

Energy and Carbon Proforma

Non-residential

Major development (+1,000m²)

Version 1.0

Project
Name:
Application
ref:
Date:

Stocktons, 140 Great Ancoats Street

142535/FO/2025

July-25

		<i>Ref. name</i>	Block A
		<i>Area (m²GIA)</i>	10,134
		<i>Target values</i>	Building 1
Minimise energy demand	Space heating demand (kWh/m²GIA/yr)	≤ 15	11.31
	Space cooling demand (kWh/m²GIA/yr)	≤ 15	0.95
	Calculation methodology used to calculate space heating demand and confirmation that this covers all homes/blocks	<i>Predictive energy model</i>	SBEM
	Form factor per building	≤ 2	0.52
	Average external wall U-value (W/m ² K)	≤ 0.15	0.85
	Average window U-value (W/m ² K)	≤ 1 (triple)	0.85
	Air permeability rate (m ³ /h/m ² @ 50 Pa)	≤ 1	2.7
Maximise energy efficiency	BREEAM Ene 01 rating	Excellent	Excellent
	Energy use intensity (kWh/m ² GIA/yr)	-	264
	Calculation methodology used to calculate energy use intensity and confirmation that this covers all homes/blocks	<i>Predictive energy model</i>	CIBSE TM54 (at detailed design)
Use renewable energy	PV footprint area (% of ground floor space)	-	10%
	Annual renewable energy generation (kWh/m ² building footprint/yr)	-	1.34
	Renewable energy balance (%)	-	4.57%
	Total energy used (kWh/yr)	-	296,940
	Total energy generated on-site (kWh/yr)	-	13,580

Use low carbon energy	Fossil fuel free (yes/no)	Yes	Yes
	Heat source	Electric	Electric
	Low Carbon Heat Appraisal completed	Yes	No
	Heat network suitability	-	No
	Exemption requested	-	
	Efficiency of heating system (SCOP)	≥ 3.5	4.46
	Carbon content of heat (gCO ₂ /kWh)	≤ 100	≤ 100
Reduce overheating risk	Has CIBSE TM52 been used to calculate overheating and does the building pass?	Yes	Commitment to undertake at detailed design
	What percentage of spaces are cooled? (% of GIA)	-	
	Has a CIBSE TM52 assessment been carried out using DSY2 and DSY3 weather files? Have any additional passive measures been included as a result?	Yes	No
Minimise embodied carbon	Upfront embodied carbon (kgCO ₂ e/m ² GIA)	-	521
	List top three materials with the highest upfront embodied carbon emissions (kgCO ₂ e/m ² GIA): Material 1	-	Ready-mix Concrete
	Material 2	-	Reinforcement steel
	Material 3		M&E systems
	Lifecycle embodied carbon (kgCO ₂ e/m ² GIA) - for large major developments only	-	805
Offsets	Offset contribution (£)	-	N/A – no details on offset scheme available

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Major development (+1,000m²)

Version 1.0

Project Name: Stocktons, 140 Great Ancoats Street
Application ref: 142535/FO/2025
Date: July-25

		Ref. name	Block B
		Area (m ² GIA)	7,537
		Target values	Building 1
Minimise energy demand	Space heating demand (kWh/m ² GIA/yr)	≤ 15	8.76
	Space cooling demand (kWh/m ² GIA/yr)	≤ 15	1.96
	Calculation methodology used to calculate space heating demand and confirmation that this covers all homes/blocks	Predictive energy model	SBEM
	Form factor per building	≤ 2	≤ 0.50
	Average external wall U-value (W/m ² K)	≤ 0.15	0.85
	Average window U-value (W/m ² K)	≤ 1 (triple)	0.85
	Air permeability rate (m ³ /h/m ² @ 50 Pa)	≤ 1	2.7
Maximise energy efficiency	BREEAM Ene 01 rating	Excellent	Excellent
	Energy use intensity (kWh/m ² GIA/yr)	-	84
	Calculation methodology used to calculate energy use intensity and confirmation that this covers all homes/blocks	Predictive energy model	CIBSE TM54 (at detailed design)
Use renewable energy	PV footprint area (% of ground floor space)	-	10%
	Annual renewable energy generation (kWh/m ² building footprint/yr)	-	2.4
	Renewable energy balance (%)	-	9.14%
	Total energy used (kWh/yr)	-	197,862
	Total energy generated on-site (kWh/yr)	-	18,090

Use low carbon energy	Fossil fuel free (yes/no)	Yes	Yes
	Heat source	Electric	Electric
	Low Carbon Heat Appraisal completed	Yes	No
	Heat network suitability	-	No
	Exemption requested	-	
	Efficiency of heating system (SCOP)	≥ 3.5	4.46
	Carbon content of heat (gCO ₂ /kWh)	≤ 100	≤ 100
Reduce overheating risk	Has CIBSE TM52 been used to calculate overheating and does the building pass?	Yes	Commitment to undertake at detailed design
	What percentage of spaces are cooled? (% of GIA)	-	
	Has a CIBSE TM52 assessment been carried out using DSY2 and DSY3 weather files? Have any additional passive measures been included as a result?	Yes	No
Minimise embodied carbon	Upfront embodied carbon (kgCO ₂ e/m ² GIA)	-	521
	List top three materials with the highest upfront embodied carbon emissions (kgCO ₂ e/m ² GIA): Material 1	-	Ready-mix Concrete
	Material 2	-	Reinforcement steel
	Material 3		M&E systems
	Lifecycle embodied carbon (kgCO ₂ e/m ² GIA) - for large major developments only	-	805
Offsets	Offset contribution (£)	-	N/A – no details on offset scheme available

Energy and Carbon Proforma Residential

Major development (+10 homes)



Version 1.0

Project Name: Stocktons, 140 Great Ancoats Street

Application ref: 142535/FO/2025

Date: July-25

		Ref. name	Block A	Block B
		No. dwellings	558	200
		Area (m ² GIA)	52,749	15,590
		Target values	Building 1	Building 2
Minimise energy demand	Space heating demand (kWh/m ² GIA/yr)	≤ 15 (flats) ≤ 20 (houses)	3.83 kWh/m ² GIA/yr	2.53 kWh/m ² GIA/yr
	Calculation methodology used to calculate space heating demand and confirmation that this covers all homes/blocks	Predictive energy model	SAP	
	Form factor per building	≤ 2	0.52	0.50
	Average external wall U-value (W/m ² K)	≤ 0.15	0.85 (curtain walling)	0.85 (curtain walling)
	Average window U-value (W/m ² K)	≤ 1 (triple)	0.89	0.89
	Air permeability rate (m ³ /h/m ² @ 50 Pa)	≤ 1	2.75	2.75
Maximise energy efficiency	Energy use intensity (kWh/m ² GIA/yr)	≤ 35	<60	<60
	Calculation methodology used to calculate energy use intensity and confirmation that this covers all homes/blocks	Predictive energy model	CIBSE TM54 (to be undertaken at detailed design)	
Use renewable energy	PV footprint area (% of ground floor space)	≥ 40	See non-residential pro-forma (same buildings)	
	Annual renewable energy generation (kWh/m ² building footprint/yr)	-		

	Renewable energy balance (%)	-		
	Total energy used (kWh/yr)	-		
	Total energy generated on-site (kWh/yr)	-		
Use low carbon energy	Fossil fuel free (yes/no)	Yes	Yes	Yes
	Heat source	Electric	Electric	Electric
	Low Carbon Heat Appraisal completed	Yes	No	No
	Heat network suitability	-	No	No
	Exemption requested	-		
	Efficiency of heating system (SCOP)	≥ 3.5	1.0	1.0
	Carbon content of heat (gCO ₂ /kWh)	≤ 100	≤ 100	≤ 100
Reduce overheating risk	Have Part O overheating requirements been met without the use of mechanical cooling?	Yes	Yes	Yes
	If no, how many homes are cooled?	Yes	N/A	NA
	Has a CIBSE TM59 assessment been carried out using DSY2 and DSY3 weather files? Have any additional passive measures been included as a result?	Yes	No	No
Minimise embodied carbon	Upfront embodied carbon (kgCO ₂ e/m ² GIA)	≤ 500-600	521	
	List top three materials with the highest upfront embodied carbon emissions (kgCO ₂ e/m ² GIA): Material 1	-	Ready-mix Concrete	
	Material 2	-	Reinforcement steel	
	Material 3		M&E systems	
	Lifecycle embodied carbon (kgCO ₂ e/m ² GIA) - for large major developments only	-	805	
Offsets	Offset contribution (£)	-	N/A – no details on offset scheme available	