



Brighter strategies
for greener projects



Client: Quartz Project Services
Project: Florentia Village
Report: Sustainability Review

QUALITY ASSURANCE

Issue/Revision:	Draft	Final
Date:	September 2025	November 2025
Comments:		
Prepared by:	Julio Jimenez Castillo	Julio Jimenez Castillo
Authorised by:	Rodrigo Garcia Priego	Rodrigo Garcia Priego
File Reference:	553303jjc21Nov25_Sustainability Review FV02	553303jjc21Nov25_Sustainability Review FV02

CONTENTS

1.0	INTRODUCTION	4
2.0	AS-BUILT ENERGY PERFORMANCE ASSESSMENT	5
2.1	COMPLIANCE WITH APPROVED ENERGY PLAN, LONDON PLAN AND COUNCIL POLICIES	5
2.2	CO ₂ EMISSION REDUCTION TARGET	6
2.3	SUPPORTING EVIDENCE	7
3.0	CONCLUSION	8
APPENDIX A		

Tables

Table 2.1	Thermal performance of Florentia Village as submitted and as Built	6
Table 2.2	As-built TER BER	7

Figures

No table of figures entries found.

Plates

No table of figures entries found.

1.0 INTRODUCTION

This Sustainability Review presents a detailed as-built energy assessment of the Proposed Development at Florentia Village, 108 Vale Road, Haringey, N4 1TD, prepared in accordance with the London Plan and relevant Haringey Council Local Plan Policies. Its purpose is to provide documented evidence demonstrating that the construction and completion of the Proposed Development align with the Approved Energy Plan as defined on Section 106 attached to planning permission HGY/2022/0044.

This review addresses the following:

- Compliance with the Approved Energy Plan, London Plan and Council Policies;
- Verification of whether the target of 100% CO₂ emission reduction has been met through connection to the District Energy Network (DEN);
- Calculation and explanation of the amount of the Carbon Offsetting Contribution (if any) to be paid by the Owner to the Council;
- Evidence of the energy requirements, supported with evidence such as photographic documentation, air tightness test certificates, and as-built EPCs.

2.0 AS-BUILT ENERGY PERFORMANCE ASSESSMENT

2.1 COMPLIANCE WITH APPROVED ENERGY PLAN, LONDON PLAN AND COUNCIL POLICIES

This section explains and provides evidence to demonstrate whether the Development has been constructed and completed in accordance with the approved Energy Statement (Issue 3) dated 18 March 2022 produced by Energy Report, the London Plan and Council policies.

Policy Checklist:

The compliance for this development followed the Development Plan and its supporting SPDs. The main energy-related policy documents for the site include:

- The London Plan 2021: The overarching Spatial Development Strategy for the entirety of Greater London (adopted March 2021).
- Haringey Local Plan Strategic Policies: Provides spatial policies to guide and manage development within the Borough (adopted March 2013, as amended July 2017).
- Haringey Council Local Plan Development Management DPD: Establishes the clear framework for assessing development proposals against the Strategic Policies (July 2017).

These documents are further supported by relevant SPDs, including the Planning Obligations SPD (2018) and the Sustainable Design and Construction SPD (2013).

The main requirements come from London Plan Policy SI 2 ('Minimising Greenhouse Gas Emissions'), which directs all development proposals to maximise the reduction of carbon dioxide emissions in accordance with the established Energy Hierarchy:

- Be Lean: Use Less Energy (Energy Efficiency)
- Be Clean Supply Energy Efficiently (District Heating)
- Be Green: Use Renewable Energy (Onsite Generation)
- Be Seen: Energy Monitoring Post Construction

In addition, London Plan Policy 5.2 sets a quantitative target: all non-domestic developments are mandated to achieve a 100% reduction in CO₂ emissions (i.e., net zero) compared to Part L2A (2013) of the building regulations. A foundational element of this is the 'Be Lean' requirement, which stipulates that developments must demonstrate a minimum 15% reduction in CO₂ emissions solely through energy efficiency measures. Furthermore, this requirement is strongly supported by local policy aspirations, such as those found in Haringey's emerging Local Plan, particularly policies DM21: Sustainable Design, Layout and Construction and DM22: Decentralised Energy.

Summary of Compliance:

The table below provides a direct comparison of the U-values for key fabric elements of the Development. This comparison shows the difference between the Revised U-values as per the

Amendment to the Energy Strategy and the as-built U-values achieved during construction. This demonstrates that the materials and construction methods implemented meet the performance targets set out in the approved plans.

Table 2.1 Thermal performance of Florentia Village as submitted and as Built

Fabric Element	Revised U-values as per Amendment to Energy Strategy	As-built U-values
Pitched roof U-value (W/m ² K)	0.18	0.18
Ground floor U-value (W/m ² K)	0.18	Block E and G: 0.18 Block H: 0.17 Block F: 0.16
External wall U-value (W/m ² K)	0.20-0.21	0.20
Vehicle / Large doors U-value (W/m ² K)	1.24	~1.24
Pedestrian / High doors (W/m ² K)	1.8	~1.7
Rooflights U-value (W/m ² K)	1.6	1.3
Window U-value (W/m ² K)	1.6	~1.45
Window g-value	0.4	0.4
Air permeability (m ³ /h/m ² @50Pa)	3	~2.40

2.2 CO₂ EMISSION REDUCTION TARGET

This section provides evidence to demonstrate whether the 100% CO₂ emission reduction target has been met.

DEN Connection:

The project is designed to handle both onsite heat generation and a District Energy Network (DEN) simultaneously, meaning it can run using either or both energy sources. The site has included all the necessary provisions to connect to the DEN, which are secured by way of sacrificial ducts placed within a prepared and marked route. The development also has its own communal heating network and allocated space within the plant room for the future DEN connection is provided. However, the appropriate final pipework and plant will need to be installed at the time the connection is physically

made. This approach, involving the use of sacrificial ducts to reserve the route and prove connection viability, was accepted by the Haringey Council.

It is important to note that third parties are responsible for the design, installation, and operation of the network itself. Since the DEN's energy is expected to have a lower carbon factor than the interim gas boilers, further carbon reductions are anticipated once the connection is operational. However, in line with the planning application's energy statement, no carbon reductions related to this future DEN connection have been included in the current calculations.

Achievement of 100% CO₂ Reduction:

Table 2.2 below details the comparison between the As-Built Target Emission Rate (TER) and the actual Building Emission Rate (BER), based on final construction information. The calculations have been undertaken in line with Building Regulations Part L 2013.

To determine the overall BER for the entire development, the results from all individual building blocks were aggregated and calculated using area weighting.

This methodology revealed a 136% reduction in CO₂ emissions when comparing the BER against the TER. This percentage significantly exceeds and fully complies with the 100% CO₂ reduction applicable to the project.

As the development achieved a total carbon reduction of more than 100%, the requirement for the Owner to pay Carbon Offsetting contributions to the Council has been considered not applicable.

Table 2.2 As-built TER BER

Block	Area sqm	As-built TER		As-built BER	
		Target emission rate kgCO ₂ /m ²	Total/annum kgCO ₂	Building emission rate kgCO ₂ /m ²	Total/annum kgCO ₂
E	897.9	12.6	11,314	-2.9	-2,604
G	2,174.1	11.4	24,785	-4.6	-10,001
H	2,529.6	12.1	30,608	-6.4	-16,189
F	3,799.1	12.2	46,349	-3.2	-12,157
Total	9,400.7	12.0	113,055	-4.4	-40,951
		TER		BER	

2.3 SUPPORTING EVIDENCE

Appendix A provides a checklist of required evidence to support the assessment:

- Air tightness test certificates.
- As-built Energy Performance Certificates (EPCs).
- As-built BRUKLs

3.0 CONCLUSION

The Sustainability Review for Florentia Village confirms that the Proposed Development has been constructed and completed in full compliance with the approved Energy Statement (Issue 3) dated 18 March 2022 produced by Energy Report, the London Plan, and all relevant Council planning policies, specifically London Plan Policies SI 2 and 5.2.

- The development has achieved an overall Building Emission Rate (BER) of $-4.4\text{kgCO}_2/\text{m}^2$ that delivers a 136% reduction in regulated CO_2 emissions when compared against the Target Emission Rate (TER), based on Building Regulations Part L 2013. This substantially exceeds the 100% CO_2 reduction target in the Approved Energy Plan;
- The construction demonstrates successful implementation of the 'Be Lean' principle, with as-built U-values for key fabric elements meeting the performance targets set out in the approved plans;
- The carbon reduction exceeds the 100% reduction, which means, the requirement for the owner to pay carbon offsetting contributions to the Council is not applicable;
- The project has been built to connect to a DEN using sacrificial ducts and allocated plant room space, aligning with the 'Be Clean' element of the energy hierarchy and as agreed with Haringey Council. Although the DEN is anticipated to provide further carbon reductions, these future savings are not included in the current planning calculations. The physical connection and operation of the network remain the responsibility of third parties.

APPENDIX A

A.1 AIR TIGHTNESS TEST CERTIFICATES.

Air Permeability Test Certificate

Building Name/Plot Number: Unit B3		Air Permeability (AP) 2.45 m ³ (h.m ²) @ 50Pa	
Building Address: Florentia Clothing Village, 108 Vale Road, Harringay, N4 1TD			
Design Target 3.00 m ³ (h.m ²) @ 50Pa	Design Target Achieved? Yes	Flow Exponent (n): 0.630	Coefficient of Determination (r²): 0.9900

Test Information

Test Method: Blower Door	Test Standard: CIBSE TM23
Test Date: 30 th September 2025	
Building Envelope Area (m^2): 730.00	Building Volume (m^3):
Building Preparations:	
Deviations/Notes: None Declared	

Tester Information

Company: Site Testing Group	Name: Aston McKay
Level of Competence: Level 2	EAS Tester Number: 0903
Contact: 01707 817550 info@sitetesting.group	Testers Report Reference: None
Related Party Disclosure: No related party	
Should you have any enquires about this certificate or require the full test report please contact the testing company.	

Elmhurst Airtightness Scheme - Registered Competent Persons Scheme

16 St Johns Business Park, Lutterworth, Leicestershire, LE17 4HB
 e: airtest-support@elmhurstenergy.co.uk, t: 01455 555 217
 w: elmhurstairtightness-scheme.co.uk

Air Permeability Test Certificate

Building Name/Plot Number: Unit C3		Air Permeability (AP) 2.07 m ³ (h.m ²) @ 50Pa	
Building Address: Florentia Clothing Village, 108 Vale Road, Harringay, N4 1TD			
Design Target 3.00 m ³ (h.m ²) @ 50Pa	Design Target Achieved? Yes	Flow Exponent (n): 0.590	Coefficient of Determination (r²): 1.0000

Test Information

Test Method: Blower Door	Test Standard: CIBSE TM23
Test Date: 30 th September 2025	
Building Envelope Area (m^2): 1199.00	Building Volume (m^3):
Building Preparations:	
Deviations/Notes: None Declared	

Tester Information

Company: Site Testing Group	Name: Aston McKay
Level of Competence: Level 2	EAS Tester Number: 0903
Contact: 01707 817550 info@sitetesting.group	Testers Report Reference: None
Related Party Disclosure: No related party	
Should you have any enquires about this certificate or require the full test report please contact the testing company.	

Elmhurst Airtightness Scheme - Registered Competent Persons Scheme

16 St Johns Business Park, Lutterworth, Leicestershire, LE17 4HB
 e: airtest-support@elmhurstenergy.co.uk, t: 01455 555 217
 w: elmhurstairtightness-scheme.co.uk

Air Permeability Test Certificate

Building Name/Plot Number: Unit A4		Air Permeability (AP) 2.24 m ³ (h.m ²) @ 50Pa	
Building Address: Florentia Clothing Village, 108 Vale Road, Harringay, N4 1TD			
Design Target 3.00 m ³ (h.m ²) @ 50Pa	Design Target Achieved? Yes	Flow Exponent (n): 0.560	Coefficient of Determination (r²): 0.9900

Test Information

Test Method: Blower Door	Test Standard: CIBSE TM23
Test Date: 30 th September 2025	
Building Envelope Area (m^2): 498.00	Building Volume (m^3):
Building Preparations:	
Deviations/Notes: None Declared	

Tester Information

Company: Site Testing Group	Name: Aston McKay
Level of Competence: Level 2	EAS Tester Number: 0903
Contact: 01707 817550 info@sitetesting.group	Testers Report Reference: None
Related Party Disclosure: No related party	
Should you have any enquires about this certificate or require the full test report please contact the testing company.	

Elmhurst Airtightness Scheme - Registered Competent Persons Scheme

16 St Johns Business Park, Lutterworth, Leicestershire, LE17 4HB
 e: airtest-support@elmhurstenergy.co.uk, t: 01455 555 217
 w: elmhurstairtightness-scheme.co.uk

Air Permeability Test Certificate

Building Name/Plot Number: Unit B14		Air Permeability (AP) 2.55 m ³ (h.m ²) @ 50Pa	
Building Address: Florentia Clothing Village, 108 Vale Road, Harringay, N4 1TD			
Design Target 3.00 m ³ (h.m ²) @ 50Pa	Design Target Achieved? Yes	Flow Exponent (n): 0.600	Coefficient of Determination (r²): 1.0000

Test Information

Test Method: Blower Door	Test Standard: CIBSE TM23
Test Date: 30 th September 2025	
Building Envelope Area (m^2): 665.00	Building Volume (m^3):
Building Preparations:	
Deviations/Notes: None Declared	

Tester Information

Company: Site Testing Group	Name: Aston McKay
Level of Competence: Level 2	EAS Tester Number: 0903
Contact: 01707 817550 info@sitetesting.group	Testers Report Reference: None
Related Party Disclosure: No related party	
Should you have any enquires about this certificate or require the full test report please contact the testing company.	

Elmhurst Airtightness Scheme - Registered Competent Persons Scheme

16 St Johns Business Park, Lutterworth, Leicestershire, LE17 4HB
 e: airtest-support@elmhurstenergy.co.uk, t: 01455 555 217
 w: elmhurstairtightness-scheme.co.uk

Air Permeability Test Certificate

Building Name/Plot Number: Unit C7		Air Permeability (AP) 2.66 m ³ (h.m ²) @ 50Pa	
Building Address: Florentia Clothing Village, 108 Vale Road, Harringay, N4 1TD			
Design Target 3.00 m ³ (h.m ²) @ 50Pa	Design Target Achieved? Yes	Flow Exponent (n): 0.560	Coefficient of Determination (r²): 1.0000

Test Information

Test Method: Blower Door	Test Standard: CIBSE TM23
Test Date: 30 th September 2025	
Building Envelope Area (m^2): 420.00	Building Volume (m^3):
Building Preparations:	
Deviations/Notes: None Declared	

Tester Information

Company: Site Testing Group	Name: Aston McKay
Level of Competence: Level 2	EAS Tester Number: 0903
Contact: 01707 817550 info@sitetesting.group	Testers Report Reference: None
Related Party Disclosure: No related party	
Should you have any enquires about this certificate or require the full test report please contact the testing company.	

Elmhurst Airtightness Scheme - Registered Competent Persons Scheme

16 St Johns Business Park, Lutterworth, Leicestershire, LE17 4HB
 e: airtest-support@elmhurstenergy.co.uk, t: 01455 555 217
 w: elmhurstairtightness-scheme.co.uk

Air Permeability Test Certificate

Building Name/Plot Number: Unit D17		Air Permeability (AP) 2.49 m ³ (h.m ²) @ 50Pa	
Building Address: Florentia Clothing Village, 108 Vale Road, Harringay, N4 1TD			
Design Target 3.00 m ³ (h.m ²) @ 50Pa	Design Target Achieved? Yes	Flow Exponent (n): 0.550	Coefficient of Determination (r²): 0.9900

Test Information

Test Method: Blower Door	Test Standard: CIBSE TM23
Test Date: 30 th September 2025	
Building Envelope Area (m^2): 369.00	Building Volume (m^3):
Building Preparations:	
Deviations/Notes: None Declared	

Tester Information

Company: Site Testing Group	Name: Aston McKay
Level of Competence: Level 2	EAS Tester Number: 0903
Contact: 01707 817550 info@sitetesting.group	Testers Report Reference: None
Related Party Disclosure: No related party	
Should you have any enquires about this certificate or require the full test report please contact the testing company.	

Elmhurst Airtightness Scheme - Registered Competent Persons Scheme

16 St Johns Business Park, Lutterworth, Leicestershire, LE17 4HB
 e: airtest-support@elmhurstenergy.co.uk, t: 01455 555 217
 w: elmhurstairtightness-scheme.co.uk

Air Permeability Test Certificate

Building Name/Plot Number: Unit D8		Air Permeability (AP) 2.40 m ³ (h.m ²) @ 50Pa	
Building Address: Florentia Clothing Village, 108 Vale Road, Harringay, N4 1TD			
Design Target 3.00 m ³ (h.m ²) @ 50Pa	Design Target Achieved? Yes	Flow Exponent (n): 0.580	Coefficient of Determination (r²): 1.0000

Test Information

Test Method: Blower Door	Test Standard: CIBSE TM23
Test Date: 30 th September 2025	
Building Envelope Area (m^2): 1041.00	Building Volume (m^3):
Building Preparations:	
Deviations/Notes: None Declared	

Tester Information

Company: Site Testing Group	Name: Aston McKay
Level of Competence: Level 2	EAS Tester Number: 0903
Contact: 01707 817550 info@sitetesting.group	Testers Report Reference: None
Related Party Disclosure: No related party	
Should you have any enquires about this certificate or require the full test report please contact the testing company.	

Elmhurst Airtightness Scheme - Registered Competent Persons Scheme

16 St Johns Business Park, Lutterworth, Leicestershire, LE17 4HB
 e: airtest-support@elmhurstenergy.co.uk, t: 01455 555 217
 w: elmhurstairtightness-scheme.co.uk

A.2 AS-BUILT ENERGY PERFORMANCE CERTIFICATES (EPCS).

- Block E: <https://find-energy-certificate.service.gov.uk/energy-certificate/2512-4190-8713-7937-8096>
- Block G: <https://find-energy-certificate.service.gov.uk/energy-certificate/5741-7389-4612-0822-7593>
- Block H: <https://find-energy-certificate.service.gov.uk/energy-certificate/3830-9272-2441-9771-7453>
- Block F: <https://find-energy-certificate.service.gov.uk/energy-certificate/9735-3893-9821-5263-6192>

A.3 AS-BUILT BRUKLS

Project name

Florentia Village - Block F Whole building As built

Date: Thu Oct 30 14:22:03 2025

Administrative information

Building Details

Address: Block F, London, N4 1TD

Certification tool

Calculation engine: Apache

Calculation engine version: 7.0.29

Interface to calculation engine: IES Virtual Environment

Interface to calculation engine version: 7.0.29

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

Certifier details

Name: Rodrigo Garcia Priego

Telephone number: 020 3544 4000

Address: 9 Holyrood Street, London, SE1 2EL

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

CO ₂ emission rate from the notional building, kgCO ₂ /m ² .annum	12.2
Target CO ₂ emission rate (TER), kgCO ₂ /m ² .annum	12.2
Building CO ₂ emission rate (BER), kgCO ₂ /m ² .annum	-3.2
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	0.21	0.21	SP000014:Surf[2]
Floor	0.25	0.16	0.16	SP000014:Surf[0]
Roof	0.25	0.18	0.18	BD000004:Surf[7]
Windows***, roof windows, and rooflights	2.2	1.39	1.86	BL000004:Surf[5]
Personnel doors	2.2	1.43	1.86	BL000004:Surf[6]
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	2.49

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	NO
Whole building electric power factor achieved by power factor correction	<0.9

1- FV: Elec rads

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	1	-	0	-	-
Standard value	N/A	N/A	N/A	N/A	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					NO

2- FV: Showers - MVHR and Elec Rads

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	1	-	0	-	0.83
Standard value	N/A	N/A	N/A	N/A	0.5
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					NO

3- FV: (Top floor units) HIU Radiators with nat vent (boilers)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	0.93	-	0	-	-
Standard value	0.91*	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 gas single boiler systems <=2 MW output. For single boiler systems >2 MW or multi-boiler systems, (overall) limiting efficiency is 0.86. For any individual boiler in a multi-boiler system, limiting efficiency is 0.82.					

4- FV: Kitchens and Shared toilets - MVHR and Rads

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	0.93	-	0	-	0.83
Standard value	0.91*	N/A	N/A	N/A	0.5
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					NO
* Standard shown is for gas single boiler systems <=2 MW output. For single boiler systems >2 MW or multi-boiler systems, (overall) limiting efficiency is 0.86. For any individual boiler in a multi-boiler system, limiting efficiency is 0.82.					

1- FV: Hot water (PoU Electric)

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

2- FV: Hot water (Block D - Communal Immersion heaters)

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	1	0.007
Standard value	1	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
BD_L00_DDA WC	-	-	-	1.5	-	-	-	-	-	-	-	N/A
BD_L00_DDA Shower	-	-	-	1.5	-	-	-	-	-	-	-	N/A
BD_L01_Unit 05 Mezzanine (Coworking space)	-	-	-	1.5	-	-	-	-	-	-	-	N/A
BD_L00_Unit 05 (Coworking)	-	-	-	1.5	-	-	-	-	-	-	-	N/A
BD_L00_Reception	-	-	-	1.5	-	-	-	-	-	-	-	N/A
BD_L00_Shower Facilities	-	-	-	1.5	-	-	-	-	-	-	-	N/A
BD_L02_Shared WCs	-	-	-	1.5	-	-	-	-	-	-	-	N/A
BD_L02_Shared Kitchen	-	-	-	1.5	-	-	-	-	-	-	-	N/A

General lighting and display lighting	Luminous efficacy [lm/W]			
Zone name	Luminaire	Lamp	Display lamp	General lighting [W]
Standard value	60	60	22	
BD_L00_Security boots WC	-	99	-	20
BD_L00_Security booth	57	-	-	94
BD_L00_WC_Units 04	-	174	-	20
BD_L00_WC_Units 01	-	163	-	20
BD_L00_WC_Units 03	-	174	-	20
BD_L00_WC_Units 02	-	174	-	20
BD_L00_DDA WC	-	174	-	40
BD_L00_Plant room	86	-	-	126
BD_L00_DDA Shower	-	174	-	20
BD_L00_Post Room	90	-	-	118
BD_L00_WC_Units 08	-	119	-	20
BD_L00_WC_Units 07	-	119	-	20
BD_L00_WC_Units 06	-	120	-	20
BD_L01_Unit 01 Mezzanine	41	-	-	63
BD_L01_Unit 02 Mezzanine	42	-	-	63
BD_L01_Unit 03 Mezzanine	41	-	-	63
BD_L01_Unit 04 Mezzanine	42	-	-	63
BD_L01_Unit 05 Mezzanine (Coworking space)	40	-	-	520

General lighting and display lighting		Luminous efficacy [lm/W]			General lighting [W]
Zone name		Luminaire	Lamp	Display lamp	
	Standard value	60	60	22	
BD_L01_Unit 06 Mezzanine		28	-	-	189
BD_L01_Unit 07 Mezzanine		28	-	-	189
BD_L01_Unit 8 Mezzanine		28	-	-	189
BD_L00_Unit 06		29	-	-	132
BD_L00_Unit 07		29	-	-	132
BD_L00_Unit 08		29	-	-	132
BD_L00_Unit 04		53	-	-	69
BD_L00_Unit 03		51	-	-	69
BD_L00_Unit 02		53	-	-	69
BD_L00_Unit 01		49	-	-	69
BD_L00_Unit 05 (Coworking)		50	-	-	290
BD_L00_Reception		-	83	105	236
BD_L00_Shower Facilities		-	93	-	235
BD_L02_Unit 15		43	-	-	588
BD_L02_Unit 09		43	-	-	718
BD_L02_Unit 16		44	-	-	588
BD_L02_Unit 17		43	-	-	588
BD_L02_Unit 11		42	-	-	783
BD_L02_Unit 18		43	-	-	588
BD_L02_Unit 19		44	-	-	588
BD_L02_Unit 20		43	-	-	588
BD_L02_Unit 14		49	-	-	393
BD_L02_Shared WCs		-	71	-	260
BD_L02_Shared Kitchen		-	92	-	263
BD_L02_Unit 12		43	-	-	783
BD_L02_Unit 13		43	-	-	783
BD_L02_Corridor		-	81	-	212
BD_L02_Corridor		-	85	-	328
BD_L02_Unit 10		43	-	-	783

Criterion 3: The spaces in the building should have appropriate passive control measures to limit solar gains

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
BD_L00_Security booth	NO (-71.2%)	NO
BD_L01_Unit 01 Mezzanine	NO (-90.5%)	NO
BD_L01_Unit 02 Mezzanine	NO (-91.1%)	NO
BD_L01_Unit 03 Mezzanine	NO (-91.8%)	NO
BD_L01_Unit 04 Mezzanine	NO (-90.9%)	NO
BD_L01_Unit 05 Mezzanine (Coworking space)	NO (-66.8%)	NO
BD_L01_Unit 06 Mezzanine	NO (-97.1%)	NO
BD_L01_Unit 07 Mezzanine	NO (-97%)	NO
BD_L01_Unit 8 Mezzanine	NO (-97.4%)	NO
BD_L00_Unit 06	NO (-72.7%)	NO
BD_L00_Unit 07	NO (-72.3%)	NO

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
BD_L00_Unit 08	NO (-75.7%)	NO
BD_L00_Unit 04	NO (-61.2%)	NO
BD_L00_Unit 03	NO (-66.5%)	NO
BD_L00_Unit 02	NO (-62.2%)	NO
BD_L00_Unit 01	NO (-63.8%)	NO
BD_L00_Unit 05 (Coworking)	NO (-28.3%)	NO
BD_L00_Reception	NO (-42.8%)	NO
BD_L02_Unit 15	NO (-10.6%)	NO
BD_L02_Unit 09	NO (-23.6%)	NO
BD_L02_Unit 16	NO (-4.5%)	NO
BD_L02_Unit 17	NO (-14.5%)	NO
BD_L02_Unit 11	NO (-28.9%)	NO
BD_L02_Unit 18	NO (-11.6%)	NO
BD_L02_Unit 19	NO (-5.5%)	NO
BD_L02_Unit 20	NO (-8.9%)	NO
BD_L02_Unit 14	NO (-3.6%)	NO
BD_L02_Unit 12	NO (-26.4%)	NO
BD_L02_Unit 13	NO (-21%)	NO
BD_L02_Unit 10	NO (-20.7%)	NO

Criterion 4: The performance of the building, as built, should be consistent with the calculated BER

Separate submission

Criterion 5: The necessary provisions for enabling energy-efficient operation of the building should be in place

Separate submission

EPBD (Recast): Consideration of 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
Area [m ²]	3799.1	3799.1
External area [m ²]	5668.5	5668.5
Weather	LON	LON
Infiltration [m ³ /hm ² @ 50Pa]	2	5
Average conductance [W/K]	1839.99	1878.7
Average U-value [W/m ² K]	0.32	0.33
Alpha value* [%]	9.99	10

* 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	13.24	12.87
Cooling	0	0
Auxiliary	2.71	0.3
Lighting	7.01	17.17
Hot water	4.32	1.72
Equipment*	19.58	19.58
TOTAL**	27.28	32.06

* 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	25.96	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]	39.69	41.58
Primary energy* [kWh/m ²]	60	69.81
Total emissions [kg/m ²]	-3.2	12.2

* 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] Central heating using water: radiators, [HS] LTHW boiler, [HFT] Natural Gas, [CFT] Electricity										
Actual	38.4	0	12.9	0	2.1	0.83	0	0.93	0	
Notional	40.6	0	12.5	0	0	0.91	0	----	----	
[ST] Central heating using water: radiators, [HS] LTHW boiler, [HFT] Natural Gas, [CFT] Electricity										
Actual	81.7	0	27.4	0	9.1	0.83	0	0.93	0	
Notional	71.8	0	23.1	0	3.5	0.86	0	----	----	
[ST] Other local room heater - unfanned, [HS] Direct or storage electric heater, [HFT] Electricity, [CFT] Electricity										
Actual	282	0	78.3	0	0	1	0	1	0	
Notional	348.6	0	112.3	0	0	0.86	0	----	----	
[ST] Other local room heater - unfanned, [HS] Direct or storage electric heater, [HFT] Electricity, [CFT] Electricity										
Actual	63.7	0	17.7	0	7.2	1	0	1	0	
Notional	110.5	0	35.6	0	2.5	0.86	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

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	0.16	SP000017:Surf[1]
Floor	0.2	0.16	SP000014:Surf[0]
Roof	0.15	0.18	BD000004:Surf[7]
Windows, roof windows, and rooflights	1.5	1.1	SP000047:Surf[7]
Personnel doors	1.5	1.24	SP000047:Surf[6]
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	2.49

Project name

Florentia Village - Block G Whole building As built

Date: Thu Oct 30 16:01:20 2025

Administrative information

Building Details

Address: Block G, Florentia Village, London, N4 1TD

Certification tool

Calculation engine: Apache

Calculation engine version: 7.0.29

Interface to calculation engine: IES Virtual Environment

Interface to calculation engine version: 7.0.29

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

Certifier details

Name: Rodrigo Garcia Priego

Telephone number: 020 3544 4000

Address: 9 Holyrood Street, London, SE1 2EL

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

CO ₂ emission rate from the notional building, kgCO ₂ /m ² .annum	11.4
Target CO ₂ emission rate (TER), kgCO ₂ /m ² .annum	11.4
Building CO ₂ emission rate (BER), kgCO ₂ /m ² .annum	-4.6
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	0.21	0.21	SP00005A:Surf[0]
Floor	0.25	0.18	0.18	SP000055:Surf[0]
Roof	0.25	0.18	0.18	SP000073:Surf[0]
Windows***, roof windows, and rooflights	2.2	1.41	1.86	SP000074:Surf[5]
Personnel doors	2.2	1.32	1.86	SP000074:Surf[6]
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	2.55

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	NO
Whole building electric power factor achieved by power factor correction	<0.9

1- FV: (Top floor units) HIU Radiators with nat vent (boilers)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	0.93	-	0	-	-
Standard value	0.91*	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 gas single boiler systems <=2 MW output. For single boiler systems >2 MW or multi-boiler systems, (overall) limiting efficiency is 0.86. For any individual boiler in a multi-boiler system, limiting efficiency is 0.82.					

1- FV: Hot water (PoU Electric)

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

"No zones in project where local mechanical ventilation, exhaust, or terminal unit is applicable"

General lighting and display lighting		Luminous efficacy [lm/W]			General lighting [W]
Zone name		Luminaire	Lamp	Display lamp	
	Standard value	60	60	22	
BB_L00_WC_Unit 2		-	122	-	20
BB_L00_WC_Unit 1		-	117	-	20
BB_L00_Corridor		-	90	-	455
BB_L00_WC_Unit 3		-	120	-	20
BB_L00_WC_Unit 5		-	132	-	20
BB_L00_WC_Unit 4		-	120	-	20
BB_L01_Unit 1 Mezzanine		41	-	-	126
BB_L01_Unit 2 Mezzanine		41	-	-	126
BB_L01_Unit 3 Mezzanine		40	-	-	189
BB_L01_Unit 4 Mezzanine		40	-	-	189
BB_L01_Unit 5 Mezzanine		28	-	-	189
BB_L00_Unit 5		29	-	-	69
BB_L00_Unit 4		43	-	-	69
BB_L00_Unit 3		42	-	-	69
BB_L00_Unit 1		43	-	-	69
BB_L00_Unit 2		44	-	-	69
BB_L02_Unit 14		40	-	-	1176
BB_L02_Unit 6		41	-	-	588
BB_L02_Unit 8		42	-	-	588
BB_L02_Unit 10		41	-	-	588
BB_L02_Unit 12		42	-	-	588
BB_L02_Unit 13		42	-	-	588
BB_L02_Unit 11		41	-	-	588
BB_L02_Unit 7		42	-	-	588

General lighting and display lighting		Luminous efficacy [lm/W]			
Zone name		Luminaire	Lamp	Display lamp	General lighting [W]
	Standard value	60	60	22	
BB_L02_Corridor		-	113	-	235
BB_L02_Unit 9		42	-	-	588

Criterion 3: The spaces in the building should have appropriate passive control measures to limit solar gains

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
BB_L01_Unit 1 Mezzanine	NO (-94.4%)	NO
BB_L01_Unit 2 Mezzanine	NO (-99.1%)	NO
BB_L01_Unit 3 Mezzanine	NO (-98.1%)	NO
BB_L01_Unit 4 Mezzanine	NO (-98.7%)	NO
BB_L01_Unit 5 Mezzanine	NO (-99.1%)	NO
BB_L00_Unit 5	NO (-93.5%)	NO
BB_L00_Unit 4	NO (-89.4%)	NO
BB_L00_Unit 3	NO (-85.3%)	NO
BB_L00_Unit 1	NO (-72.3%)	NO
BB_L00_Unit 2	NO (-93.2%)	NO
BB_L02_Unit 14	NO (-65.7%)	NO
BB_L02_Unit 6	NO (-37.3%)	NO
BB_L02_Unit 8	NO (-44.4%)	NO
BB_L02_Unit 10	NO (-49.8%)	NO
BB_L02_Unit 12	NO (-46.7%)	NO
BB_L02_Unit 13	NO (-4.4%)	NO
BB_L02_Unit 11	NO (-12.7%)	NO
BB_L02_Unit 7	NO (-60.7%)	NO
BB_L02_Unit 9	NO (-5.1%)	NO

Criterion 4: The performance of the building, as built, should be consistent with the calculated BER

Separate submission

Criterion 5: The necessary provisions for enabling energy-efficient operation of the building should be in place

Separate submission

EPBD (Recast): Consideration of 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
Area [m ²]	2174.1	2174.1
External area [m ²]	3014.8	3014.8
Weather	LON	LON
Infiltration [m ³ /hm ² @ 50Pa]	3	7
Average conductance [W/K]	872.51	1040.93
Average U-value [W/m ² K]	0.29	0.35
Alpha value* [%]	12.56	10

* 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	12.63	12.84
Cooling	0	0
Auxiliary	2.05	0.05
Lighting	5.63	15.88
Hot water	1.64	1.72
Equipment*	17.2	17.2
TOTAL**	21.95	30.48

* 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	23.42	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]	37.61	41.86
Primary energy* [kWh/m ²]	44.02	65.22
Total emissions [kg/m ²]	-4.6	11.4

* 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] Central heating using water: radiators, [HS] LTHW boiler, [HFT] Natural Gas, [CFT] Electricity										
	Actual	40	0	13.4	0	2.1	0.83	0	0.93	0
	Notional	44.5	0	13.7	0	0	0.91	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

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	0.21	SP00005A:Surf[0]
Floor	0.2	0.18	SP000055:Surf[0]
Roof	0.15	0.18	SP000073:Surf[0]
Windows, roof windows, and rooflights	1.5	1.1	SP000074:Surf[4]
Personnel doors	1.5	1.24	SP000074:Surf[3]
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	2.55

Project name

Florentia Village - Block H whole building As built

Date: Thu Oct 30 14:31:05 2025

Administrative information

Building Details

Address: Block H, Florentia Village, 108 Vale Road,
London, N4 1TD

Certification tool

Calculation engine: Apache

Calculation engine version: 7.0.29

Interface to calculation engine: IES Virtual Environment

Interface to calculation engine version: 7.0.29

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

Certifier details

Name: Rodrigo Garcia Priego**Telephone number:** 020 3544 4000**Address:** 9 Holyrood Street, London, SE1 2ELCriterion 1: The calculated CO₂ emission rate for the building must not exceed the target

CO ₂ emission rate from the notional building, kgCO ₂ /m ² .annum	12.1
Target CO ₂ emission rate (TER), kgCO ₂ /m ² .annum	12.1
Building CO ₂ emission rate (BER), kgCO ₂ /m ² .annum	-6.4
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	0.21	0.21	SP00000A:Surf[1]
Floor	0.25	0.17	0.17	SP00000A:Surf[0]
Roof	0.25	0.18	0.18	BC000000:Surf[0]
Windows***, roof windows, and rooflights	2.2	1.27	1.86	SP000007:Surf[4]
Personnel doors	2.2	1.43	1.79	SP000034:Surf[6]
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	2.66

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	NO
Whole building electric power factor achieved by power factor correction	<0.9

1- FV: (Top floor units) HIU Radiators with nat vent (boilers)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	0.93	-	0	-	-
Standard value	0.91*	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 gas single boiler systems <=2 MW output. For single boiler systems >2 MW or multi-boiler systems, (overall) limiting efficiency is 0.86. For any individual boiler in a multi-boiler system, limiting efficiency is 0.82.					

2- FV: Kitchens and Shared toilets - MVHR and Rads

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	0.93	-	0	-	0.83
Standard value	0.91*	N/A	N/A	N/A	0.5
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					NO
* Standard shown is for gas single boiler systems <=2 MW output. For single boiler systems >2 MW or multi-boiler systems, (overall) limiting efficiency is 0.86. For any individual boiler in a multi-boiler system, limiting efficiency is 0.82.					

1- FV: Hot water (PoU Electric)

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

2- FV: Hot water (Block C - Communal Immersion heaters)

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	1	0.007
Standard value	1	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		Zone	Standard
Standard value	0.3	1.1	0.5	1.9	1.6	0.5	1.1	0.5	1			
BC_L02_Shared WCs	-	-	-	1.5	-	-	-	-	-	-	-	N/A
BC_L02_Storage	-	-	-	1.5	-	-	-	-	-	-	-	N/A
BC_L02_Lobby	-	-	-	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	1.9	1.6	0.5	1.1	0.5	1	Zone	Standard
BC_L02_Kitchen	-	-	-	1.5	-	-	-	-	-	-	N/A
BC_L02_Wash	-	-	-	1.5	-	-	-	-	-	-	N/A
BC_L02_Storage	-	-	-	1.5	-	-	-	-	-	-	N/A

General lighting and display lighting		Luminous efficacy [lm/W]			General lighting [W]
Zone name		Luminaire	Lamp	Display lamp	
	Standard value	60	60	22	
BC_L00_WC_Unit 03		-	116	-	20
BC_L00_WC_Unit 04		-	130	-	20
BC_L01_Unit 4 Mezzanine		40	-	-	126
BC_L01_Unit 3 Mezzanine		40	-	-	126
BC_L01_Unit 2 Mezzanine		40	-	-	126
BC_L01_Unit 1 Mezzanine		40	-	-	126
BC_L00_Unit 4		42	-	-	69
BC_L00_Unit 3		42	-	-	69
BC_L02_Unit 7		44	-	-	653
BC_L02_Unit 9		44	-	-	653
BC_L02_Unit 10		45	-	-	653
BC_L02_Unit 11		44	-	-	653
BC_L02_Unit 12		45	-	-	653
BC_L02_Unit 13		44	-	-	653
BC_L02_Unit 14		45	-	-	653
BC_L02_Unit 15		44	-	-	653
BC_L02_Unit 16		45	-	-	653
BC_L02_Shared WCs		-	79	-	300
BC_L02_Storage		97	-	-	27
BC_L02_Lobby		-	161	-	3
BC_L02_Kitchen		-	97	-	195
BC_L02_Unit 8		45	-	-	653
BC_L02_Wash		92	-	-	65
BC_L02_Storage		121	-	-	27
BC_L00_WC_Unit 05		-	122	-	20
BC_L00_WC_Unit 06		-	114	-	20
BC_L01_Unit 6 Mezzanine		45	-	-	126
BC_L01_Unit 5 Mezzanine		29	-	-	126
BC_L00_Unit 6		46	-	-	69
BC_L00_Unit 5		30	-	-	69
BC_L00_Unit 2		43	-	-	69
BC_L00_WC_Unit 02		-	140	-	20
BC_L00_Tank Room		56	-	-	57
BC_L00_WC_Unit 01		-	174	-	47
BC_L00_LV Room		63	-	-	57
BC_L00_Substation		57	-	-	81

General lighting and display lighting		Luminous efficacy [lm/W]		
Zone name		Luminaire	Lamp	Display lamp
	Standard value	60	60	22
BC_L00_Unit 1		46	-	-
BC_L00_Boiler Room		55	-	-
				General lighting [W]
				69
				84

Criterion 3: The spaces in the building should have appropriate passive control measures to limit solar gains

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
BC_L01_Unit 4 Mezzanine	NO (-96.5%)	NO
BC_L01_Unit 3 Mezzanine	NO (-97.1%)	NO
BC_L01_Unit 2 Mezzanine	NO (-97.7%)	NO
BC_L01_Unit 1 Mezzanine	NO (-82.8%)	NO
BC_L00_Unit 4	NO (-72.9%)	NO
BC_L00_Unit 3	NO (-78.6%)	NO
BC_L02_Unit 7	YES (+80.3%)	NO
BC_L02_Unit 9	YES (+79.5%)	NO
BC_L02_Unit 10	YES (+78.1%)	NO
BC_L02_Unit 11	YES (+81%)	NO
BC_L02_Unit 12	YES (+82.1%)	NO
BC_L02_Unit 13	YES (+83.7%)	NO
BC_L02_Unit 14	YES (+82.8%)	NO
BC_L02_Unit 15	YES (+84%)	NO
BC_L02_Unit 16	YES (+83.3%)	NO
BC_L02_Unit 8	YES (+70.8%)	NO
BC_L01_Unit 6 Mezzanine	NO (-99%)	NO
BC_L01_Unit 5 Mezzanine	NO (-97.5%)	NO
BC_L00_Unit 6	NO (-95.5%)	NO
BC_L00_Unit 5	NO (-81.2%)	NO
BC_L00_Unit 2	NO (-83.6%)	NO
BC_L00_Unit 1	NO (-70%)	NO

Criterion 4: The performance of the building, as built, should be consistent with the calculated BER

Separate submission

Criterion 5: The necessary provisions for enabling energy-efficient operation of the building should be in place

Separate submission

EPBD (Recast): Consideration of 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
Area [m ²]	2529.6	2529.6
External area [m ²]	3894.5	3894.5
Weather	LON	LON
Infiltration [m ³ /hm ² @ 50Pa]	3	7
Average conductance [W/K]	1384.84	1315.81
Average U-value [W/m ² K]	0.36	0.34
Alpha value* [%]	10.01	10

* 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	13.88	13.26
Cooling	0	0
Auxiliary	2.43	0.19
Lighting	4.03	16.97
Hot water	2.93	1.71
Equipment*	24.31	24.31
TOTAL**	23.27	32.14

* 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	27.51	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]	41.33	43.05
Primary energy* [kWh/m ²]	45.77	69.43
Total emissions [kg/m ²]	-6.4	12.1

* 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] Central heating using water: radiators, [HS] LTHW boiler, [HFT] Natural Gas, [CFT] Electricity										
	Actual	41.5	0	13.9	0	2.1	0.83	0	0.93	0
	Notional	43.1	0	13.2	0	0	0.91	0	----	----
[ST] Central heating using water: radiators, [HS] LTHW boiler, [HFT] Natural Gas, [CFT] Electricity										
	Actual	83.8	0	28.1	0	9.3	0.83	0	0.93	0
	Notional	90	0	29	0	3.6	0.86	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

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	0.17	BC000011:Surf[8]
Floor	0.2	0.17	SP00000A:Surf[0]
Roof	0.15	0.18	BC000000:Surf[0]
Windows, roof windows, and rooflights	1.5	1.05	BC000000:Surf[2]
Personnel doors	1.5	1.24	SP000007:Surf[2]
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	2.66

Project name

Florentia Village - Block E whole buidling As built

Date: Thu Oct 30 14:14:44 2025

Administrative information

Building Details

Address: Block E, Florentia Village, 108 Vale Road,
London, N4 1TD

Certification tool

Calculation engine: Apache

Calculation engine version: 7.0.29

Interface to calculation engine: IES Virtual Environment

Interface to calculation engine version: 7.0.29

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

Certifier details

Name: Rodrigo Garcia Priego**Telephone number:** 020 3544 4000**Address:** 9 Holyrood Street, London, SE1 2ELCriterion 1: The calculated CO₂ emission rate for the building must not exceed the target

CO ₂ emission rate from the notional building, kgCO ₂ /m ² .annum	12.6
Target CO ₂ emission rate (TER), kgCO ₂ /m ² .annum	12.6
Building CO ₂ emission rate (BER), kgCO ₂ /m ² .annum	-2.9
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	0.21	0.21	SP000060:Surf[0]
Floor	0.25	0.18	0.18	SP000060:Surf[1]
Roof	0.25	0.18	0.18	SP000002:Surf[0]
Windows***, roof windows, and rooflights	2.2	1.41	1.86	SP000056:Surf[6]
Personnel doors	2.2	1.44	1.83	SP000056:Surf[5]
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	2.24

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	NO
Whole building electric power factor achieved by power factor correction	<0.9

1- FV: (Top floor units) HIU Radiators with nat vent (boilers)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	0.93	-	0	-	-
Standard value	0.91*	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 gas single boiler systems <=2 MW output. For single boiler systems >2 MW or multi-boiler systems, (overall) limiting efficiency is 0.86. For any individual boiler in a multi-boiler system, limiting efficiency is 0.82.					

1- FV: Hot water (PoU Electric)

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

"No zones in project where local mechanical ventilation, exhaust, or terminal unit is applicable"

General lighting and display lighting		Luminous efficacy [lm/W]			General lighting [W]
Zone name		Luminaire	Lamp	Display lamp	
	Standard value	60	60	22	
BA_L00_Unit 3 WC		-	129	-	20
BA_L00_Unit 2 WC		-	129	-	20
BA_L00_Unit 1 WC		-	123	-	20
BA_L01_Unit 3 - Mezzanine		40	-	-	189
BA_L01_Unit 2 - Mezzanine		40	-	-	189
BA_L01_Unit 1 - Mezzanine		40	-	-	189
BA_L00_Unit 3		43	-	-	69
BA_L00_Unit 2		43	-	-	69
BA_L00_Unit 1		43	-	-	69
BA_L02_Unit 4		41	-	-	783
BA_L02_Unit 5		41	-	-	783
BA_L02_Unit 6		41	-	-	783

Criterion 3: The spaces in the building should have appropriate passive control measures to limit solar gains

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
BA_L01_Unit 3 - Mezzanine	NO (-96.2%)	NO
BA_L01_Unit 2 - Mezzanine	NO (-95.3%)	NO
BA_L01_Unit 1 - Mezzanine	NO (-94.7%)	NO
BA_L00_Unit 3	NO (-78.5%)	NO
BA_L00_Unit 2	NO (-71.4%)	NO
BA_L00_Unit 1	NO (-66.6%)	NO
BA_L02_Unit 4	NO (-42.8%)	NO
BA_L02_Unit 5	NO (-27.2%)	NO
BA_L02_Unit 6	NO (-30.3%)	NO

Criterion 4: The performance of the building, as built, should be consistent with the calculated BER

Separate submission

Criterion 5: The necessary provisions for enabling energy-efficient operation of the building should be in place

Separate submission

EPBD (Recast): Consideration of 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
Area [m ²]	897.9	897.9
External area [m ²]	1527.7	1527.7
Weather	LON	LON
Infiltration [m ³ /hm ² @ 50Pa]	2	7
Average conductance [W/K]	452.54	526.65
Average U-value [W/m ² K]	0.3	0.34
Alpha value* [%]	12.09	10

* 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	16.04	17.31
Cooling	0	0
Auxiliary	2.13	0.07
Lighting	5.55	16.23
Hot water	1.71	1.8
Equipment*	17.71	17.71
TOTAL**	25.43	35.4

* 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	21.64	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]	47.77	56.41
Primary energy* [kWh/m ²]	48.39	71.88
Total emissions [kg/m ²]	-2.9	12.6

* 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 SSEEF	Cool SSEER	Heat gen SEFF	Cool gen SEER	
[ST] Central heating using water: radiators, [HS] LTHW boiler, [HFT] Natural Gas, [CFT] Electricity										
	Actual	48.6	0	16.3	0	2.1	0.83	0	0.93	0
	Notional	57.4	0	17.6	0	0	0.91	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

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	0.21	SP000060:Surf[0]
Floor	0.2	0.18	SP000060:Surf[1]
Roof	0.15	0.18	SP000002:Surf[0]
Windows, roof windows, and rooflights	1.5	1.1	SP000056:Surf[2]
Personnel doors	1.5	1.24	SP000056:Surf[3]
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	2.24