

RESIDENTIAL ENERGY CONSUMPTION AND CO₂ ANALYSIS (PART 1)

NON-RESIDENTIAL ENERGY CONSUMPTION AND CO₂ ANALYSIS (PART L2)

Building Use	Model Area (m ²)	Number of units represented by (m ²)	VALIDATION CHECK	REGULATED ENERGY CONSUMPTION BY END USE (kWh/m ² p.a.) TER - SOURCE: BRULOUT PUT	REGULATED CO ₂ EMISSIONS BY FUEL TYPE (kgCO ₂ /m ² p.a.) TER - SOURCE: SIM.CSV FILE

SITE-WIDE ENERGY CONSUMPTION AND CO ₂ ANALYSIS									
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	Calculated	REGULATED ENERGY CONSUMPTION	EMISSIONS

RESIDENTIAL ENERGY CONSUMPTION AND CO₂ ANALYSIS (PART L1)

NON-RESIDENTIAL ENERGY CONSUMPTION AND CO₂ ANALYSIS (PART L2)

VALIDATION CHECK	REGULATED ENERGY CONSUMPTION BY END USE (kWh/m ² p.a.) 'BE LEAN' BER - SOURCE: 'SIM.CSV FILE	REGULATED CO ₂ EMISSIONS BY FUEL TYPE (kgCO ₂ /m ² p.a.) - BER BRUKL - SOURCE: 'SIM.CSV FILE
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SITE-WIDE ENERGY CONSUMPTION AND CO₂ ANALYSIS

[illegible]

RESIDENTIAL ENERGY CONSUMPTION AND CO₂ ANALYSIS (PART L1)[illegible]

The applicant should complete all the light blue cells including information on the 'be green' energy consumption figures and the 'be green' DER.

RESIDENTIAL ENERGY CONSUMPTION AND CO₂ ANALYSIS (PART L1)

				VALIDATION CHECK		REGULATED ENERGY CONSUMPTION PER UNIT (kWh p.a.) - 'BE GREEN' SAP DER WORKSHEET																		REGULATED CO ₂ EMISSIONS PER UNIT (kgCO ₂ p.a.)										
Unit identifier (e.g. plot number, dwelling type etc.)		Total area represented by model (m ²)		Calculated DER (kgCO ₂ / m ²)	DER Worksheet DER (kgCO ₂ / m ²)	Space Heating (Heat Source 1)	Fuel type Space Heating	Domestic Hot Water (Heat Source 1)	Fuel type Domestic Hot Water	Space Heating (Heat source 2)	Fuel type Space Heating	Domestic Hot Water (Heat source 2)	Fuel type Domestic Hot Water	Space and Domestic Hot Water from CHP	Fuel type CHP	Total Electricity generated by CHP (-)	Fuel factors for electricity generated by CHP	Secondary Heating system	Fuel type Secondary Heating	Electricity generated by renewable (-)	Lighting	Auxiliary	Cooling	Space Heating Water	Domestic Hot Water	Space Heating and DHW from CHP	Electricity generated by CHP	Lighting	Auxiliary	Cooling	Electricity generated by renewable	Part L 2021 CO ₂ emissions (kgCO ₂ p.a.)		
		area (m ²)	Number of units		DER Sheet (Row 384)	DER Sheet (Row 385 + (Row 387b x 0.01))	Select fuel type	DER Sheet (Row 385 + (Row 387c x 0.01))	Select fuel type	DER Sheet (Row 387c + (Row 387c x 0.01))	Select fuel type	DER Sheet (Row 387c + (Row 387c x 0.01))	Select fuel type	DER Sheet (Row 387c + (Row 387c x 0.01))	Select fuel type	DER Sheet (Row 387c + (Row 387c x 0.01))	Select fuel type	DER Sheet (Row 387c + (Row 387c x 0.01))	Select fuel type	DER Sheet (Row 387c + (Row 387c x 0.01))	Select fuel type	DER Sheet (Row 387c + (Row 387c x 0.01))	Select fuel type	DER Sheet (Row 387c + (Row 387c x 0.01))	Select fuel type	DER Sheet (Row 387c + (Row 387c x 0.01))	Select fuel type	DER Sheet (Row 387c + (Row 387c x 0.01))	Select fuel type	DER Sheet (Row 387c + (Row 387c x 0.01))	Select fuel type			
1	137.38	1	137.38	4.1	4.4	2021.833	Grid Electricity	1884.4639	Grid Electricity																						648			

NON-RESIDENTIAL ENERGY CONSUMPTION AND CO₂ ANALYSIS (PART L2)

NON-RESIDENTIAL ENERGY CONSUMPTION AND CO ₂ ANALYSIS (PART L2)																																
Use	Area per unit (m²)	Number of units	Total area represented by model (m²)	REGULATED ENERGY CONSUMPTION BY END USE (kWh/m² p.a.) 'BE GREEN' BER - SOURCE: BRUKL OUTPUT														REGULATED CO ₂ EMISSIONS BY FUEL TYPE (kgCO ₂ /m² p.a.) - BER BRUKL - SOURCE: 'SIM.CSV FILE														
VALIDATION CHECK				Calculated BER (kgCO ₂ / m²)	BRUKL BER (kgCO ₂ / m²)	Space Heating (kWh/m² p.a.)	Fuel type Space Heating	Domestic Hot Water (kWh/m² p.a.)	Fuel type Domestic Hot Water	N/A	N/A	N/A	N/A	N/A	N/A	Electricity generated by CHP (-)	N/A	N/A	N/A	Electricity generated by renewable technology (+)	Lighting (kWh/m² p.a.)	Auxiliary (kWh/m² p.a.)	Cooling (kWh/m² p.a.)	Natural Gas	Grid Electricity	Biogas Df Factor	Electricity generated by CHP (-)	Enter Carbon Factor 1	Enter Carbon Factor 2	Enter Carbon Factor 3	Electricity generated by renewable technology (+)	Part L 2021 CO ₂ emissions (kgCO ₂ p.a.)
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SITE-WIDE ENERGY CONSUMPTION AND CO₂ ANALYSIS

Total Area (m²)		Calculated BER (kgCO ₂ / m²)	REGULATED ENERGY CONSUMPTION																		REGULATED CO ₂ EMISSIONS	
			Space Heating (kWh p.a.)		Domestic Hot Water (kWh p.a.)		Space Heating (Heat source 2) (kWh p.a.)		Domestic Hot Water (Heat source 2) (kWh p.a.)		Space and Domestic Hot Water from CHP (kWh p.a.)		Electricity generated by CHP (kWh p.a.)		Secondary Heating system (kWh p.a.)		Electricity generated by renewable (kWh p.a.)		Lighting (kWh p.a.)	Auxiliary (kWh p.a.)	Cooling (kWh p.a.)	Part L 2021 CO ₂ emissions
			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sum	137	4.1	-	2,826	1,884	0	0	0	0	0	0	0	0	0	0	315	519	0	648			

Part L 2021 Performance

Residential

Table 3: Carbon Dioxide Emissions after each stage of the Energy Hierarchy for residential builds

	Carbon Dioxide Emissions for residential buildings (Tonne CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L 2021 of the Building Regulations	1.0	
Carbon Dioxide Emissions		
After energy demand reduction (in kW)	1.5	
After heat network connection (in kW)	1.0	
After renewable energy (in kW)	0.0	

Table 2: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for residential build

Regulated residential carbon dioxide savings		
(Tonne CO ₂ per annum)	(%)	
Be lean: savings from energy demand reduction	0.4	21%
Be clean: savings from heat network	0.0	0%
Be green: savings from renewable energy	0.0	40%
Cumulative on-site savings	1.3	60%
Annual savings from off-net payment	0.0	-
Cumulative savings for off-net payment	10	-
Cash in-flow contribution (k)	1,000	

Carbon price is based on UKA recommended price of £55 per tonne of carbon dioxide unless Local Planning Authority price is reported in the 'Notes' column

Non-residential

Table 3: Carbon Dioxide Emissions after each stage of the Energy Hierarchy for non-residential builds

	Carbon Dioxide Emissions for non-residential buildings (Tonne CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L 2021 of the Building Regulations	0.0	
Carbon Dioxide Emissions		
After energy demand reduction (in kW)	0.0	
After heat network connection (in kW)	0.0	
After renewable energy (in kW)	0.0	

Table 2: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for non-residential build

Regulated non-residential carbon dioxide savings		
(Tonne CO ₂ per annum)	(%)	
Be lean: savings from energy demand reduction	0.0	0%
Be clean: savings from heat network	0.0	0%
Be green: savings from renewable energy	0.0	0%
Total Cumulative Savings	0.0	0%
Annual savings from off-net payment	0.0	-
Cumulative savings for off-net payment	0	-
Cash in-flow contribution (k)	0	

Carbon price is based on UKA recommended price of £55 per tonne of carbon dioxide unless Local Planning Authority price is reported in the 'Notes' column

Site-wide

	Total regulated emissions (Tonne CO ₂ per year)	CO ₂ savings (Tonne CO ₂ per year)	Percentage saved (%)
Part L 2021 baseline	1.0		
Be lean	1.0	0.4	21%
Be clean	1.0	0.0	0%
Be green	0.0	0.0	40%
Total Savings	-	1.3	60%
	-	CO ₂ savings off-net	-
Off-net	-	10.4	-

	Target Fabric Energy Efficiency (kWh/m ² /yr)	Existing Fabric Energy Efficiency (kWh/m ² /yr)	Improvement (%)
Development total	0.00	0.00	

	Avoid weighted non-residential cooling demand (kWh/m ² /yr)	Total on-site weighted non-residential cooling demand (kWh/m ² /yr)
Actual		
National		

EUI & space heating demand (predicted energy use)

Building type	EUI (kWh/m ² /year) predicted energy demand	Space heating demand (kWh/m ² /year) predicted energy demand	EUI value from Table 4 of the guidance (kWh/m ² /year) including renewable energy	Space heating demand from Table 4 of the guidance (kWh/m ² /year) including renewable energy	Meeting energy need e.g. by solar, microhydrology or alternative predictive energy modelling (including renewables)	(If expected performance differs from the Table 4 values in the guidance)	Explanatory notes (If expected performance differs from the Table 4 values in the guidance)
Residential							
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