

TABLE 1. DEVELOPMENT INFORMATION		NOTES
Date of Application	12/10/2022	Please provide the date the application was submitted to the Local Planning Authority.
Local Planning Authority	Surrey	Please indicate the Local Planning Authority determining the application.
Confirmed carbon offset price (£/tonne of carbon dioxide)	95	Please confirm the agreed carbon offset price for the Local Planning Authority. Evidence of communication on the price is expected to be included in the energy assessment. If no value is entered then the GLA's recommend price of £95 per tonne of carbon dioxide will be used.

TABLE 2. CARBON (CO <sub>2</sub> ) FACTORS		NOTES
Fuel type	Fuel Carbon Factor (kgCO <sub>2</sub> /kWh) SAP 10.2	
Natural Gas	0.210	SAP 10.2 carbon emission factors (Table 12).
Grid Electricity	0.136	
Enter Carbon Factor 1	0.138833	These factors should be used where alternative fuel is used to grid gas and electricity. Carbon emission factors used here must be taken from Table 12 and Table 12f (for CHP generated electricity) within the SAP 10.2 document.  Fuel type should be updated and referenced in Column A when additional carbon factor values have been added.
Enter Carbon Factor 2		
Enter Carbon Factor 3		
Enter Carbon Factor 4		
Bespoke DH Factor		This should only be used for non-domestic buildings that are connecting to District Heating (DH) networks. The network carbon factor should be calculated in line with Part L requirements and separate factors should be provided using and SAP 10.2 fuel factors. Assumptions and workings should be shown below in Table 4.

TABLE 3. BESPOKE DH CARBON FACTOR CALCULATION METHODOLOGY
Please provide below details of the calculation methodology followed to establish the bespoke carbon factor, if applicable.

TABLE 4. DISTRIBUTION LOSSES		COMMENTS
Primary network (buried pipe)	Total pipe length (m)	
	Average heat loss rate (W/m)	
Secondary network (buried pipe)	Total pipe length (m)	
	Average heat loss rate (W/m)	
Total losses (MWh/year)		
Total heat supplied (MWh/year)		
Distribution Loss Factor (DLF)		
Calculation included in energy statement (yes/no)		



The applicant should complete all the light blue cells including information on the 'be lean' energy consumption figures, the 'be lean' DER, the DFEE and the regulated energy demand of the 'be lean' scenario.

RESIDENTIAL ENERGY CONSUMPTION AND CO <sub>2</sub> ANALYSIS (PART L1)			REGULATED ENERGY CONSUMPTION PER UNIT (kWh p.a.) - 'BE LEAN' SAP DER WORKSHEET												REGULATED CO <sub>2</sub> EMISSIONS PER UNIT (kgCO <sub>2</sub> e p.a.)								Fabric Energy Efficiency (kWh/m <sup>2</sup> )									
Unit identifier (i.e. unit number, dwelling type etc.)	Total area represented by model (m <sup>2</sup> )	Calculated DER (kgCO <sub>2</sub> /m <sup>2</sup> )	REGULATED ENERGY CONSUMPTION PER UNIT (kWh p.a.)												REGULATED CO <sub>2</sub> EMISSIONS PER UNIT (kgCO <sub>2</sub> e p.a.)								Part L1 2021 CO <sub>2</sub> emissions (kgCO <sub>2</sub> e p.a.)	Fabric Energy Efficiency (kWh/m <sup>2</sup> )								
			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 Space and Domestic Hot Water from CHP	Total Electricity generated by CHP (%)	Fuel factors for electricity generated by CHP	Secondary Heating system	Fuel type Secondary Heating	Lighting	Auxiliary	Cooling	Space Heating	Domestic Hot Water	Space Heating and DHW from CHP			Electricity generated by CHP	Lighting	Auxiliary	Cooling	Electricity generated by renewable technology (optional building)			
DER Sheet (Rows 306)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)	DER Sheet (Rows 307)		
0	0	0.0	-	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A	0	0	0	N/A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON-RESIDENTIAL ENERGY CONSUMPTION AND CO <sub>2</sub> ANALYSIS (PART L2)			REGULATED ENERGY CONSUMPTION BY END USE (kWh/m <sup>2</sup> p.a.) - 'BE LEAN' DER - SOURCE: 'SIM.CSV FILE												REGULATED CO <sub>2</sub> EMISSIONS BY FUEL TYPE (kgCO <sub>2</sub> e/m <sup>2</sup> p.a.) - DER BRUML - SOURCE: 'SIM.CSV FILE								Part L1 2021 CO <sub>2</sub> emissions (kgCO <sub>2</sub> e p.a.)									
Building Use	Model Area (m <sup>2</sup> )	Number of units	Calculated BER (kgCO <sub>2</sub> /m <sup>2</sup> )	Space Heating (kWh/m <sup>2</sup> p.a.)	Fuel type Space Heating	Domestic Hot Water (kWh/m <sup>2</sup> p.a.)	Fuel type Domestic Hot Water	Space and Domestic Hot Water from CHP (kWh/m <sup>2</sup> p.a.)	Fuel type Space and Domestic Hot Water from CHP	Total Electricity generated by CHP (%)	Fuel factors for electricity generated by CHP	Secondary Heating system	Fuel type Secondary Heating	Lighting (kWh/m <sup>2</sup> p.a.)	Auxiliary (kWh/m <sup>2</sup> p.a.)	Cooling (kWh/m <sup>2</sup> p.a.)	Natural Gas	Grid Electricity	Beepaks DH Factor	Enter Carbon Factor 1	Enter Carbon Factor 2	Enter Carbon Factor 3	Electricity generated by renewable technology (optional building)	Part L1 2021 CO <sub>2</sub> emissions (kgCO <sub>2</sub> e p.a.)								
0	1555.0	7	1555.0	0.1	0.1	21.49	Natural Gas	0.79	Natural Gas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.414
Sum	0	0	0.0	0.1	0.1	42.847	N/A	19.136	N/A	0.0	0.0	0.0	0.0	11.994	7.439	2.818	12.840	3.026	0	0	0	0	480	15.414								
SITE-WIDE ENERGY CONSUMPTION AND CO <sub>2</sub> ANALYSIS			REGULATED ENERGY CONSUMPTION												REGULATED CO <sub>2</sub> EMISSIONS								Part L1 2021 CO <sub>2</sub> emissions (kgCO <sub>2</sub> e p.a.)									
Total Area (m <sup>2</sup> )	Calculated BER (kgCO <sub>2</sub> /m <sup>2</sup> )	Space Heating (kWh p.a.)	Domestic Hot Water (kWh p.a.)	Space and Domestic Hot Water from CHP (kWh p.a.)	Secondary Heating System (kWh p.a.)	Electricity generated by CHP (kWh p.a.)	Lighting (kWh p.a.)	Auxiliary (kWh p.a.)	Cooling (kWh p.a.)	Natural Gas	Grid Electricity	Beepaks DH Factor	Enter Carbon Factor 1	Enter Carbon Factor 2	Enter Carbon Factor 3	Electricity generated by renewable technology (optional building)	Part L1 2021 CO <sub>2</sub> emissions (kgCO <sub>2</sub> e p.a.)															
1555.0	0.1	42.847	19.136	0	0	0	11.994	7.439	2.818	12.840	3.026	0	0	0	0	480	15.414															

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

RESIDENTIAL ENERGY CONSUMPTION AND CO <sub>2</sub> ANALYSIS (PART L1)																																
Use identifier EIA and number, drawing, Model total floor area (m <sup>2</sup> ) — Area (m <sup>2</sup> ) — Number of units represented by model (m <sup>2</sup> )	REGULATED ENERGY CONSUMPTION PER UNIT (kWh p.a.) - BE GREEN SAP DER WORKSHEET																REGULATED CO <sub>2</sub> EMISSIONS PER UNIT (kgCO <sub>2</sub> e p.a.)															
	Calculated DER (kgCO <sub>2</sub> /m <sup>2</sup> )	DER Worksheet DER (kgCO <sub>2</sub> /m <sup>2</sup> )	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 Space and Domestic Hot Water from CHP	Total Electricity generated by CHP (%)	Fuel factors for electricity generated by CHP	Secondary Heating system	Fuel type Secondary Heating	Lighting (kWh/m <sup>2</sup> p.a.)	Auxiliary (kWh/m <sup>2</sup> p.a.)	Cooling (kWh/m <sup>2</sup> p.a.)	Space Heating (kWh/m <sup>2</sup> p.a.)	Domestic Hot Water (kWh/m <sup>2</sup> p.a.)	Space Heating and DHW from CHP	Electricity generated by CHP	Lighting	Auxiliary	Cooling	Electricity generated by renewable technology (national building)	Part L1 2021 CO <sub>2</sub> emissions (kgCO <sub>2</sub> e p.a.)				
VALIDATION CHECK				DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)	DER Sheet (Row 26)		
0	0	0	0	0	N/A	0	0	N/A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>NON-RESIDENTIAL ENERGY CONSUMPTION AND CO<sub>2</sub> ANALYSIS (PART L2)</b>																																
Building Use	Model Area (m <sup>2</sup> )	Number of units represented by model (m <sup>2</sup> )	REGULATED ENERGY CONSUMPTION BY END USE (kWh/m <sup>2</sup> p.a.) - BE CLEAR BER - SOURCE: BRUKL OUTPUT																REGULATED CO <sub>2</sub> EMISSIONS BY FUEL TYPE (kgCO <sub>2</sub> /m <sup>2</sup> p.a.) - BER BRUKL - SOURCE: SIM CSV FILE													
			Calculated BER (kgCO <sub>2</sub> /m <sup>2</sup> )	BRUKL BER (kgCO <sub>2</sub> /m <sup>2</sup> )	Space Heating (kWh/m <sup>2</sup> p.a.)	Fuel type Space Heating	Domestic Hot Water (kWh/m <sup>2</sup> p.a.)	Fuel type Domestic Hot Water	Space Heating (kWh/m <sup>2</sup> p.a.)	Fuel type Space Heating	Domestic Hot Water (kWh/m <sup>2</sup> p.a.)	Fuel type Domestic Hot Water	Space and Domestic Hot Water from CHP (kWh/m <sup>2</sup> p.a.)	Fuel type Space and Domestic Hot Water from CHP	Secondary Heating System (kWh/m <sup>2</sup> p.a.)	Fuel type Secondary Heating System	Electricity generated by CHP (%)	Fuel factors for electricity generated by CHP	Lighting (kWh/m <sup>2</sup> p.a.)	Auxiliary (kWh/m <sup>2</sup> p.a.)	Cooling (kWh/m <sup>2</sup> p.a.)	Natural Gas	Grid Electricity	Electricity generated by CHP (Factor 1)	Electricity generated by CHP (Factor 2)	Electricity generated by CHP (Factor 3)	Electricity generated by renewable technology (national building)	Part L1 2021 CO <sub>2</sub> emissions (kgCO <sub>2</sub> e p.a.)				
1522.0	1	1522.0	0.1	0.1	21.5	Natural Gas	0	0	N/A	0	0	0	0	0	0	0	0	0	0	0	7	2	0	0	0	0	0	0	0	15.474		
<b>SITE-WIDE ENERGY CONSUMPTION AND CO<sub>2</sub> ANALYSIS</b>																																
Total Area (m <sup>2</sup> )			REGULATED ENERGY CONSUMPTION																REGULATED CO <sub>2</sub> EMISSIONS													
1522.0			0.1	0.1	42.047	N/A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11.994	7.435	2.818	12.949	3.028	0	0	0	0	15.474





