

Energy and Carbon Proforma

Introduction

Version 1.0

What is the Energy and Carbon Proforma

The Energy and Carbon Proforma is a tool to summarise the energy and carbon performance of a project. It requires information to be completed on the themes listed in the Energy and Carbon Framework.

Why the Energy and Carbon Proforma is important

The energy and carbon proforma eases communication between applicants and planning officers, helping to determine if the full potential of a project from an energy and carbon perspective has been reached. If it has not, the proforma helps to easily identify where the development could be improved. Focusing on design solutions alleviates the financial pressure of costly solutions, encouraging the viability of

Content of the Energy and Carbon Proforma

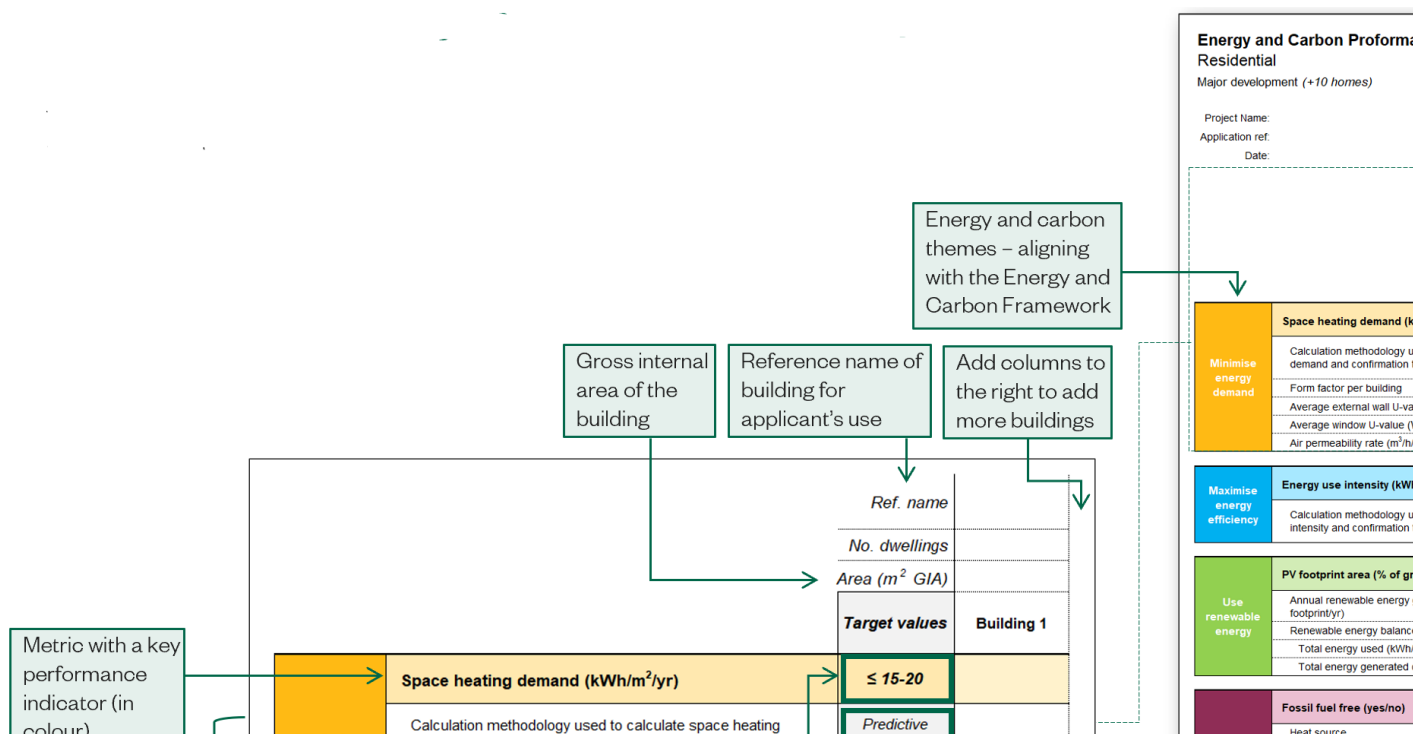
There are six Energy and Carbon Proformas: three for residential developments and three for non-residential developments. The level of information required varies depending on type and size of development, but the overall structure remains the same, requiring data across the following themes:

- Minimise energy demand
- Maximising energy efficiency (omitted for small minor development)
- Use renewable energy
- Use low carbon energy
- Reduce overheating risk
- Minimise embodied carbon
- Offsets (omitted for small minor development)

Energy and Carbon Proforma quick-start

Refer to the accompanying Submissions Guidance for further information.

The below explains how the Energy and Carbon Proforma is set out.



Supporting information that backs up the key performance indicator (in grey)

Minimise energy demand	demand and confirmation that this covers all homes/blocks	
	Form factor per building	≤ 2
	Average external wall U-value ($\text{W/m}^2\text{K}$)	≤ 0.15
	Average window U-value ($\text{W/m}^2\text{K}$)	≤ 1.0
	Airtightness ($\text{m}^3/\text{h/m}^2$ @ 50 Pa)	≤ 1

Target values to be achieved to meet policy or intent of policy

Suggested supporting information/values

Results from each building in the development. Every building with a distinct/complete thermal envelope/insulation line should have its own column. Add one column for every separate building.

Use low carbon energy	Heat source
	Low Carbon Heat Appraisal
	Heat network suitability
	Exemption requested
Reduce overheating risk	Have Part O overheating the use of mechanical cooling
	If no, how many homes are
	Has a CIBSE TM59 assess and DSYS3 weather files? If measures been included a
Minimise embodied carbon	Upfront embodied carbon
	List top three materials with carbon emissions (kgCO_2e)
	Material 2
	Material 3
Offsets	Lifecycle embodied carbon major developments on
	Offset contribution (£)

	Ref. name	
	No. dwellings	
	Area (m ² GIA)	
	Target values	Building 1
kWh/m ² /yr)	≤ 15 (flats) ≤ 20 (houses)	
used to calculate space heating that this covers all homes/blocks	Predictive energy model	
	≤ 2	
alue (W/m ² K)	≤ 0.15	
(W/m ² K)	≤ 1.0	
lm ² @ 50 Pa)	≤ 1	
/h/m ² /yr)	≤ 35	
used to calculate energy use that this covers all homes/blocks	Predictive energy model	
round floor space)	≥ 40	
generation (kWh/m ² building	-	
re (%)	-	
V/yr)	-	
on-site (kWh/yr)	-	
	Yes	
	Electric	

	Electric	
all completed	Yes	
	-	
	-	
sm (SCOP)	≥ 3.5	
yCO ₂ /kWh)	≤ 100	
g requirements been met without ooling?	Yes	
ie cooled?	Yes	
isment been carried out using DSY2 Have any additional passive as a result?	Yes	
n (kgCO _{2,e} /m ² GIA)	≤ 500-600	
th the highest upfront embodied e/m ² GIA): Material 1	-	
	-	
bon (kgCO _{2,e} /m ² GIA) - for large tly	-	
	-	

Energy and Carbon Proforma Residential

Small minor development (*XL extensions & 1 home*)

Version 1.0

Project Name:

Application ref:

Date:

		Ref. name	
		Area (m ² GIA)	
		Target values	Extension/ home
Minimise energy demand	Form factor per home or extension	≤ 2	
	Average glazing ratio per façade: North	~10-15%	
	South	~20-30%	
	East	~10-20%	
	West	~10-20%	
	Average external walls U-value (W/m ² K)	≤ 0.15	
	Wall thickness (mm)	> 400	
	Average ground floor U-value (W/m ² K)	≤ 0.10	
	Average external roofs U-value (W/m ² K)	≤ 0.10	
	Average external doors U-value (W/m ² K)	≤ 1.0	
	Average windows U-value (W/m ² K) (or double/ triple glazed)	≤ 1 (triple)	
	Air permeability rate (m ³ /h/m ² @ 50 Pa)	≤ 3	
	Ventilation strategy (background only)	-	
Use renewable energy	PV footprint area (% of ground floor space)	≥ 40	
Use low carbon energy	Fossil fuel free (yes/no)	Yes	
	Heat source - <i>Where the system for generating space heating and hot water is a heat pump and it achieves a SCOP of 3.5 or higher (then a Low Carbon Heat Appraisal not required)</i>	Electric	
Reduce overheating risk	Has the Good Homes Alliance overheating risk assessment tool been completed?	Yes	
	Resulting score from the GHA tool?	<12	
Minimise embodied carbon	Confirmation that a summary of the efforts made to design a lean, low carbon structure and building design has been submitted?	Yes	

Energy and Carbon Proforma

Residential

Minor development (2-9 homes)

Version 1.0

Project Name: Mount Pleasant

Application ref:

Date: 08/07/2025

		Ref. name	End terrace	Mid terrace
		No. dwellings	1	1
		Area (m ² GIA)	110	110
		Target values	Building 1	Building 2
Minimise energy demand	Space heating demand (kWh/m ² GIA/yr)	≤ 15 (flats) - 20 (houses)	8.97	4.93
	Calculation methodology used to calculate space heating demand and confirmation that this covers all homes/blocks	Predictive energy model	SAP10	SAP10
	Form factor per building	≤ 2	0.49	0.38
	Average external wall U-value (W/m ² K)	≤ 0.15	0.15	0.15
	Average window U-value (W/m ² K)	≤ 1 (triple)	1.2	1.2
	Air permeability rate (m ³ /h/m ² @ 50 Pa)	≤ 1	3	3
Maximise energy efficiency	Energy use intensity (kWh/m ² GIA/yr)	≤ 35		
	Calculation methodology used to calculate energy use intensity and confirmation that this covers all homes/blocks	Predictive energy model		
Use renewable energy	PV footprint area (% of ground floor space)	≥ 40	63	63
	Annual renewable energy generation (kWh/m ² building footprint/yr)	-	73	73
	Renewable energy balance (%)	-	39	39
	Total energy used (kWh/yr)	-	2133.05	2115.6
	Total energy generated on-site (kWh/yr)	-	826.27	833.44
Use low carbon energy	Fossil fuel free (yes/no)	Yes	Yes	Yes
	Heat source - Where the system for generating space heating and hot water is a heat pump and it achieves a SCOP of 3.5 or higher (then a Low Carbon Heat Appraisal not required)	Electric	Electric	Electric
Reduce overheating risk	Have Part O overheating requirements been met without the use of mechanical cooling?	Yes	No	No
Minimise embodied carbon	Confirmation that a summary of the efforts made to design a lean, low carbon structure and building design has been submitted?	Yes	Yes	Yes

Mid terrace	Mid terrace	End terrace	Semi-detached 1	Semi-detached 2		
1	1	1	1			
110	110	110	79.7	79.7		
Building 3	Building 4	Building 5	Building 6	Building 7	Building 8	Building 9
4.93	4.93	8.97	9.53	9.53		
SAP10	SAP10	SAP10	SAP10	SAP10		
0.38	0.38	0.49	0.57	0.57		
0.15	0.15	0.15	0.15	0.15		
1.2	1.2	1.2	1.2	1.2		
3	3	3	3	3		

63	63	63	63	63		
73	73	73	71	71		
39	39	39	43	43		
2115.6	2115.6	2133.05	1993.23	1993.23		
833.44	833.44	826.27	852.5	852.5		

Yes	Yes	Yes	Yes	Yes		
Electric	Electric	Electric	Electric	Electric		

No	No	No	No	No		
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Yes	Yes	Yes	Yes	Yes		
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Energy and Carbon Proforma

Residential

Major development (+10 homes)

Version 1.0

Project Name:

Application ref:

Date:

		Ref. name				
		No. dwellings				
		Area (m ² GIA)				
		Target values	Building 1	Building 2	Building 3	Building 4
Minimise energy demand	Space heating demand (kWh/m ² GIA/yr)	≤ 15 (flats) ≤ 20 (houses)				
	Calculation methodology used to calculate space heating demand and confirmation that this covers all homes/blocks	Predictive energy model				
	Form factor per building	≤ 2				
	Average external wall U-value (W/m ² K)	≤ 0.15				
	Average window U-value (W/m ² K)	≤ 1 (triple)				
	Air permeability rate (m ³ /h/m ² @ 50 Pa)	≤ 1				
Maximise energy efficiency	Energy use intensity (kWh/m ² GIA/yr)	≤ 35				
	Calculation methodology used to calculate energy use intensity and confirmation that this covers all homes/blocks	Predictive energy model				
Use renewable energy	PV footprint area (% of ground floor space)	≥ 40				
	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				
	Heat source	Electric				
	Low Carbon Heat Appraisal completed	Yes				
	Heat network suitability	-				
	Exemption requested	-				
	Efficiency of heating system (SCOP)	≥ 3.5				
	Carbon content of heat (gCO ₂ /kWh)	≤ 100				
Reduce overheating risk	Have Part O overheating requirements been met without the use of mechanical cooling?	Yes				
	If no, how many homes are cooled?	Yes				
	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				
Minimise embodied carbon	Upfront embodied carbon (kgCO ₂ e/m ² GIA)	≤ 500-600				
	List top three materials with the highest upfront embodied carbon emissions (kgCO ₂ e/m ² GIA): Material 1	-				
	Material 2	-				
	Material 3					
	Lifecycle embodied carbon (kgCO ₂ e/m ² GIA) - for large major developments only	-				
Offsets	Offset contribution (£)	-				

Building 5	Building 6	Building 7	Building 8	Building 9	Building 10	+

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Energy and Carbon Proforma

Non-residential

Small minor development (<100m²)

Version 1.0

Project Name:

Application ref:

Date:

		Ref. name	
		Area (m ² GIA)	
		Target values	Building 1
Minimise energy demand	Form factor per building	≤ 2	
	Average glazing ratio per façade: North	(% of façade) See 'Net Zero Design Guidance' for	
	South		
	East		
	West		
	Average external walls U-value (W/m ² K)	≤ 0.15	
	Wall thickness (mm)	> 400	
	Average ground floor U-value (W/m ² K)	≤ 0.10	
	Average external roofs U-value (W/m ² K)	≤ 0.10	
	Average external doors U-value (W/m ² K)	≤ 1.20	
	Average windows U-value (W/m ² K) (or double/ triple glazed)	≤ 1 (triple)	
	Air permeability rate (m ³ /h/m ² @ 50 Pa)	≤ 3	
	Ventilation strategy (background only)	-	
Use renewable energy	PV footprint area (% of ground floor space)	-	
Use low carbon energy	Fossil fuel free (yes/no)	Yes	
	Heat source - Where the system for generating space heating and hot water is a heat pump and it achieves a SCOP of 3.5 or higher (then a Low Carbon Heat Appraisal not required)	Electric	
Reduce overheating risk	Has the Net Zero Design Guidance been followed for orientation, window areas and shading?	Yes	
Minimise embodied carbon	Confirmation that a summary of the efforts made to design a lean, low carbon structure and building design has been submitted?	Yes	

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Energy and Carbon Proforma

Non-residential

Minor development (100-999m²)
Version 1.0

Project Name:

Application ref:

Date:

		Ref. name			
		Area (m ² GIA)			
		Target values	Building 1	Building 2	Building 3
Minimise energy demand	Space heating demand (kWh/m ² GIA/yr)	≤ 15			
	Space cooling demand (kWh/m ² GIA/yr)	≤ 15			
	Calculation methodology used to calculate space heating demand and confirmation that this covers all homes/blocks	Predictive energy model			
	Form factor per building	≤ 2			
	Average external wall U-value (W/m ² K)	≤ 0.15			
	Average window U-value (W/m ² K)	≤ 1 (triple)			
	Air permeability rate (m ³ /h/m ² @ 50 Pa)	≤ 1			
Maximise energy efficiency	BREEAM Ene 01 rating	Excellent			
	Energy use intensity (kWh/m ² GIA/yr)	-			
	Calculation methodology used to calculate energy use intensity and confirmation that this covers all homes/blocks	Predictive energy model			
Use renewable energy	PV footprint area (% of ground floor space)	-			
	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			
	Heat source - Where the system for generating space heating and hot water is a heat pump and it achieves a SCOP of 3.5 or higher (then a Low Carbon Heat Appraisal not required)	Electric			
Reduce overheating risk	Has CIBSE TM52 been used to calculate overheating and does the building pass?	Yes			
	What percentage of spaces are cooled? (% of GIA)	-			
Minimise embodied carbon	Confirmation that a summary of the efforts made to design a lean, low carbon structure and building design has been submitted?	Yes			

Building 4	Building 5	+

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Energy and Carbon Proforma

Non-residential

Major development (+1,000m²)

Version 1.0

Project Name:

Application ref:

Date:

		Ref. name					
		Area (m ² GIA)					
		Target values	Building 1	Building 2	Building 3	Building 4	Building 5
Minimise energy demand	Space heating demand (kWh/m ² GIA/yr)	≤ 15					
	Space cooling demand (kWh/m ² GIA/yr)	≤ 15					
	Calculation methodology used to calculate space heating demand and confirmation that this covers all homes/blocks	Predictive energy model					
	Form factor per building	≤ 2					
	Average external wall U-value (W/m ² K)	≤ 0.15					
	Average window U-value (W/m ² K)	≤ 1 (triple)					
	Air permeability rate (m ³ /h/m ² @ 50 Pa)	≤ 1					
Maximise energy efficiency	BREEAM Ene 01 rating	Excellent					
	Energy use intensity (kWh/m ² GIA/yr)	-					
	Calculation methodology used to calculate energy use intensity and confirmation that this covers all homes/blocks	Predictive energy model					
Use renewable energy	PV footprint area (% of ground floor space)	-					
	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					
	Heat source	Electric					
	Low Carbon Heat Appraisal completed	Yes					
	Heat network suitability	-					
	Exemption requested	-					
	Efficiency of heating system (SCOP)	≥ 3.5					
	Carbon content of heat (gCO ₂ /kWh)	≤ 100					
Reduce overheating risk	Has CIBSE TM52 been used to calculate overheating and does the building pass?	Yes					
	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					
Minimise embodied carbon	Upfront embodied carbon (kgCO ₂ e/m ² GIA)	-					
	List top three materials with the highest upfront embodied carbon emissions (kgCO ₂ e/m ² GIA): Material 1	-					
	Material 2	-					
	Material 3	-					
	Lifecycle embodied carbon (kgCO ₂ e/m ² GIA) - for large major developments only	-					
Offsets	Offset contribution (£)	-					

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