-	-	N/A	
01 - Opposition Leader's Office	-	-	-	-	-	-	-	0.2	-	-	N/A	
01 - Study Room 01	-	-	-	-	-	-	-	0.2	-	-	N/A	
01 - Study Room 02	-	-	-	-	-	-	-	0.2	-	-	N/A	
01 - Study Room 03	-	-	-	-	-	-	-	0.2	-	-	N/A	
02 - Meeting Room 01	-	-	-	-	-	-	-	0.2	-	-	N/A	
02 - Meeting Room 02	-	-	-	-	-	-	-	0.2	-	-	N/A	
02 - Open Office 02	-	-	-	-	-	-	-	0.2	-	-	N/A	
02 - Open Office 03	-	-	-	-	-	-	-	0.2	-	-	N/A	
02 - Open Office 04	-	-	-	-	-	-	-	0.2	-	-	N/A	
02 - Police Secure Room	-	-	-	-	-	-	-	0.2	-	-	N/A	
02 - Study Room 01	-	-	-	-	-	-	-	0.2	-	-	N/A	
02 - Study Room 01	-	-	-	-	-	-	-	0.2	-	-	N/A	
02 - Study Room 02	-	-	-	-	-	-	-	0.2	-	-	N/A	
03 - Booth	-	-	-	-	-	-	-	0.2	-	-	N/A	
03 - MASH	-	-	-	-	-	-	-	0.2	-	-	N/A	
03 - Open Office 01	-	-	-	-	-	-	-	0.2	-	-	N/A	
03 - Open Office 02	-	-	-	-	-	-	-	0.2	-	-	N/A	
03 - Open Office 03	-	-	-	-	-	-	-	0.2	-	-	N/A	
03 - Police Secure Room	-	-	-	-	-	-	-	0.2	-	-	N/A	
02 - Open Office 01	-	-	-	-	-	-	-	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 - Changing Places Space		60	-	-
00 - Civic Bridge Welcome Area/Circulation		60	-	-
00 - Entrance Lobby/Reception 02		60	80	1.688
00 - Entrance Lobby/Reception 03		60	80	1.688
00 - Flexible Meeting/Event Space		60	-	-
00 - Meeting Room 01		60	-	-

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
00 - Meeting Room 02		60	-	-
00 - Meeting Room 04		60	-	-
00 - Meeting Room 05		60	-	-
00 - Meeting Room 06		60	-	-
00 - Meeting Room 07		60	-	-
00 - Meeting Room 08		60	-	-
00 - Meeting Room 09		60	-	-
00 - Open Office 01		60	-	-
00 - Open Office 02		60	-	-
00 - Quiet Room		60	-	-
00 - Study Room		60	-	-
00_Circ_01		60	-	-
00_Circ_03		60	-	-
00_Circ_04		60	-	-
00_Circ_05		60	-	-
00_Circ_02		60	-	-
00_Civic_Bridge_Kitchen/Storage		60	-	-
00_Civic_Bridge_WC_Lobby		60	-	-
00_Civic_Bridge_WCs		60	-	-
00_Cleaners Cup.		60	-	-
00_Comms_Room		60	-	-
00_Draft_Lobby		60	-	-
00_Draught_Lobby_01		60	-	-
00_Lobby		60	-	-
00_Lobby		60	-	-
00_Stairs_01		60	-	-
00_Stairs_02		60	-	-
00_WC_Lobby_01		60	-	-
00_WCs_01		60	-	-
00_WCs_02		60	-	-
01 - Civic Chamber 01		60	-	-
01 - Committee 01 & 2		60	-	-
01 - Committee 03		60	-	-
01 - Mayor Robing		60	-	-
01 - Mayor Robing - WC		60	-	-
01 - Mayor's Aid & Wating Area		60	-	-
01 - Mayors Parlour		60	-	-
01 - Meeting 01		60	-	-
01 - Meeting 02		60	-	-
01 - Meeting 03		60	-	-
01 - Meeting 04		60	-	-
01 - Meeting 05		60	-	-
01 - Open Office 01		60	-	-

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 - Open Office 02		60	-	-
01 - Open Office 03		60	-	-
01 - Open Office 03		60	-	-
01 - Opposition Leader's Office		60	-	-
01 - Study Room 01		60	-	-
01 - Study Room 02		60	-	-
01 - Study Room 03		60	-	-
01_Acc. WC		60	-	-
01_Aud_Circ_01		60	-	-
01_Aud_Circ_02		60	-	-
01_Circ_03		60	-	-
01_Circ_04		60	-	-
01_Circ_04		60	-	-
01_Circ_04		60	-	-
01_Circ_05		60	-	-
01_Circulation		60	-	-
01_Civic_Bridge_Circ_01		60	-	-
01_Comms Room		60	-	-
01_Stairs_01		60	-	-
01_WC_Lobby_01		60	-	-
01_WCs		60	-	-
01_WCs_01		60	-	-
01_WCs_03		60	-	-
01_WCs_03		60	-	-
01_WCs_04		60	-	-
01_WCs_Cleaner's_Cupboard		60	-	-
01_WCs_Lobby		60	-	-
02 - Civic Auditorium		60	-	-
02 - Civic Seating		60	-	-
02 - Meeting Room 01		60	-	-
02 - Meeting Room 02		60	-	-
02 - Open Office 02		60	-	-
02 - Open Office 03		60	-	-
02 - Open Office 04		60	-	-
02 - Police Secure Room		60	-	-
02 - Study Room 01		60	-	-
02 - Study Room 01		60	-	-
02 - Study Room 02		60	-	-
02_Aud_Circ_01		60	-	-
02_Circulation		60	-	-
02_Circ_02		60	-	-
02_Circ_03		60	-	-
02_Circ_04		60	-	-

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_Comms_Room		60	-	-
02_Stairs		60	-	-
02_Stairs_01		60	-	-
02_Store		60	-	-
02_WC_01		60	-	-
02_WC_02		60	-	-
02_WC_03		60	-	-
02_WC_Lobby		60	-	-
02_WC_Lobby_01		60	-	-
02_WCs_01		60	-	-
03 - Booth		60	-	-
03 - MASH		60	-	-
03 - Open Office 01		60	-	-
03 - Open Office 02		60	-	-
03 - Open Office 03		60	-	-
03 - Police Secure Room		60	-	-
03_Circ_01		60	-	-
03_Circ_02		60	-	-
03_Circ_03		60	-	-
03_Circ_04		60	-	-
03_Circ_05		60	-	-
03_Cleaners_01		60	-	-
03_Comms_Room		60	-	-
03_Council_Chamber_Comms_Room		60	-	-
03_Stairs_01		60	-	-
03_Stairs_02		60	-	-
03_WC		60	-	-
03_WCs_01		60	-	-
03_WCs_Lobby		60	-	-
B0_Circ_01		60	-	-
B0_Comms_Room		60	-	-
B0_Domestic_Water_Tank		60	-	-
B0_General_Storage		60	-	-
B0_General_Storage_02		60	-	-
B0_General_Storage_03		60	-	-
B0_General_Storage_04		60	-	-
B0_IT_Secure_Storage		60	-	-
B0_Life_Lobby		60	-	-
B0_Life_Safety_Room		60	-	-
B0_Lobby		60	-	-
B0_LV_Room		60	-	-
B0_Plant_Space		60	-	-
B0_Stair_02		60	-	-

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
B0_Stairs_01		60	-	-
B0_Storage		60	-	-
02 - Open Office 01		60	-	-

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 - Changing Places Space	YES (+14%)	NO
00 - Civic Bridge Welcome Area/Circulation	YES (+36.5%)	NO
00 - Entrance Lobby/Reception 02	YES (+251.8%)	NO
00 - Entrance Lobby/Reception 03	YES (+192.1%)	NO
00 - Flexible Meeting/Event Space	YES (+17.6%)	NO
00 - Meeting Room 01	YES (+8.2%)	NO
00 - Meeting Room 02	YES (+122.7%)	NO
00 - Meeting Room 04	YES (+25.6%)	NO
00 - Meeting Room 05	YES (+26.5%)	NO
00 - Meeting Room 06	YES (+25.5%)	NO
00 - Meeting Room 07	YES (+9%)	NO
00 - Meeting Room 08	YES (+129.6%)	NO
00 - Meeting Room 09	NO (-23.5%)	NO
00 - Open Office 01	YES (+29.2%)	NO
00 - Open Office 02	YES (+21.7%)	NO
00 - Quiet Room	NO (-81%)	NO
00 - Study Room	YES (+30.2%)	NO
00_Comms_Room	N/A	N/A
01 - Civic Chamber 01	YES (+10.6%)	NO
01 - Committee 01 & 2	YES (+41.3%)	NO
01 - Committee 03	YES (+105.9%)	NO
01 - Mayor Robing	YES (+93.3%)	NO
01 - Mayor's Aid & Wating Area	N/A	N/A
01 - Mayors Parlour	YES (+102.9%)	NO
01 - Meeting 01	YES (+39.4%)	NO
01 - Meeting 02	YES (+34.5%)	NO
01 - Meeting 03	YES (+33.7%)	NO
01 - Meeting 04	YES (+87.5%)	NO
01 - Meeting 05	YES (+8.7%)	NO
01 - Open Office 01	YES (+38.1%)	NO
01 - Open Office 02	NO (-29.3%)	NO
01 - Open Office 03	YES (+17.5%)	NO
01 - Open Office 03	YES (+35.6%)	NO
01 - Opposition Leader's Office	YES (+71%)	NO
01 - Study Room 01	YES (+30.3%)	NO
01 - Study Room 02	YES (+14.2%)	NO
01 - Study Room 03	YES (+59.7%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
01_Aud_Circ_02	YES (+34%)	NO
01_Comms Room	N/A	N/A
02 - Civic Auditorium	NO (-61.7%)	NO
02 - Civic Seating	YES (+39.4%)	NO
02 - Meeting Room 01	YES (+34.8%)	NO
02 - Meeting Room 02	YES (+40.8%)	NO
02 - Open Office 02	NO (-30.2%)	NO
02 - Open Office 03	YES (+16%)	NO
02 - Open Office 04	YES (+26.7%)	NO
02 - Police Secure Room	YES (+20.1%)	NO
02 - Study Room 01	YES (+30.2%)	NO
02 - Study Room 01	YES (+17.6%)	NO
02 - Study Room 02	YES (+35.5%)	NO
02_Comms_Room	N/A	N/A
03 - Booth	YES (+79.1%)	NO
03 - MASH	YES (+70.5%)	NO
03 - Open Office 01	YES (+90.3%)	NO
03 - Open Office 02	YES (+71.3%)	NO
03 - Open Office 03	YES (+54.8%)	NO
03 - Police Secure Room	YES (+39.6%)	NO
03_Comms_Room	N/A	N/A
03_Council_Chamber_Comms_Room	N/A	N/A
B0_Comms_Room	N/A	N/A
02 - Open Office 01	YES (+19.6%)	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]	5434.7	5434.7
External area [m ²]	7399.9	7399.9
Weather	LON	LON
Infiltration [m ³ /hm ² @ 50Pa]	25	3
Average conductance [W/K]	4094.56	0
Average U-value [W/m ² K]	0.55	0
Alpha value* [%]	24.54	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
92	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
8	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	12.58	3.86
Cooling	7.57	3.55
Auxiliary	15.83	7.31
Lighting	19.38	9.59
Hot water	2.71	1.52
Equipment*	49.45	49.45
TOTAL **	58.07	25.83

* 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]	189.12	97.8
Primary energy [kWh _{PE} /m ²]	88.11	38.16
Total emissions [kg/m ²]	8.13	3.51

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] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	97.4	145.8	11.3	13	16.6	2.39	3.12	2.64	4.5	
Notional	32.5	96.2	3.3	5.8	11.2	2.78	4.63	----	----	
[ST] Central heating using water: radiators, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	142.4	0	16.8	0	1.1	2.36	0	2.64	0	
Notional	87.1	0	8.7	0	1	2.78	0	----	----	
[ST] Constant volume system (variable fresh air rate), [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	152.8	92.4	17	12.5	82.1	2.5	2.05	2.64	4.5	
Notional	68.1	67.7	6.8	4.1	11.7	2.78	4.63	----	----	
[ST] Split or multi-split system, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	0	0	0	0	0	2.46	3.94	2.64	5.55	
Notional	0	0	0	0	0	2.78	4.63	----	----	
[ST] Fan coil systems, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	95.3	139	11.1	12.4	14.6	2.39	3.12	2.64	4.5	
Notional	24.8	109.3	2.5	6.6	12.1	2.78	4.63	----	----	
[ST] Central heating using water: radiators, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
Actual	117.6	0	13.9	0	0.7	2.36	0	2.64	0	
Notional	45.2	0	4.5	0	0.7	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