



CWC

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One North Parade

Manchester

Part L Compliance

Date: 03/09/2025

Ref: 3369-CWC-XX-RP-N-7001

Revision Record

Date	Reference	Revision	Prepared By	Checked By	Authorised By
31/01/2025	3369-CWC-XX-RP-N-7001	00	Nazhan Nizam	Obaid Rahman	John Barnett
			NN	OR	JB
21/03/2025	3369-CWC-XX-RP-N-7001	01	Nazhan Nizam	Obaid Rahman	John Barnett
			NN	OR	JB
03/09/2025	3369-CWC-XX-RP-N-7001	02	Nazhan Nizam	Obaid Rahman	John Barnett
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1.0 Executive Summary

Crookes Walker Consulting (CWC) have undertaken the 'As Designed' Part L assessment to demonstrate the One North Parade development, in Manchester, achieves compliance with the requirements stipulated in Approved Document Part L, Conservation of Fuel and Power, Volume 2: Buildings other than dwellings 2021.

The proposed development will include open plan offices, a restaurant, bicycle storage, shower and changing facilities. Therefore, the development falls under Use Class E(g) (*Offices*) and E(b) (*Food and Drinks*) in accordance with the Town and Country Planning (Use Classes) Order 2020. For the purposes of the Approved Document Part L assessment within IES:VE, the building has been modelled under the 'B1 Offices' classification, as this remains the relevant category within the compliance software.

The assessment has offered the following outcomes:

Target Emission Rate kgCO ₂ /m ² /year	Building Emission Rate kgCO ₂ /m ² /year	Target Primary Energy Rate kWh/m ² /year	Building Primary Energy Rate kWh/m ² /year	% Emission Rate Improvement over Part L Volume 2 2021	Projected EPC Rating
3.30	2.80	36.01	30.69	15.15	A (8)

Table 1. Result Summary.

The 'As Designed' BRUKL report and EPC can be found in Appendix 1 and 2 respectively.

2.0 Introduction

2.1 Site Location

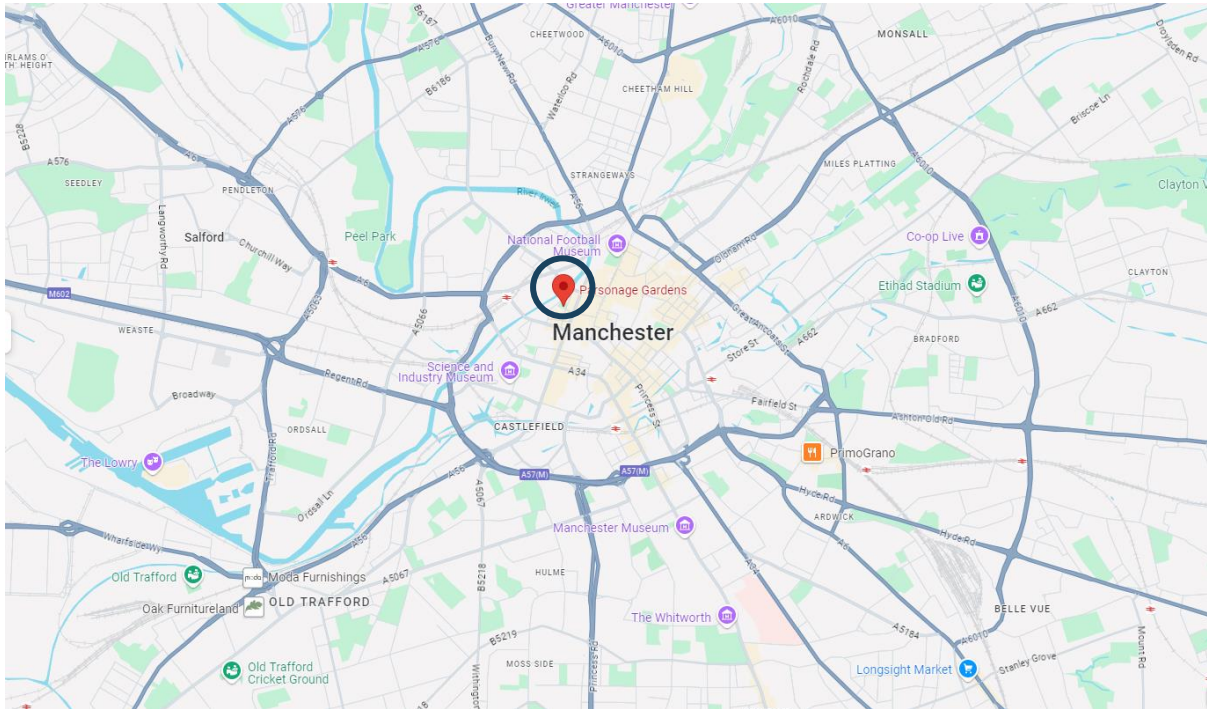


Figure 1. Site Location

The site is located in Manchester city centre, hence, the Manchester TRY weather file has been used for the Part L assessment.

2.2 Modelling Disclaimer

The building has been modelled with the accredited software package IES:VE accredited software version 2024.1.0.0 which is approved for the purpose of demonstrating compliance with the energy efficiency and carbon emission requirements of the building regulations.

These assessments were undertaken by an energy specialist; an individual who has acquired substantial expertise or a recognised qualification for undertaking thermal dynamic simulations and is not professionally connected to a single technology or manufacturer.

It should be noted that the data generated by this work is obtained using computer calculations. These calculations are the best means of predicting the performance of the building at this stage. Full certainty can only be achieved by measuring the performance of the building and associated systems after a period of use.

Whilst the calculations have been undertaken in good faith using reasonable skill and care, Crookes Walker Consulting Limited can take no responsibility for differences between the computer calculations and the actual performance of the completed building due to the inherent complexity and variability of the physics in a building and its environment.

2.3 Thermal Model

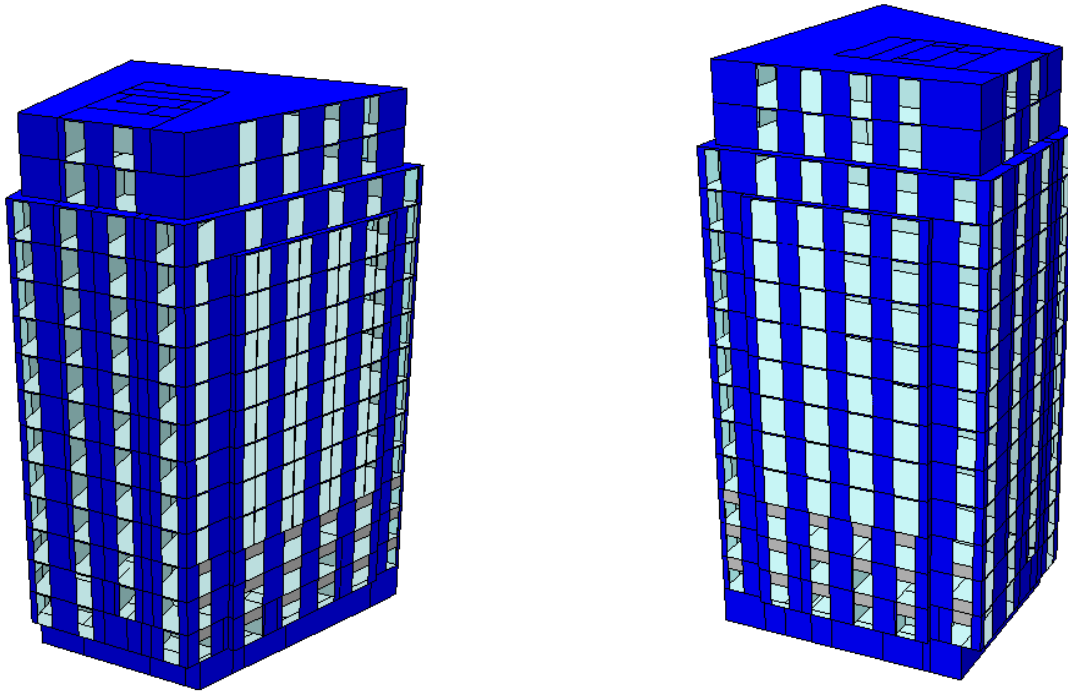


Figure 2. Thermal Model North view (left) and East view (right)

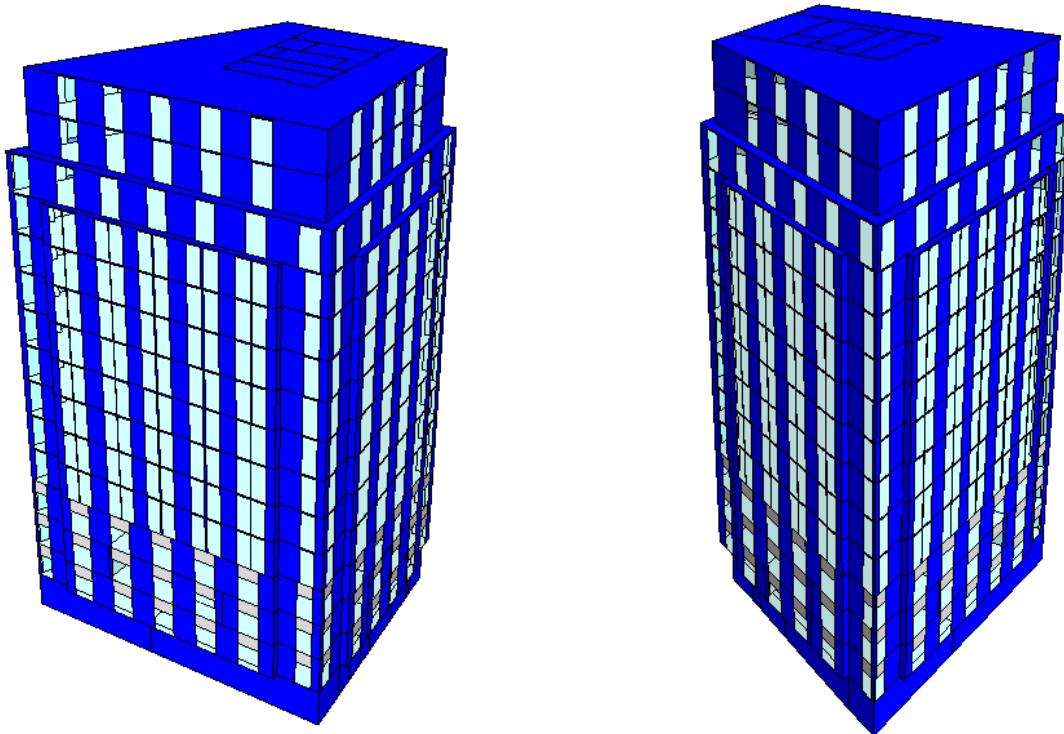


Figure 3. Thermal Model South view (left) and West view (right)

3.0 Input Parameters

3.1 Fabric parameters

A 'fabric first' approach has been taken for the One North Parade development, u-values that are better than the minimum required for compliance with Building Regulations. Table 2 below confirms the fabric parameters assigned:

	Fabric Parameters
External Wall	0.17 W/m ² K
Glazing	1.40 W/m ² K g-value 0.40
Roof	0.10 W/m ² K
Ground Floor	0.10 W/m ² K
Air permeability	3.00 m ³ /(h.m ²)@50Pa

Table 2. Fabric Parameters

3.2 Services Parameters

Tables 3 to 5 give the systems, and their performance figures, that have been used to assess the building.

	System Parameters - Offices
HVAC Type	Air source heat pumps, VRF system with ventilation via local MVHRs
Heating Efficiency	4.50
Cooling Efficiency	6.50
Ventilation SFP	1.00 W/l/s
Heat Recovery Efficiency	85%

Table 3. System Parameters – Offices

	System Parameters – Reception/Security
HVAC Type	Air source heat pumps, VRF system with ventilation via local MVHRs
Heating Efficiency	4.50
Cooling Efficiency	6.50
Ventilation SFP	1.00 W/l/s
Heat Recovery Efficiency	85%

Table 4. System Parameters – Reception / Security

	System Parameters – Restaurant
HVAC Type	Air source heat pumps, VRF system with ventilation via local MVHRs
Heating Efficiency	4.50
Cooling Efficiency	6.50
Ventilation SFP	1.00 W/l/s
Heat Recovery Efficiency	85%

Table 5. System Parameters – Restaurant

3.3 Renewables

None proposed.

4.0 Summary

Crookes Walker Consulting (CWC) have undertaken the 'As Designed' Part L assessment to demonstrate the One North Parade development, in Manchester, achieves compliance with the requirements stipulated in Approved Document Part L, Conservation of Fuel and Power, Volume 2: Buildings other than dwellings 2021.

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3.30	2.80	36.01	30.69	14.7	A (8)

Table 6. Result Summary.

The 'As Designed' BRUKL report and EPC can be found in Appendix 1 and 2 respectively.

5.0 Appendix 1 – BRUKL Report

BRUKL Output Document



HM Government

Compliance with England Building Regulations Part L 2021

Project name

One North Parade

As designed

Date: Thu Mar 20 16:19:10 2025

Administrative information

Building Details

Address: Parsonage Gardens, Manchester, M3 2NH

Certifier details

Name: CWC

Telephone number: Phone

Address: Bloc, 17 Marble Street, Manchester, M2 3AW

Certification tool

Calculation engine: Apache

Calculation engine version: 7.0.28

Interface to calculation engine: IES Virtual Environment

Interface to calculation engine version: 7.0.28

BRUKL compliance module version: v6.1.e.1

Foundation area [m²]: 571.65

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	3.3
Building CO ₂ emission rate (BER), kgCO ₂ /m ² :annum	2.8
Target primary energy rate (TPER), kWh _{pe} /m ² :annum	36.01
Building primary energy rate (BPER), kWh _{pe} /m ² :annum	30.69
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	00000000:Surf[3]
Floors	0.18	0.1	0.1	00000000:Surf[0]
Pitched roofs	0.16	-	-	No pitched roofs in building
Flat roofs	0.18	0.1	0.1	00000149:Surf[0]
Windows** and roof windows	1.6	1.4	1.4	00000000:Surf[1]
Rooflights***	2.2	-	-	No roof lights in building
Personnel doors^	1.6	-	-	No personnel doors in building
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/(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)] * 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/m ² K 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

Technical Data Sheet (Actual vs. Notional Building)

Building Global Parameters			Building Use	
	Actual	Notional	% Area	Building Type
Floor area [m ²]	10170.6	10170.6		Retail/Financial and Professional Services
External area [m ²]	7967.6	7967.6	6	Restaurants and Cafes/Drinking Establishments/Takeaways
Weather	MAN	MAN	94	Offices and Workshop Businesses
Infiltration [m ³ /hm ² @ 50Pa]	3	3		General Industrial and Special Industrial Groups
Average conductance [W/K]	4323.73	4165.68		Storage or Distribution
Average U-value [W/m ² K]	0.54	0.52		Hotels
Alpha value* [%]	25.34	10		Residential Institutions: Hospitals and Care Homes
* Percentage of the building's average heat transfer coefficient which is due to thermal bridging				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	2.5	2.61
Cooling	5.1	3.98
Auxiliary	1.97	1.9
Lighting	6.1	8.99
Hot water	5.2	7.08
Equipment*	45.62	45.62
TOTAL**	20.88	24.56

* 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	0.13
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0
<i>Displaced electricity</i>	<i>0</i>	<i>0.13</i>

Energy & CO₂ Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m ²]	121.26	90.76
Primary energy [kWh _{PE} /m ²]	30.69	36.01
Total emissions [kg/m ²]	2.8	3.3

6.0 Appendix 2 – EPC

