### **APPENDIX A**

# **Carbon Management and Reduction Plan 2020 – 2030**

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### **Table 1: Organisation Emissions - Carbon Reduction Actions**

| Ref. | Action  | Description  | When          | Est.<br>carbon<br>savings<br>[tCO2e/<br>year] | Est.<br>capital<br>cost<br>[£] | Fund-<br>ing<br>source | Est.<br>savings<br>[£/year] | Est.<br>simple<br>pay-<br>back<br>[years] | Lead |
|------|---|--|---------------|---|--------------------------------|------------------------|-----------------------------|---|------|
| Orga | nisation Emissi   | ons  |               |   |                                |                        |                             |   |      |
| 1    | Accommoda-<br>tion Strategy<br>Review –<br>Space<br>Utilisation | Reduce and rationalise office space to reflect increased remote working arrangements and a range of meetings happening through videoconferencing. A 20% to 40% reduction in office space utilisation reduces energy consumption (electricity, gas, water), and waste consumption and as a result carbon emissions significantly. At the same time cost savings are achieved. | Phase 1 21/22 | 84 to<br>168                                  | 0                              | Officer<br>time        | 29,000<br>to<br>58,000      | n/a                                       | СМВ  |
| 2    | Energy<br>Management<br>Responsibility                          | Agree on the overall responsibility and scope of energy management at the Council. Appoint formal responsibility and establish points of contact for energy management (e.g. Head of AMPS) and data collection to systematically and proactively improve our energy performance across operational buildings.  | Phase 1 20/21 | n/a   | 0                              | Officer<br>time        | n/a                         | n/a                                       | СМВ  |

| Ref. | Action  | Description   | When          | Est.<br>carbon<br>savings<br>[tCO2e/<br>year] | Est.<br>capital<br>cost<br>[£] | Fund-<br>ing<br>source                      | Est.<br>savings<br>[£/year] | Est.<br>simple<br>pay-<br>back<br>[years] | Lead |  |  |  |
|------|---|---|---------------|---|--------------------------------|---|-----------------------------|---|------|--|--|--|
| Orga | Organisation Emissions                                    |   |               |   |                                |   |                             |   |      |  |  |  |
| 3    | Energy<br>Management<br>System<br>Assessment              | Conduct research in preparation to the implementation of a procedural Energy Management System (EMS) for our operational sites that sets out energy and cost saving potentials and identifies milestones (e.g. energy management policy, energy targets) for the successful implementation of an EMS.   | Phase 1 21/22 | n/a   | 0                              | Officer<br>time                             | n/a                         | n/a                                       | AMPS |  |  |  |
| 4    | Energy Management System Implementation and Certification | Implement a procedural EMS across our operational buildings and get it certified. This will include management and technological interventions to develop robust energy management procedures to minimise and manage energy usage, and to promote responsible usage to align with objectives under standards such as ISO 50001.1  | Phase 1 22/23 | 14  | 0 to<br>10,000 <sup>2</sup>    | Subject<br>to capi-<br>tal bid <sup>3</sup> | 4,417                       | tbc                                       | AMPS |  |  |  |
| 5    | Building<br>Management<br>System Review                   | Plan for an upgrade and/or replacement of our current Building Management System (BMS) <sup>4</sup> to state-of-the-art technology by investigating feasibility, necessary specifications and developing the business case. To date, our BMS controls air condition and heating systems through thermostats. The Carbon Trust estimates further energy savings will be realised by using the newest technology. | Phase 1 21/22 | n/a   | 0                              | Officer<br>time                             | n/a                         | n/a                                       | AMPS |  |  |  |

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<sup>&</sup>lt;sup>1</sup> ISO 50001 is an international standard recognising organisations that enhance their energy performance by implementing an energy management system (EMS) based on a model of continual improvement. This includes developing e.g. an energy policy, setting energy targets, to use data to better understand and make decisions about its use.

<sup>2</sup> Capital cost are unknown until scoping assessment (Ref. 3) has been conducted. The Carbon Trust estimates £0 capital for the implementation of an EMS. However, certifi-

<sup>&</sup>lt;sup>2</sup> Capital cost are unknown until scoping assessment (Ref. 3) has been conducted. The Carbon Trust estimates £0 capital for the implementation of an EMS. However, certification cost is expected to be in the region of £10,000.

<sup>&</sup>lt;sup>3</sup> Capital bid submission due latest by 11/2021.

<sup>&</sup>lt;sup>4</sup> Building Management Systems are computer-based systems used to monitor and control building services such as heating, ventilation and air conditioning, fire alarms etc.

| Ref. | Action                                  | Description  | When             | Est.<br>carbon<br>savings<br>[tCO2e/<br>year] | Est.<br>capital<br>cost<br>[£] | Fund-<br>ing<br>source   | Est.<br>savings<br>[£/year] | Est.<br>simple<br>pay-<br>back<br>[years] | Lead |
|------|---|--|------------------|---|--------------------------------|--|-----------------------------|---|------|
| Orga | nisation Emissi                         | ons  |                  |   |                                |  |                             |   |      |
| 6    | Building<br>Management<br>System Update | Upgrade and/or replacement our BMS to state-of-the-art technology. This might entail upgrades to (daylight) sensors and linking controls for lighting to the BMS as it currently only controls our heating and cooling systems. Installing an advanced BMS and realising tighter control of e.g. systems on site can achieve up to 10% energy savings. | Phase 2<br>23/24 | 34  | 50,000                         | Next<br>condi-<br>tion sur-<br>vey pro-<br>gramme<br>5             | 11,055                      | 4.5                                       | AMPS |
| 7    | LED lighting –<br>Civic Centre          | Upgrade existing fittings at the Civic Centre in accordance with the review of the accommodation strategy. Consider the installation of daylight and occupational sensor to reduce energy consumption additionally. LED lights save energy and improve workplace environment by optimising the office lighting situation.                              | Phase 1 21/22    | 29  | 100,000                        | Covered<br>by exist-<br>ing capi-<br>tal pro-<br>ject <sup>6</sup> | 11,319                      | 8.8                                       | AMPS |
| 8    | Heating<br>Assessment –<br>Civic Centre | Plan for future replacement of gas fired boilers with electric or other state of the art technologies at Civic Centre in Phase 2 to reduce carbon emissions (heating feasibility study).   | Phase 1 22/23    | n/a   | 10,000                         | To be considered in budget setting process 22/23                   | n/a                         | n/a                                       | AMPS |

<sup>&</sup>lt;sup>5</sup> For inclusion within 5-year condition survey programme from 23/24 onwards. Capital bid is due latest by 11/2022. <sup>6</sup> Covered by £1,350,000 capital project 'Conditions Survey Works 2018'. Funding approval was given by Cabinet at meeting of 07 February 2018.

| Ref. | Action   | Description   | When             | Est.<br>carbon<br>savings<br>[tCO2e/<br>year] | Est.<br>capital<br>cost<br>[£] | Fund-<br>ing<br>source  | Est.<br>savings<br>[£/year] | Est.<br>simple<br>pay-<br>back<br>[years] | Lead |
|------|--|---|------------------|---|--------------------------------|---|-----------------------------|---|------|
| Orga | nisation Emissi                                      | ons   |                  |   |                                |   |                             |   |      |
| 0    | Electrifying<br>Heating –<br>Civic Centre            | Replace gas fired boilers with electric or state-of-the-art alternatives with low/zero carbon impact to reduce carbon emissions from heating the building. Overall, the energy used at the Civic Centre for heating accounted for approx. 10.4% of our operational carbon footprint in FY 2018/19.  | Phase 2<br>25/26 | 54  | 100,000                        | Next<br>condi-<br>tion sur-<br>vey pro-<br>gramme<br>7                | 1,978                       | 50.6 <sup>8</sup>                         | AMPS |
| 10   | Solar<br>Photovoltaic –<br>Feasibility<br>Assessment | Conduct a feasibility study to assess suitable roof space, structural feasibility, technologies and cost to install solar photovoltaic panels on the Civic Centre's and Community Centre's roofs, as well as possible battery storage solutions.  | Phase 1 21/22    | n/a   | 5,000                          | To be considered in budget setting process 21/22                      | n/a                         | n/a                                       | AMPS |
| 11   | Solar<br>Photovoltaic –<br>Installation              | Install solar photovoltaic panels on identified roof spaces, as well as battery storage. Covering 75% of the Civic Centre's roof (approx.1,500m²) could supply up to 16% of its electricity consumption. While covering approx. 1,040m² roof space with solar photovoltaic panels across the Community Centres could generate approx. 41% of its current electricity consumption according to Carbon Trust initial estimates. | Phase 2<br>23/24 | 77  | 410,000                        | Subject<br>to capi-<br>tal bid <sup>9</sup> /<br>External<br>funding* | 17,450                      | 23.5                                      | AMPS |

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<sup>&</sup>lt;sup>7</sup> For inclusion within 5-year condition survey programme from 23/24 onwards. Capital bid is due latest by 11/2022.

<sup>&</sup>lt;sup>8</sup> At the current point in time and the available technology, moving from gas fired heating systems to heat pump-based systems will not provide a particularly attractive business case. However, in the next few years, the carbon intensity of grid supplied electricity will fall below that of the carbon intensity of natural gas (on a kWh/kWh basis). In terms of the operational costs of running heat pump systems, it is suggested that it should be possible to run systems with minor reductions to the current operational costs. This relative parity of costs along with the high capital cost of heat pump systems creates situations with estimated long simple paybacks.

<sup>&</sup>lt;sup>9</sup> Capital bid is due latest by 11/2022.

| Ref. | Action   | Description  | When            | Est.<br>carbon<br>savings<br>[tCO2e/<br>year] | Est.<br>capital<br>cost<br>[£] | Fund-<br>ing<br>source  | Est.<br>savings<br>[£/year] | Est.<br>simple<br>pay-<br>back<br>[years] | Lead |
|------|--|--|-----------------|---|--------------------------------|-------------------------|-----------------------------|---|------|
| Orga | nisation Emissi  | ons  |                 |   |                                |                         |                             |   |      |
| 12   | Green Energy   | Procure renewable electricity. Continue discussions with our energy provider as their green product offers increase and to explore opportunities to include e.g. green gas or local renewable energy into the contract going forward.            | Phase 1 20/21   | 366 <sup>10</sup>                             | 0                              | Existing revenue budget | 21,012                      | n/a                                       | AMPS |
| 13   | Heat and Hot<br>Water Review<br>– Community<br>Centres | Review heating and hot water schedules at the Community Centre's so they run as efficiently as possible, e.g. align schedules to only run systems when spaces are utilised. Energy and carbon emission reduction from this action are immediate. | Phase 1 ongoing | 5   | 0                              | Officer<br>time         | 1,088                       | n/a                                       | AMPS |
| 14   | Loft Insulation<br>– Feasibility<br>Assessment         | Conduct a feasibility study to assess the practical feasibility and cost of insulation lofts across our Community Centres.   | Phase 1 21/22   | n/a   | 0                              | Officer<br>time         | n/a                         | n/a                                       | AMPS |

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<sup>&</sup>lt;sup>10</sup> If the market-based based calculation method is used. In short, the market-based method reflects the emissions from the electricity that a company is purchasing, which may be different from the electricity that is generated locally. As with any product, more demand for low-carbon energy will drive greater supply over time and reduced global emissions.

<sup>&</sup>lt;sup>11</sup> Estimated cost savings for Year 1 (electricity and gas) based on our new 5-year energy contract starting from October 2020. The chosen supplier provides us with a 'business renewable' tariff that is independently-verified and fully-compliant with zero-carbon standards in the UK, the electricity is matched to Renewable Energy Guarantees of Origin (REGOs).

| Ref. | Action  | Description  | When   | Est.<br>carbon<br>savings<br>[tCO2e/<br>year] | Est.<br>capital<br>cost<br>[£] | Fund-<br>ing<br>source  | Est.<br>savings<br>[£/year] | Est.<br>simple<br>pay-<br>back<br>[years] | Lead |
|------|---|--|--|---|--------------------------------|---|-----------------------------|---|------|
| Orga | nisation Emissi                                 | ons  |  |   |                                |   |                             |   |      |
| 15   | Loft Insulation                                 | Insulate lofts across the usage roof space based on the outcome of our feasibility study. Insulating unused loft space is considered a simple and largely effective measure through which to reduce heat loss and heating bills. Gas consumption savings of up to 17% are estimated. | Phase 1<br>and 2<br>22/23 –<br>25/26 <sup>12</sup> | 17  | 20,000                         | Subject<br>to capi-<br>tal bid<br><sup>13</sup> / Ex-<br>ternal<br>funding* | 3,482                       | 5.7                                       | AMPS |
| 16   | LED lighting –<br>Community<br>Centres          | Upgrade existing fittings at the Community Centres (e.g. in the communal areas). Consider the installation of daylight and occupational sensor to reduce energy consumption additionally. LED lights save energy and improve workplace environments.                                 | Phase 2<br>26/27                                   | 13  | 40,000                         | Next<br>condi-<br>tion sur-<br>vey pro-<br>gramme<br>14*                    | 5,074                       | 7.9                                       | AMPS |
| 17   | Heating<br>Assessment –<br>Community<br>Centres | Plan for future replacement of gas fired boilers with electric or other state of the art technologies at Community Centres in Phase 2 to reduce carbon emissions (heating feasibility study).  | Phase 1 22/23                                      | n/a   | 20,000                         | Reve-<br>nue/ Ex-<br>ternal<br>funding                                      | n/a                         | n/a                                       | AMPS |

<sup>&</sup>lt;sup>12</sup> Insulation of lofts in two Centres per year from 22/23 that proved most suitable based on the recommendations from the feasibility assessment.

Capital bid submission due latest by 11/2021.
 For inclusion within 5-year condition survey programme from 23/24 onwards. Capital bid is due latest by 11/2022.

| Ref. | Action  | Description  | When             | Est.<br>carbon<br>savings<br>[tCO2e/<br>year] | Est.<br>capital<br>cost<br>[£] | Fund-<br>ing<br>source                                   | Est.<br>savings<br>[£/year] | Est.<br>simple<br>pay-<br>back<br>[years] | Lead                  |
|------|---|--|------------------|---|--------------------------------|--|-----------------------------|---|-----------------------|
| Orga | nisation Emissi   | ons  |                  |   |                                |  |                             |   |                       |
| 18   | Electrifying<br>Heating –<br>Community<br>Centres                   | Replace gas fired boilers with electric or state-of-the-art alternatives with low/zero carbon impact to reduce carbon emissions from heating the building. Overall the energy used for heating accounted for approx. 11% of our operational carbon footprint in FY 2018/19.  | Phase 2<br>25/26 | 39  | 130,000                        | Next<br>condi-<br>tion sur-<br>vey pro-<br>gramme<br>15* | 1,978                       | 90 <sup>16</sup>                          | AMPS                  |
| 19   | Catering Energy Awareness and Sustainable Catering Guidance         | Provide 'catering energy awareness' guidance (e.g. staff training) for key staff at the Community Centres (e.g. how to avoid common misuse of kitchen equipment) as well as how to provide meals with a low(er) carbon footprint (e.g. seasonal/regional produce, vegetarian choices).   | Phase 1 20/21    | 4   | 0                              | CSS<br>training<br>budget                                | 1,219                       | n/a                                       | CSS                   |
| 20   | Decision Mak-<br>ing –<br>'Carbon Impact<br>Assessment'             | A two-stage process, like our existing 'Equality Impact Assessment' (EIA), to be implemented in our decision-making processes to assess climate change and carbon impacts for all key projects and decisions going forward. Results to be added to Cabinet reports.  | Phase 1 20/21    | n/a   | 0                              | Officer<br>time  | n/a                         | n/a                                       | tbc                   |
| 21   | Sustainable Procurement – Procedural Procurement Rules and Strategy | Integrate 'sustainability' into procurement requirements (contract procedure rules) and update our procurement strategy. This could include, ensuring that there is consideration of carbon impact into procurement policies and processes, for goods, works and services. Prioritising low carbon alternatives helps to reduce our total carbon footprint in relation to supply chains. | Phase 1 20/21    | n/a   | 0                              | Officer<br>time  | n/a                         | n/a                                       | Pro-<br>cure-<br>ment |

<sup>&</sup>lt;sup>15</sup> For inclusion within 5-year condition survey programme from 23/24 onwards. Capital bid is due latest by 11/2022. <sup>16</sup> Please refer to footnote 7 (Ref.9) for an explanation.

| Ref. | Action                                      | Description   | When                           | Est.<br>carbon<br>savings<br>[tCO2e/<br>year] | Est.<br>capital<br>cost<br>[£] | Fund-<br>ing<br>source | Est.<br>savings<br>[£/year] | Est.<br>simple<br>pay-<br>back<br>[years] | Lead                  |
|------|---|---|--------------------------------|---|--------------------------------|------------------------|-----------------------------|---|-----------------------|
| Orga | nisation Emissi                             | ons   |                                |   |                                |                        |                             |   |                       |
| 22   | Monitor New<br>Procurements                 | Procurement forward planning in the years 2020-2023, to explore and include options to embed carbon impact requirements (e.g. procurement of new fleet).  | Phase 1<br>20/21<br>-<br>22/23 | n/a   | 0                              | Officer<br>time        | n/a                         | n/a                                       | Pro-<br>cure-<br>ment |
| 23   | Sustainable<br>Procurement<br>Questionnaire | Develop a supplier and service provider sustainability questionnaire to be filled out by contractors at the beginning of every procurement process for goods, works and services. This questionnaire will help to gather valuable information, such as suppliers and supply chains' commitment to a carbon neutral vision, to receive their Scope 1 and 2 carbon emission data, and to understand how they manage and reduce their carbon emissions, etc. | Phase 1 20/21                  | n/a   | 0                              | Officer<br>time        | n/a                         | n/a                                       | Pro-<br>cure-<br>ment |

**Table 2: Transport and Air Quality - Carbon Reduction Actions** 

| Ref.  | Action                        | Description  | When                           | Est.<br>carbon<br>savings<br>[tCO2e/<br>year] | Est.<br>capital<br>cost<br>[£] | Fund-<br>ing<br>source  | Est.<br>savings<br>[£/year] | Est.<br>simple<br>pay-<br>back<br>[years] | Lead         |  |  |  |
|-------|-------------------------------|--|--------------------------------|---|--------------------------------|---|-----------------------------|---|--------------|--|--|--|
| Trans | ransport and Air Quality      |  |                                |   |                                |   |                             |   |              |  |  |  |
| 24    | Remote and<br>Agile Working   | Seek senior management decision on the strategic direction how staff will be able to work remotely (post Covid-19). This may include desk/staff ratios, identification of implications on general staffing/HR decisions and policies such as contracts and car allowances. Employee commuting accounted for 13% of our operational carbon footprint in FY 2018/19. | Phase 1 20/21                  | 62 <sup>17</sup>                              | 0                              | Officer<br>time   | n/a                         | n/a                                       | СМВ          |  |  |  |
| 25    | Travel Plan<br>and Hierarchy  | Set up a strategic Elmbridge Borough Council 'Travel Plan' that outlines our commitment to changing behaviour and operations towards sustainable modes of travel, to reduce carbon emissions from staff commute and business mileage (e.g. through updating our existing travel hierarchy).  | Phase 1 20/21                  | 57  | 0                              | Officer<br>time   | 2,829 18                    | n/a                                       | CMB /<br>tbc |  |  |  |
| 26    | EV Charging<br>Infrastructure | Roll-out of EV (twin-) charging points at appropriate locations in the borough, for our operational fleet (i.e. at our CSS depot) and for staff at the Civic Centre, to improve the local low carbon transport infrastructure.   | Phase 1<br>20/21<br>-<br>22/23 | n/a   | 100,000                        | Covered<br>by exist-<br>ing capi-<br>tal pro-<br>ject <sup>19</sup> |                             | n/a                                       | AMPS         |  |  |  |

<sup>&</sup>lt;sup>17</sup> Based on an assumption that staff commuting miles are reduced by 40% (assumes that employees working on average 2 days a week remotely). <sup>18</sup> Cost savings based on an estimated 10.6% reduction in business mile claims, based on Energy Saving Trust estimates.

<sup>19</sup> Covered by £100,000 capital project 'Installation of Electric Vehicle Charging Points'. Funding approval was given by Cabinet at meeting of 26 February 2020.

| Ref.  | Action   | Description   | When            | Est.<br>carbon<br>savings<br>[tCO2e/<br>year] | Est.<br>capital<br>cost<br>[£] | Fund-<br>ing<br>source          | Est.<br>savings<br>[£/year] | Est.<br>simple<br>pay-<br>back<br>[years] | Lead                  |
|-------|--|---|-----------------|---|--------------------------------|---------------------------------|-----------------------------|---|-----------------------|
| Trans | sport and Air Qu                                     | uality  |                 |   |                                |                                 |                             |   |                       |
| 27    | Fleet<br>Electrification                             | Review the Council's internal purchases and work towards the ambition to make our fleet ultra-low carbon, e.g. 100% electric latest by 2030 preferably sooner.  | Phase 1 ongoing | 261 <sup>20</sup>                             | n/a                            | Subject<br>to capi-<br>tal bids | n/a                         | n/a                                       | Pro-<br>cure-<br>ment |
| 28    | Fleet<br>Electrification –<br>EV Car Pool<br>Upgrade | Replace and review existing electric vehicle fleet and increase number of our EV pool cars.   | Phase 1 20/21   | 2.4   | tbc                            | Existing budget                 | 1,224                       | n/a                                       | ES                    |
| 29    | Fleet<br>Management                                  | Seek CMB decision who oversees and manages the Council's total fleet, its operations and vehicle renewals. Appointing clear responsibility to manage the fleet comprehensively will help to monitor and understand our fleet's carbon emissions as well as reducing them. | Phase 1 20/21   | n/a   | 0                              | Officer<br>time                 | n/a                         | n/a                                       | СМВ                   |

<sup>&</sup>lt;sup>20</sup> Estimated annual carbon savings assumption that the whole Council fleet is electrified by 2030. Estimated capital cost cannot be stated, as those will vary significantly depending on the number and type of vehicles purchased/leased as well as the timing. The EV market changing every year, and prices will change too. The same applies to new technology that may become available.

| Ref. | Action                                 | Description   | When          | Est.<br>carbon<br>savings<br>[tCO2e/<br>year] | Est.<br>capital<br>cost<br>[£] | Fund-<br>ing<br>source | Est.<br>savings<br>[£/year] | Est.<br>simple<br>pay-<br>back<br>[years] | Lead |
|------|--|---|---------------|---|--------------------------------|------------------------|-----------------------------|---|------|
| Tran | sport and Air Q                        | uality  |               |   |                                |                        |                             |   |      |
| 30   | Community<br>Support<br>Services Fleet | Review our ageing CSS fleet and its operations, to achieve a reduction of total mileage driven and CO <sub>2</sub> emissions/mile driven effectively. Exploring and identifying how this will be achieved, e.g. through detailed transport and fleet analysis. This could include the analysis of vehicle routes, average passenger numbers, passengers per vehicle, overall passenger capacity and utilisation etc. Based on the analysis solutions will be implemented. Going forward low emission vehicles (i.e. electric or hybrid) must be the prioritised alternative where practicable when vehicles are replaced. <sup>21</sup> | Phase 1 20/21 | 108 <sup>22</sup>                             | 0                              | Officer<br>time        | 7,610 <sup>23</sup>         | n/a                                       | CSS  |

<sup>&</sup>lt;sup>21</sup> In the meantime, and until there are electric alternatives available that can carry and lift wheelchairs, we are in the process of switching from Diesel to 'GreenBio Fuel', with the intention to have the switch completed by 10/2020. This will significantly reduce our greenhouse gas (GHG) emissions from our CSS fleet by approx. 90%. In addition, we will also sell two of our oldest vehicles which are both 15 years old.

<sup>&</sup>lt;sup>22</sup> Based on fuel consumption of the CSS fleet (June 2019 to June 2020), comparing emission using average diesel vs. 'GreenBio Fuel'.

<sup>&</sup>lt;sup>23</sup> Estimated cost savings per annum based on the assumption that we use 'GreenBio Fuel' at average £1.06/litre instead of average £1.27/litre for diesel (through AllStar fuel cards) only, excluding cost saving that might occur due to less mileages etc.

**Table 3: Housing and Planning - Carbon Reduction Actions** 

| Ref. | Action  | Description   | When            | Est.<br>carbon<br>savings<br>[tCO2e/<br>year] | Est.<br>capital<br>cost<br>[£] | Fund-<br>ing<br>source | Est.<br>savings<br>[£/year] | Est.<br>simple<br>pay-<br>back<br>[years] | Lead         |  |
|------|---|---|-----------------|---|--------------------------------|------------------------|-----------------------------|---|--------------|--|
| Hous | Housing and Planning                              |   |                 |   |                                |                        |                             |   |              |  |
| 31   | Partnership<br>Working and<br>Communica-<br>tions | Continue to support partners such as Action Surrey to distribute impartial information and advice on energy efficiency measures to residents, e.g. identify qualifying households to access energy efficiency funding and promote the benefits to residents and the environment of installing energy saving measures and changing behaviour to reduce energy use. Legislation is also used to ensure that privately rented properties meet the current energy efficiency standards, contributing to the reduction of fuel poverty and energy use. Continue our communications to tenants, homeowners, (social) landlords etc. including how to save energy or encourage them to take up smart meters to measure energy usage. <sup>24</sup> | Phase 1 ongoing | n/a   | 0                              | Officer<br>time        | n/a                         | n/a                                       | Hous-<br>ing |  |

<sup>&</sup>lt;sup>24</sup> Various actions around tackling fuel poverty and energy efficiency are included in our 'Housing, Homelessness & Rough Sleeping Strategy 2020-2024'. We want to progress those. For more details and our commitments, <u>please refer to this strategy</u>.

**Table 4: Buildings and Infrastructure - Carbon Reduction Actions** 

| Ref.  | Action   | Description   | When          | Est.<br>carbon<br>savings<br>[tCO2e/<br>year] | Est.<br>capital<br>cost<br>[£] | Fund-<br>ing<br>source        | Est.<br>savings<br>[£/year] | Est.<br>simple<br>pay-<br>back<br>[years] | Lead          |  |  |
|-------|--|---|---------------|---|--------------------------------|-------------------------------|-----------------------------|---|---------------|--|--|
| Build | Buildings and Infrastructure                                   |   |               |   |                                |                               |                             |   |               |  |  |
| 32    | Local Plan –<br>Planning<br>Application<br>Criteria            | The new Local Plan will play a central role in addressing the climate emergency by setting out a development strategy and policies that seek to reduce carbon dioxide emissions and support the transition to a low carbon future. As well as delivering improvements to green and blue infrastructure, flood risk, air quality, recycling and waste management. The Plan will form the basis on which planning applications in the borough will be determined.                                     | Phase 1 21/22 | n/a   | n/a                            | Local<br>Plan<br>budget       | n/a                         | n/a                                       | Plan-<br>ning |  |  |
| 33    | Local Plan –<br>Supplementary<br>Planning<br>Document<br>(SPD) | The SPD will set out detailed guidance to applicants in terms of how the policies in the Local Plan can be met. Focusing on climate change mitigation, adaption and resilience, guidance will include ensuring the buildings are located in sustainable locations benefiting from a reduced need to travel / travel by public means; designed and positioned to benefit from passive solar gain; and how to incorporate low carbon technologies into new developments / which are most appropriate. | Phase 1 21/22 | n/a   | n/a                            | Local<br>Plan<br>budget       | n/a                         | n/a                                       | Plan-<br>ning |  |  |
| 34    | Green & Blue<br>Infrastructure<br>Study                        | This evidence base document will inform the policies of the Local Plan and guidance contained within the SPD. It will include opportunities for reducing carbon emissions such as contributing to a greener active travel network thus reducing the need to travel by private vehicle and, tree planting to capture carbon dioxide emissions. The Study will set out G&BI opportunities appropriate to the location and size of development that should be incorporated into the design of schemes. | Phase 1 20/21 | n/a   | n/a                            | Local<br>Plan<br>budget<br>27 | n/a                         | n/a                                       | Plan-<br>ning |  |  |

<sup>&</sup>lt;sup>25</sup> The budget for preparing the Local Plan has been agreed by Cabinet at Meeting of 12 February 2020. <sup>26</sup> The budget for preparing the Local Plan has been agreed by Cabinet at meeting of 12 February 2020. The cost for implementing measures required as part of the new Local Plan will be met by applicants.

<sup>&</sup>lt;sup>27</sup> The cost of producing the Study forms part of the agreed Local Plan budget by Cabinet at meeting of 12 February 2020. The cost for implementing some of the opportunities will be by applicants.

**Table 5: Monitoring and Evaluation** 

| Ref. | Action                                   | Description  | When    | Est.<br>carbon<br>savings<br>[tCO2e/<br>year] | Est.<br>capital<br>cost<br>[£] | Fund-<br>ing<br>source | Est.<br>savings<br>[£/year] | Est.<br>simple<br>pay-<br>back<br>[years] | Lead |  |
|------|--|--|---------|---|--------------------------------|------------------------|-----------------------------|---|------|--|
| Moni | Monitoring and Evaluation                |  |         |   |                                |                        |                             |   |      |  |
| 35   | Monitoring and<br>Evaluation             | Review our progress of the 'Carbon Management and Reduction Plan' annually.  | ongoing | n/a   | 0                              | Officer<br>time        | n/a                         | n/a                                       | ES   |  |
| 36   | Monitoring and<br>External<br>Evaluation | Calculate the operational EBC carbon footprint annually. Consider calculating the total carbon footprint with the support of external partners such as the Carbon Trust every few years. <sup>28</sup>   | ongoing | n/a   | 0                              | Officer time           | n/a                         | n/a                                       | ES   |  |
| 37   | Stakeholder<br>Engagement                | Actively manage and work with external/internal stakeholders and partners, i.e. sharing knowledge, seeking feedback and promoting organisational change supporting the Council to transition to become carbon neutral. In July 2020, for instance a group of Climate Change Officer across Surrey's local authorities started to meet regularly. Keep carbon reduction on the Council's high-level agenda, manage expectations and recognise achievements. | ongoing | n/a   | 0                              | Officer<br>time        | n/a                         | n/a                                       | ES   |  |

<sup>&</sup>lt;sup>28</sup> This could take place approx. every three years, e.g. at the end of each Phase. The cost for one carbon footprint report (incl. data collection and calculation) would be approx. £6,000 per report. Our operational footprint can be calculated with 'The Carbon Trust Carbon Footprint Calculator' tool free of charge, which was provided to us, as part of their initial work for us.

**Table 6: Carbon Offsetting** 

| Ref. | Action                 | Description   | When         | Est.<br>carbon<br>savings<br>[tCO2e/<br>year] | Est.<br>capital<br>cost<br>[£] | Fund-<br>ing<br>source | Est.<br>savings<br>[£/year] | Est.<br>simple<br>pay-<br>back<br>[years] | Lead |
|------|------------------------|---|--------------|---|--------------------------------|------------------------|-----------------------------|---|------|
| Carb | on Offsetting          |   |              |   |                                |                        |                             |   |      |
| 38   | Carbon Offset-<br>ting | Despite the carbon reductions achievable from the implementation of the actions outlined in this Plan, we will still be emitting approx. 270 tCO2e in 2030. For us to meet our carbon neutral target we will need to consider offsetting any remaining carbon emissions. There are numerous methods for offsetting carbon emissions, each with their pros and cons. It is therefore recommended to explore methods and principles for offsetting, e.g. through own projects, such as tree planting or offsetting providers. Either way, carbon offsetting will require funding. | Phase 2 or 3 | n/a   | tbc                            | tbc*                   | n/a                         | tbc                                       | tbc  |

#### **Table 7: List of Abbreviations**

\* Projects which may have potential to be included in the application process for CIL funding.

AMPS Asset and Property Management

Approx. Approximately

BMS Buildings Management System
CMB Council Management Board
CSS Community Support Services

CO2 Carbon dioxide

e.g. exempli gratia (for example)

EMS Environmental Management System

Est. Estimated
Etc. Et cetera
EV Electric vehicle
FY Financial year

GHG emissions Greenhouse gas emissions (e.g. carbon dioxide, methane, nitrous oxide)

G&BI Green and blue infrastructure

ISO International Organisation for Standardisation

kWh Kilowatt-hour m2 Square meter n/a Not applicable

OECD Organisation for Economic Cooperation and Development Operational sites Civic Centre and our seven Centres for the Community

Ref. Reference

REGO Renewable Energy Guarantees of Origin

Scope 1 Covers direct emissions from owned or controlled sources.

Scope 2 Covers indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed by the reporting company.

Scope 3 Includes all other indirect emissions that occur in a company's value chain.

SPD Supplementary Planning Document

tbc to be confirmed

tCO2e Tonnes of carbon dioxide equivalent

- Estimates and calculations presented are based on our carbon footprint data from financial year 2018/19, Carbon Trust calculations and recommendations, as well as officer calculations and estimates.
- The terms carbon, CO2, CO2e, GHG emissions are used synonymously. "The term "carbon" refers to carbon dioxide, which is a colourless, odourless and non-poisonous gas formed by combustion of carbon and in the respiration of living organisms. It is considered a greenhouse gas. Emissions means the release of greenhouse gases or their precursors into the atmosphere over an area during a period of time" (OECD Dictionary).
- Phase 1 refers to the years 2020-2022/23, Phase 2 to 2023/24-2026/27, Phase 3 to 2027/28-2029/30.