

| The applicant should complete all the light blue cells including information on the modelled units, the area per unit, the number of units, the TER/DER/BER and the TFEe/DFEE. |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-----------------|---------------------------------------|----------------------------------------------------|-------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|-----------------------|------------------------------------|--------------------------------------|------------------------------------------|---------------------------------------------|------------------------------------------|----------------------------------------------------------------------------------|--------------------------|------------------------------------------|----------------------------------------------------------------------------------|--------------------------|------------------------------------------|--------------------|-----|
| RESIDENTIAL CO <sub>2</sub> ANALYSIS (PART L1)                                                                                                                                 |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
| Unit identifier<br>(e.g. plot<br>number, dwelling<br>type etc.)                                                                                                                | Model total floor<br>area | Number of units | Total area<br>represented by<br>model | Baseline                                           |                                                 | 'Be Lean'                                                 |                                                           | 'Be Clean'                                                |                       | 'Be Green'                         |                                      | Fabric Energy Efficiency (FEE)           |                                             | Baseline                                 |                                                                                  | 'Be Lean'                |                                          | 'Be Clean'                                                                       |                          | 'Be Green'                               |                    |     |
|                                                                                                                                                                                |                           |                 |                                       | TER                                                | Energy<br>saving/generation<br>technologies (-) | DER                                                       | DER                                                       | DER                                                       | DER                   | Target Fabric<br>Energy Efficiency | Dwelling Fabric<br>Energy Efficiency | Part L 2021 CO <sub>2</sub><br>emissions | Energy<br>saving/generation<br>technologies | Part L 2021 CO <sub>2</sub><br>emissions | Part L 2021 CO <sub>2</sub><br>emissions with<br>National PV<br>savings included | 'Be Lean' savings        | Part L 2021 CO <sub>2</sub><br>emissions | Part L 2021 CO <sub>2</sub><br>emissions with<br>National PV<br>savings included | 'Be Clean' savings       | Part L 2021 CO <sub>2</sub><br>emissions | 'Be Green' savings |     |
|                                                                                                                                                                                | (m <sup>2</sup> )         |                 | (m <sup>2</sup> )                     | (kgCO <sub>2</sub> / m <sup>2</sup> )<br>(Row 275) | (kgCO <sub>2</sub> p.a.)<br>(Row 269)           | (kgCO <sub>2</sub> / m <sup>2</sup> )<br>(Row 275 or 264) | (kgCO <sub>2</sub> / m <sup>2</sup> )<br>(Row 275 or 264) | (kgCO <sub>2</sub> / m <sup>2</sup> )<br>(Row 275 or 264) | (kWh/m <sup>2</sup> ) | (kWh/m <sup>2</sup> )              |                                      |                                          | (kgCO <sub>2</sub> p.a.)                    | (kgCO <sub>2</sub> p.a.)                 | (kgCO <sub>2</sub> p.a.)                                                         | (kgCO <sub>2</sub> p.a.) | (kgCO <sub>2</sub> p.a.)                 | (kgCO <sub>2</sub> p.a.)                                                         | (kgCO <sub>2</sub> p.a.) | (kgCO <sub>2</sub> p.a.)                 |                    |     |
|                                                                                                                                                                                | 83.08                     | 1               | 83.08                                 | 16.18                                              | -192.82                                         | 15.98                                                     | 15.98                                                     | 15.98                                                     | 3.84                  |                                    |                                      |                                          | 1,344                                       | -193                                     | 1,317                                                                            | 1,128                    | 219                                      | 1,317                                                                            | 1,128                    | 0                                        | 319                | 806 |
|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
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|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
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|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
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|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
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|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
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|                                                                                                                                                                                |                           |                 |                                       |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |
|                                                                                                                                                                                |                           |                 | </                                    |                                                    |                                                 |                                                           |                                                           |                                                           |                       |                                    |                                      |                                          |                                             |                                          |                                                                                  |                          |                                          |                                                                                  |                          |                                          |                    |     |

| Part I. 2021 Performance |                 |
|--------------------------|-----------------|
| Residential              | Non-residential |

## Residential

| Energy Hierarchy Stage   | Carbon Dioxide Emissions (kg CO <sub>2</sub> /m <sup>2</sup> /year) |
|--------------------------|---------------------------------------------------------------------|
| 1. Heating and hot water | 10.5                                                                |
| 2. Cooling               | 1.5                                                                 |
| 3. Ventilation           | 0.5                                                                 |
| 4. Lighting              | 0.5                                                                 |
| 5. Power                 | 0.5                                                                 |
| 6. Other                 | 0.5                                                                 |
| <b>Total</b>             | <b>13.5</b>                                                         |

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

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

\*carbon price is based on GEA's recommended price of 1.95 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the 'Development Information' tab

Domestic Part L 2021 Carbon Emissions



## Non-residential

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

Table 4: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for non-residential buildings

| Measure                             | CO <sub>2</sub> Savings (tCO <sub>2</sub> e/yr) |
|-------------------------------------|-------------------------------------------------|
| Energy efficiency measures          | 1,200                                           |
| Renewable energy measures           | 1,200                                           |
| Carbon capture and storage measures | 1,200                                           |
| Other measures                      | 1,200                                           |
| <b>Total</b>                        | <b>4,800</b>                                    |

\*carbon price is based on UK recommended price of £35 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the 'Development Information' tab

Non-domestic Part L 2021 Carbon Emissions



## SITE-WIDE

|  | Total regulated emissions<br>(tCO <sub>2</sub> e/annum) | CO <sub>2</sub> savings<br>(tCO <sub>2</sub> e/annum) | Percentage savings<br>(%) |  | Target Fabric Energy<br>(kWh/m <sup>2</sup> /annum) | Dwelling Fabric Energy<br>(kWh/m <sup>2</sup> /annum) | Improvement (%) |
|--|---------------------------------------------------------|-------------------------------------------------------|---------------------------|--|-----------------------------------------------------|-------------------------------------------------------|-----------------|
|--|---------------------------------------------------------|-------------------------------------------------------|---------------------------|--|-----------------------------------------------------|-------------------------------------------------------|-----------------|

|  | Target Fabric Energy<br>(kWh/m <sup>2</sup> /year) | Dwelling Fabric Energy<br>(kWh/m <sup>2</sup> /year) | Improvement (%) |
|--|----------------------------------------------------|------------------------------------------------------|-----------------|
|--|----------------------------------------------------|------------------------------------------------------|-----------------|

|      | Area weighted<br>non-residential | Total<br>non-residential |
|------|----------------------------------|--------------------------|
| 1990 | 0.0000                           | 0.0000                   |
| 2000 | 0.0000                           | 0.0000                   |
| 2010 | 0.0000                           | 0.0000                   |
| 2020 | 0.0000                           | 0.0000                   |

## EUI &amp; space heating demand (predicted energy use)

| Category       | Sub-category             | Value |
|----------------|--------------------------|-------|
| Residential    | Single-family homes      | 12.5% |
| Commercial     | Office buildings         | 8.2%  |
| Industrial     | Manufacturing plants     | 5.7%  |
| Public Works   | Water treatment plants   | 3.1%  |
| Transportation | Highways                 | 2.9%  |
| Utilities      | Power plants             | 1.8%  |
| Healthcare     | Hospitals                | 1.5%  |
| Education      | Universities             | 1.2%  |
| Government     | City hall                | 0.8%  |
| Religious      | Churches                 | 0.5%  |
| Other          | Various small structures | 0.3%  |

| EUI | Space heating demand | EUI value from Table 4 of the guidance | Space heating demand from Table 4 of the | Methodology used |
|-----|----------------------|----------------------------------------|------------------------------------------|------------------|
|-----|----------------------|----------------------------------------|------------------------------------------|------------------|

[illegible]

| EUI | Space heating demand | EUI value from Table 4 of the guidance | Space heating demand from Table 4 of the | Methodology used |
|-----|----------------------|----------------------------------------|------------------------------------------|------------------|
|-----|----------------------|----------------------------------------|------------------------------------------|------------------|