Appendix E - Camden Climate Budget

1. Introduction

1.1. Camden formally declared a "climate and ecological emergency" in November 2019 and committed to do everything it could to help make the borough of Camden net zero carbon by 2030.

1.2. The cost of achieving a zero carbon borough exceeds £10 billion and is therefore far in excess of available Council budgets. Additionally, the Council only has influence or control over approximately one-third of emissions in Camden. The Council's approach to addressing the decarbonisation challenge therefore seeks to galvanise climate action by everyone living and working in Camden through our Climate Action Plan (CAP) 2020-2025. The CAP sets out a five-year programme of projects and activities across the themes of People, Places, Buildings and Organisations.

1.3. The CAP 2022/23 annual review shows that good progress continues to be made on delivering climate action in Camden with 98% of the actions either delivered or underway, and borough wide carbon dioxide emissions are now 49% below 2005 levels.

1.4. As part of the Council's approach to decarbonising those parts of the borough under its control and influence, the Council operates a Carbon Management Plan for its own estate and operations. This Climate Budget provides transparency on progress and funding secured towards the decarbonisation of our own estate and operations through the Carbon Management Plan.

1.5. The scope of the decarbonisation programme for our own estate includes schools, corporate buildings, leisure centres, libraries and our fleet but excludes housing. The scope excludes housing because the Council has limited visibility on carbon emissions that result from energy consumption in homes as the majority of Council homes are subject to private electricity and gas supply and metering and billing arrangements.

1.6. Following the implementation of this Climate Budget, the Council will consider how improvements in data collection processes could enable the extension of the Climate Budget to cover activities beyond the council's Carbon Management Plan.

1.7. Making the Council's own estate and operations zero carbon through our Carbon Management Plan remains a major challenge given that the financial investment required will be in the region of £167m to £200m and the national funding landscape in support of energy efficiency improvements to public buildings

remains limited and governed by one off funding rounds that typically only meet approximately 25% of the costs of energy efficiency improvements to buildings.

1.8. The Council has therefore supplemented successful funding applications to Government with its own budgets and new forms of finance such as Community municipal investment "bonds" and local carbon offsets. The Council has also continued to work with regional partners such as London Councils, the Greater London Authority and Future Cities Catapult to make the case to Government for additional funding for Council retrofit programmes.

1.9. With the aim of improving transparency, the following sections set out the extent of funding secured by the Council to decarbonise its own estate and operations, progress on emissions reductions and the residual funding gap the Council would need to bridge to sustain progress to 2030. The budgeting approach follows the Greater London Authority's decision to disclose a Climate Budget in their Consolidated Budget for the 2023-24 financial year.

2. London Borough of Camden's Carbon Footprint

2.1. As illustrated by Figure 1, in the reporting year 2022/23 the Council's greenhouse gas emissions stood at 12,412 tCO_2e (tonnes of carbon dioxide equivalent). Through the delivery of Council's Carbon Management Plan, the Council exceeded its target of a 40% reduction in emissions by 2020 in 2018/19 and has reduced emissions by 63% in 2022/23 when compared to a 2009/10 baseline.

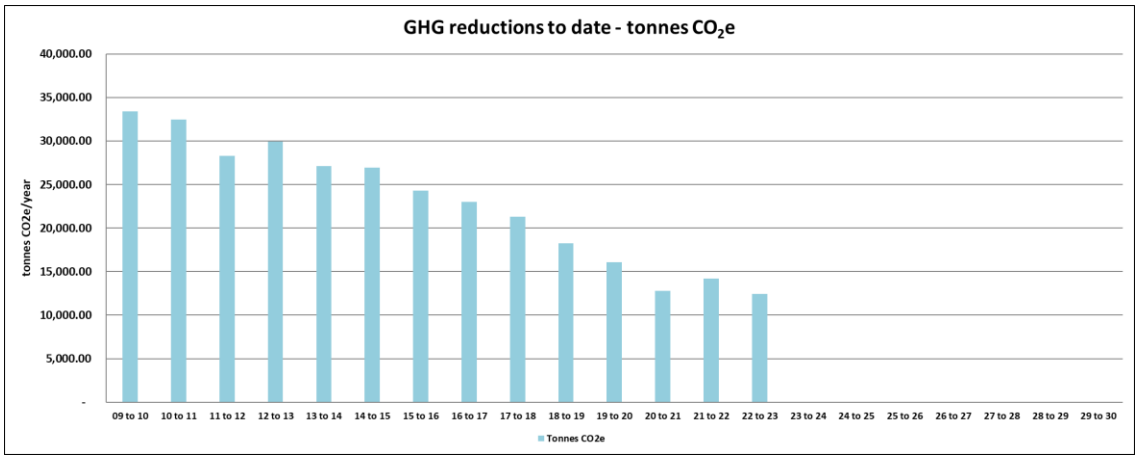

Figure 1 : Camden Council GHG reductions 2009/10 to 2022/23

2.2. The Council's carbon footprint covers operational energy use from its own estate and operations including Scope 1 and Scope 2 emissions from energy used in schools, council corporate buildings, leisure centres, hostels, and street lighting. Fuel use from the Council's fleet and transport is also considered. The contribution that each sector has on the Council's overall carbon footprint is shown in figure 2.

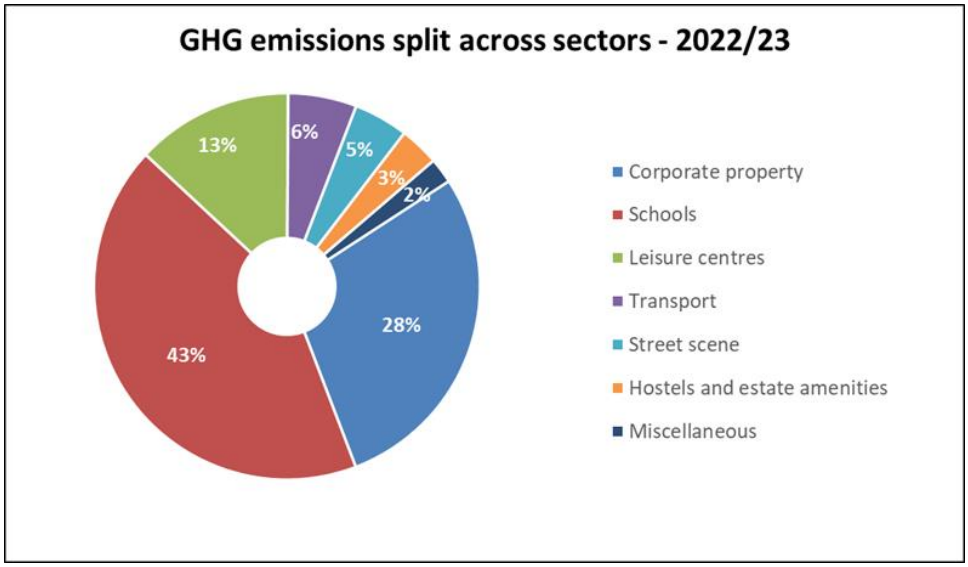

Figure 2 : Camden GHG emission split across sectors 2022/23

2.3. Nevertheless, the Council continues to invest in improving the energy efficiency of Council homes as part of the Climate Action Plan. Highlights include:

2.3.1. £3m retrofit of 58 units within 5-7 Belsize Grove with works underway to install double glazing, internal and external wall insulation, high efficiency electric heating and a communal solar energy system. The project is being supported with a £500k grant from the Social Housing Decarbonisation Fund, Wave 1.

2.3.2. £1.5m retrofit of 21 dwellings within Brookes Court estate which includes the installation of double/triple glazing across all dwellings, with some dwellings also benefiting from internal and external wall insulation, and loft insulation. The project is being supported with a £250k grant from Social Housing Decarbonisation Fund, Wave 1.

3. Road to 2030 – Camden's emission pathway for its own estate and operations

3.1. Figure 3 below is taken from the Council' Carbon Management Plan and indicates that emissions across the Council's estate and operations can be reduced by as much as 82% against 2019/20 baseline. To achieve this reduction the following conditions will need to be achieved:

3.1.1. Fossil fuel use (predominately gas for heating and hot water) in schools, corporate buildings, leisure centres, replaced with high efficiency electrification and improvements to building energy efficiency and renewable capacity as part of a whole building decarbonisation approach rolled out across the estate by 2030.

3.1.2. Conversion of petrol and diesel vehicles to electric vehicle vehicles by 2030.

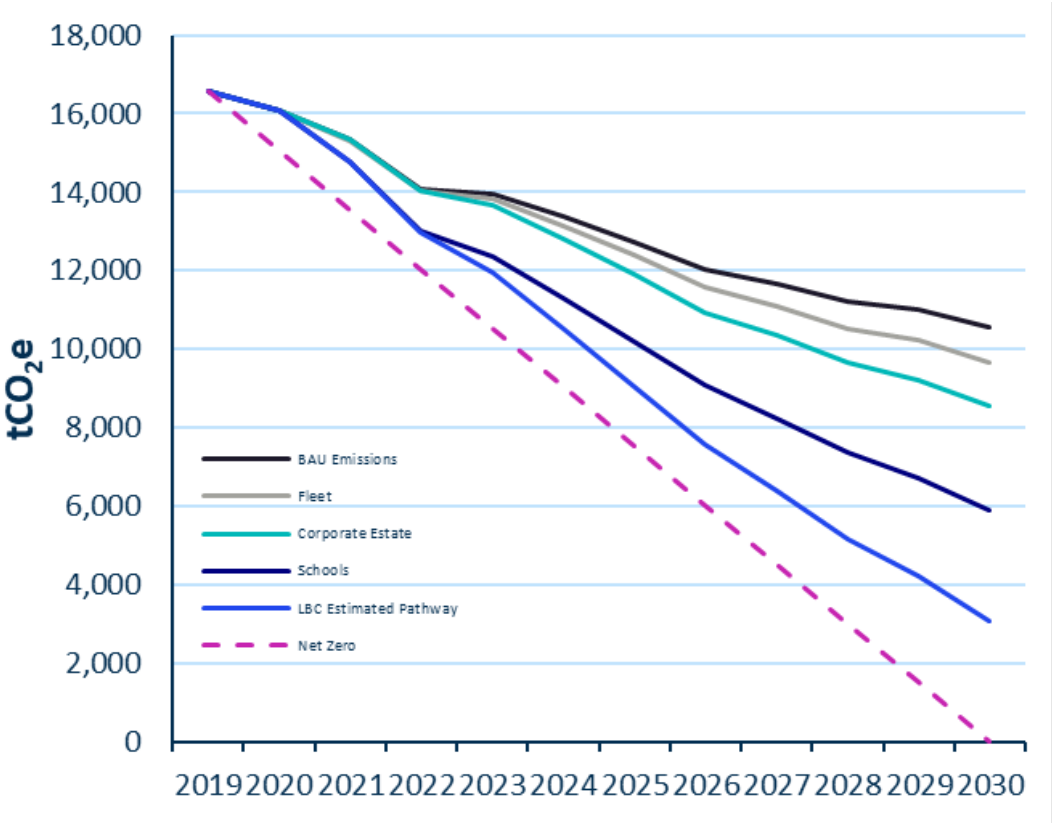

Figure 3 : LBC emissions pathway by sector (note Corporate Estate covers emissions reductions from Council Corporate Buildings and Leisure Centres)

3.2. The carbon reduction pathway in Figure 3 considers the cumulative effect of emissions reductions from each sector. It confirms that emissions can be reduced to 3,060 tonnes of CO_2e in 2030 with the delivery of the measures outlined in 3.1.1 and 3.1.2 above. Further decarbonisation is limited by factors that include, but are not limited to, the rate of decarbonisation of the national grid (the grid is not expected to fully decarbonise until after 2030) and constraints on building construction and the ability for all buildings to be retrofitted to the net zero standard.

3.3. The 'BAU' (business as usual) scenario within figure 3 depicts how far emissions can be reduced, based on the expected decarbonisation of the grid between now and 2030 and the impact of planned disposals across the Council's estate, with no further interventions being delivered in line with the measures proposed in 3.1.1 and 3.1.2. This shows that only a 36% reduction in emissions can be achieved by 2030, the equivalent of reducing emissions to 10,569 tonnes of CO_2e per annum by 2030. The Carbon Management Plan estimates that this business as usual approach would prevent the realisation of energy cost savings of approximately £1.2m annually when compared to deeper decarbonisation scenarios.

3.4. The Camden Accessible Travel Solutions team (CATS) is currently developing an updated strategy for decarbonising the Council's Fleet called *Greening the Fleet* (see section 6 for full details). The Climate Budget and Carbon Management Plan will be updated to consider the outcomes of this strategy once complete and a preferred pathway for decarbonising the fleet is agreed.

3.5. The emission reduction pathway for Schools has been informed by the *Net Zero Carbon Schools by 2030 plan* (see section 5 for full details).

3.6. Currently there is no budgeted plan to offset residual emissions should Camden not reach its zero-carbon ambition; however, strategies for offsetting emissions will be explored through the latter half of this decade.

3.7. The following sections provide further detail on the emissions reduction potential and the available and required budgets needed to make progress across the three key sectors of the Council's estate and operations: Corporate Buildings, Leisure Centres, Schools and our Fleet.

4. Camden Corporate Buildings and Leisure Centres

4.1. Figure 4 shows the emission reduction pathway for Corporate Buildings and Leisure Centre's and confirms that emissions can be reduced by 78% by 2030 based on the decarbonisation approach outlined in 3.1.2. This represents an emission reduction from 6,489 tonnes of CO_2e in 2019/20 to 1,426 tonnes of CO_2e in 2030.

4.2. Cost modelling from the Carbon Management Plan confirms that a budget in the region of £55m-£69m will be required to realise this emission reduction pathway. This costing is based on high-level decarbonisation surveys that have been conducted across a sample corporate and leisure centre buildings. The estimated cost and emissions savings from these surveys were then extrapolated across the corporate and leisure portfolio to develop the emission reduction pathway and costings across all buildings in this sector.

4.3. The Carbon Management Plan estimates that total bills savings of £1.2m a year could be achieved by delivering the pathway displayed in Figure 4.

4.4. The budget estimates in the Carbon Management Plan provide the likely cost for achieving the emission reduction pathway for this sector. The costs were developed in 2022 and have not been indexed. The Council continues to develop detailed decarbonisation plans for buildings as part of a rolling programme of work. The plans will provide further cost and technology certainty for achieving decarbonisation of buildings, with budgeted figure from the Carbon Management Plan subject to change, based on the outcomes of these plans.

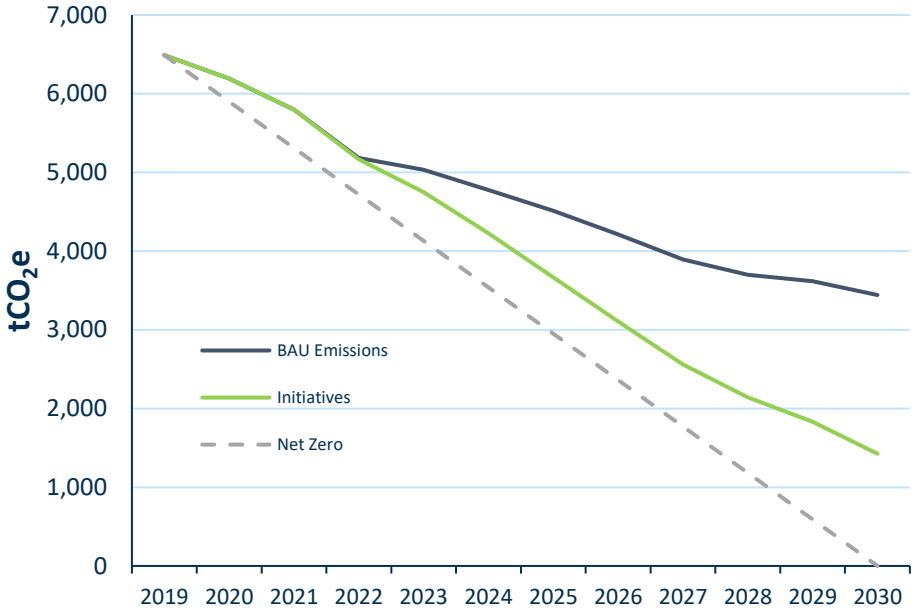

Figure 4 : Corporate Estate Emission Pathway

4.5. The Council has commenced delivery of decarbonisation projects across its corporate buildings, with notable project highlights including:

4.5.1. £3.7m energy efficiency retrofit of Swiss Cottage Library which completed in March 2023 and is expected to save 138 tonnes of CO_2e per annum. The project has included the installation of air source heat pumps, LED lighting, insulation, ventilation improvements and double glazing. The project was supported with a £1.4m grant from the Public Sector Decarbonisation Scheme.

4.5.2. £3.8m secured towards energy efficiency retrofit of four buildings including Highgate Library, Netherwood Youth Centre, West Hampstead Library and Waterlow Park Visitor Centre. The projects aim to replace fossil fuel heating with air source heat pumps and will also introduce energy efficiency measures including LED lighting, glazing upgrades and insulation across some sites. The projects are part funded with a £572k grant from the Government's Public Sector Decarbonisation Scheme and are expected to complete by March 2025. The projects are expected to save more than 75 tonnes of CO_2e per annum once complete.

4.6. The Council's £1.5 million Sustainability capital budget and carbon offset contributions secured from developments in Camden through section 106 agreements are the main sources of capital funds that can be allocated towards supporting projects across the corporate estate. The "*Budget available*" column in Table 1 confirms the total value of capital held in these funds and compares this against the estimated budget to deliver emission reductions for this sector.

Estimated budget required to deliver emission reduction (£/m)	Spend allocated to projects to date (£/m)	Budget available (£/m)	Estimated gap in budget (£/m)	Budget type	Projected CO_2e reduction by 2030 (tonnes of CO_2e saved)
£55-£69m	£7.5m	£6.2m	£41m - £55m	Capital	5,063 tCO_2e

Table 1

5. Camden Schools

5.1. The schools' emission reduction pathway in Figure 3 is based on the Camden *Net Zero Carbon Schools by 2030* plan which estimates that a 92.9% reduction in emissions from schools is achievable by taking the decarbonisation approach outlined in 3.1.2. The plan states that emissions can be reduced from 5,015 tonnes of CO_2e in 2020 to 313 tonnes of CO_2e in 2030 for 39 schools that are currently maintained by the Council.

5.2. The *Net Zero Carbon by Schools 2030* plan estimates that a budget of £112m is required to achieve this target. This cost estimate was developed in 2021 and has not been indexed.

5.3. The £112m budget estimate is based on detailed decarbonisation surveys that were completed across a sample of schools. The surveys identified the technological approach for displacing fossil fuel with high efficiency electricity solutions (such as high efficiency heat pumps) and improvement in energy efficiency and renewable generation. The estimated cost and emissions savings from these surveys were then extrapolated across the school portfolio to arrive at the total budgeted cost.

5.4. The budget estimates provide a high-level estimate of the likely cost for achieving the emission reduction pathway for this sector. The Council continues to develop detailed decarbonisation plans for buildings as part of a rolling programme of work. The plans will provide further cost and technology certainty for achieving decarbonisation of buildings, with budgeted figure subject to change, based on the outcomes of this work.

5.5. The Council has commenced delivery of decarbonisation projects across schools, with notable project highlights including:

5.5.1. £1.3m retrofit of Acland Burghley and Eleanor Palmer schools, with measures including air source heat pumps, LED lighting, draught proofing and building energy management systems. The projects are expected to save 45 tonnes of CO_2e per annum. The projects were supported with £300k grant from the Public Sector Decarbonisation Scheme.

5.5.2. £4.98m towards retrofitting Kingsgate Upper School and Hampstead School. The projects will include the provision of air source heat pumps, loft insulation, with the scope for Hampstead Schools also including LED lighting, double glazing, and solar energy. The projects are expected save 228 tonnes of CO_2e annum and will be delivered by March 2025. The projects were supported with a grant from the Public Sector Decarbonisation Scheme.

5.5.3. £1.2m towards retrofit work at Brookfield Primary School including the provision of new insulation, double glazing, mechanical ventilation improvements and solar energy. The project is expected to save 24 tonnes of CO_2e per annum once complete.

5.6. The Council's existing budget to support the decarbonisation of schools has been fully allocated against the retrofit project at Brookfield Primary School. Other projects which have been delivered or are in delivery have been financed on a building-by-building basis with funding requests to the Council's Capital Programme and associated grants to the Public Sector Decarbonisation Scheme.

5.7. Table 2 summarises the estimated budget requirements to deliver emission reductions in schools compared to budgets currently available.

Estimated budget required to deliver emission reduction (£/m)	Spend allocated to projects to date (£/m)	Budget available (£m)	Estimated gap in budget (£/m)	Budget type	Projected CO_2e reduction by 2030 (tonnes of CO_2e saved)
£112m	£7.5m	£0	£105m	Capital	4,702 tCO_2e

Table 2

6. Camden Fleet

6.1. The Council is developing a *Greening the Fleet* strategy with the support of Energy Saving Trust. The project's focus is on developing a plan to reduce greenhouse gas emissions from Camden's fleet of 300+ vehicles in the years to 2030.

6.2. There are operational, working practice and financial challenges to the deep decarbonisation of Camden's fleet, which the project is seeking to address. One notable challenge is the limited grid supply capacity for electric vehicle charging infrastructure at existing Camden depots and uncertainty around the future development plans for Camden's depot sites.

6.3. The Camden Accessible Transport Solutions team (CATS) is currently finalising the strategy. The strategy will identify the activities that will need to be delivered by the council to reduce emissions from the fleet by 2030. An estimated cost for achieving emissions reductions will also be disclosed. Initial estimates suggest that a fully decarbonised fleet will cost in the region of £11 - £14 million.

6.4. Financial mechanisms such as the Camden Climate Community Municipal Investment, which launched in 2022 and has raised more than £1m of investment from Camden investors is supporting the delivery of the *Greening the Fleet strategy* through a £250k contribution.

7. Conclusion

7.1. Through its established Carbon Management Plan, the Council is continuing to make strides to reduce its emissions from its own estate and operations, investing in projects which are aimed at removing fossil fuel use from buildings and improving energy efficiency across the estate. As part of a rolling programme of work, the council is continuing to develop decarbonisation plans for buildings. The plans will provide further cost and technology certainty for delivering decarbonisation of buildings.

7.2. A *Greening the Fleet* project is also underway to identify a viable route for decarbonising the Council's fleet operations by 2030. Initial estimates suggest that a fully decarbonised fleet will cost in the region of £11 - £14 million.

7.3. Whilst progress continues to be made on reduction emissions from the Council's own estate and operations, funding conditions remain challenging with Table 3 illustrating an estimated funding gap of £146m - £160m to deliver profiled emissions reductions across schools and the Council's corporate estate to 2030.

Estimated budget required to deliver emission reduction in Corporate Estate and Schools by 2030 (£/m)	Project spend to date (£/m)	Remaining budget (£/m)	Gap in budget (£/m)	Budget Type	Projected CO_2e reduction by 2030 (tonnes of CO_2e saved)
£167m - £181m	£15m	£6.2m	£146m - £160m	Capital	9,765 tCO_2e

Table 3

7.4. Whilst the Council continues to access a diverse portfolio of established and emerging financing mechanisms, which include central government grants such as the Public Sector Decarbonisation Scheme and social financing in partnership with community energy groups such as Power Up North London, alongside Council funding, the delivery of the Council's Carbon Management Plan will require the scaling of financing to bridge current and future funding gaps.

7.5. With Council funding constrained and central government grant programmes such as the Public Sector Decarbonisation Scheme heavily oversubscribed and providing only a partial contribution towards projects there is need for other financing mechanisms to bridge the funding gap.

7.6. To help address this, the Council has developed and tested new forms of finance including community municipal investment “bonds”, raising £1m from this in 2021/22 to help fund a range of projects including fleet decarbonisations, and local carbon offsets to support our social housing retrofit programme. The Council is now exploring how funding mechanisms such as local carbon offsets can be mainstreamed into social housing retrofit activities across the council.

7.7. The Council is also working with London Councils, the Greater London Authority and Future Cities Catapult to make the case to Government for additional funding to support area-based net zero investment nationally.

7.8. However, these new financing models are still unlikely to fully bridge the funding gap to the Council’s net zero ambition, without a significant change in the national funding landscape. To address this, a long-term credible plan for financing local authority climate action, which is led and supported by Central Government and considers the role and use of private sector finance is required.