

Decision Maker: Environment and Community Services Policy Development and Scrutiny Committee

Date: 17 November 2020

Decision Type: Non-Urgent Non-Executive Key

Title: LBB's NET ZERO CARBON ACTION PLAN

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Chief Officer: Colin Brand, Director of Environment & Public Protection

Ward: n/a

1. Reason for report

- 1.1 This report sets out an action plan for achieving the Council's net zero carbon target by 2029. It provides an update on progress made to date, outlining various initiatives, funding options currently available, and governance and reporting processes. With continued financial support and resource commitment, it shows that the target is achievable through a variety of measures.
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2. **RECOMMENDATION(S)**

The ECS PDS is asked to:

- 2.1 **Review and provide comments on the proposed action plan to reduce the Council's organisational emissions to net zero by 2029.**

Impact on Vulnerable Adults and Children

1. Summary of Impact: n/a
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Corporate Policy

1. Policy Status: Update on progress made to LBB's 2029 net zero carbon target.
 2. BBB Priority: Excellent Council
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Financial

1. Cost of proposals: See Appendix A for indicative estimates
 2. Ongoing costs:
 3. Budget head/performance centre: Carbon Management Team
 4. Total current budget for this head: £142k
 5. Source of funding: Revenue budget 2020/21 for staffing costs, energy management software and project expenses. Various internal and external funding options for net zero carbon initiatives (see section 6)
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Personnel

1. Number of staff (current and additional): 3 fte
 2. If from existing staff resources, number of staff hours:
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Legal

1. Legal Requirement: Non-statutory – Government guidance
 2. Call-in: Not Applicable
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Procurement

1. Summary of Procurement Implications: None
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Customer Impact

1. Estimated number of users/beneficiaries (current and projected): This action plan will not only benefit the Council by achieving carbon, energy and financial savings, but it will provide broader environmental benefits to the wider local community.
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Ward Councillor Views

1. Have Ward Councillors been asked for comments? No
2. Summary of Ward Councillors comments: n/a

3. COMMENTARY

Background

- 3.1 The Executive established a Carbon Management Programme (CMP) in 2008 to take action to reduce energy consumption, revenue costs and carbon emissions.
- 3.2 Since 2008/09, LBB's Carbon Management Team has quantified the Council's emissions each year, following the guiding principles of the internationally recognised World Resources Institute's Greenhouse Gas (GHG) Protocol Corporate Accounting and Reporting Standard.
- 3.3 LBB's first Carbon Management Programme (CMP1) operated from 2008/09 to 2012/13, achieving a 14% reduction (5,275 tCO₂e) in the Council's GHG emissions.
- 3.4 The second programme CMP2 (2013/14 to 2017/18) achieved a 33% reduction (12,000 tCO₂e) against a 2013 baseline.
- 3.5 A Council Motion on 15th July 2019 unanimously approved a ten-year plan to ensure that the council reaches net zero carbon emissions by 2029. Essentially, this means reducing emissions produced by the Council to zero in order to achieve carbon neutrality.
- 3.6 A 2029 Net Zero Carbon Strategy was reviewed and approved at the Environment and Community Services Policy Development and Scrutiny (ECS PDS) Committee meeting on 29th January 2020, where it was also agreed that an action plan be presented to the ECS PDS committee in the autumn (2020).
- 3.7 CMP3 (2019/20 to 2029/30), the third phase of the Council's Carbon Management Programme, has adopted 2018/19 as the baseline year against which progress will be monitored and measured over the next ten years, and zero emissions set as the new target.

Measuring the Council's Organisational Emissions

- 3.8 We use tonnes of carbon dioxide equivalent (tCO₂e) to allow for comparison between different GHG sources.
- 3.9 The GHG Protocol categorises emissions into three different scopes, which helps define operational boundaries:
 - **Scope 1:** Direct GHG emissions occurring from sources that are owned or controlled by the organisation, such as the emissions from burning gas to heat a building, and the emissions directly entering the atmosphere from using company vehicles.
 - **Scope 2:** Electricity indirect GHG emissions produced from the generation of purchased electricity.
 - **Scope 3:** An optional reporting category that allows for the accounting of other relevant indirect emissions (i.e. emissions resulting from the consequence of an organisation's activities, occurring from sources not owned or controlled by the organisation).
- 3.10 LBB measures carbon emissions for the activities shown in table 1:

Table 1

Scope 1	Scope 2	Scope 3
<ul style="list-style-type: none"> • Building heating: gas & oil consumption (LBB estate) • Council owned fleet: petrol/diesel consumption 	<ul style="list-style-type: none"> • Purchased electricity (LBB estate / borough street lighting) 	<ul style="list-style-type: none"> • Business travel • Staff commuting • Electricity (transmission & distribution) • Waste (Civic Centre) • Water (LBB estate) • Paper (Civic Centre) • Procured services

3.11 The Council's net zero target will apply to all those emissions that it **directly controls**, namely, all scope 1 and 2 emissions, plus scope 3 emissions for business travel, water and paper usage, office waste and electricity (transmission & distribution).

3.12 The Council does not directly control scope 3 emissions arising from staff commuting and procured services, which are therefore excluded from our net zero scope of emissions.

3.13 However, LBB's forthcoming annual CMP3 report will provide greater detail on all organisational emissions, along with procured services and borough-wide emissions, and other projects.

3.14 The Council's net zero profile emissions for 2018/19 totalled **7,196 tCO₂e**, which forms our net zero baseline.

	Emissions (tCO ₂ e/yr)	%
Buildings (electricity & gas)	3,954	54.9
Street lighting	2,888	40.1
Fleet	61	0.8
Waste	3	0.05
Water	55	0.8
Paper	44	0.6
Business travel	191	2.7
Total (tCO₂e/yr)	7,196	

3.15 In 2019/20 our net zero profile emissions totalled **6,584 tCO₂e** (i.e. an 8.5% annual reduction against the baseline).

Source	2018/19	2019/20	2018/19 - 2019/20	
	tCO ₂ e/yr	tCO ₂ e/yr	tCO ₂ e/yr	
	CMP3 Baseline Year	CMP3 Year 1	Tonnage change	Percentage change
Buildings	3,954	3,822	-131.5	-3%
Street lighting	2,888	2,451	-436.7	-15%
Fleet	60.9	33.8	-27.1	-44%
Waste	3.4	2.5	-0.9	-26%
Water	54.6	54.6	0.0	0%
Paper	44.4	35.1	-9.3	-21%
Business travel	190.7	184.0	-6.7	-4%
Total (tCO₂e/yr)	7,196	6,584		

Getting to Net Zero Emissions by 2029

- 3.16 This section provides an overview of our adopted approach to take the Council forward in meeting its net zero emissions target.
- 3.17 The main vehicle for transitioning to a net zero council will be through CMP3 but will involve the Carbon Management Team working closely with other service departments/teams within the Council to make significant energy efficiency improvements across different service areas.
- 3.18 LBB's carbon emissions is a continually moving number due to varying factors such as a changing national grid mix (with more renewables-generated energy becoming available) and carbon reductions achieved from ongoing projects (e.g. the more streetlights upgraded to LED, the fewer emissions). Hence, the ten-year action plan will remain fluid and evolve over time.
- 3.19 Various factors will help inform which projects to take forward, such as: the potential carbon, energy and cost savings of initiatives; available funding; the priorities identified by Members in terms of mobilising medium to large scale projects.
- 3.20 In line with best practice, our aim is to first reduce both our vehicle emissions and energy demand on the national grid as far as possible through **four key initiatives** (potentially delivering a 95% reduction in emissions), then offset all remaining residual emissions through a mix of suitable initiatives outlined in table 2:

Table 2

Reduce LBB's Direct Organisational Emissions		
1	Street Lighting LED Upgrade	Upgrade remaining 14,000 street lights to LED (including dimming capability and photocells).
2	Buildings: energy efficiency	Work closely with LBB's Energy Manager to identify and install energy efficiency measures and smart technology across Bromley Council's estate by targeting the most energy intensive buildings with the highest consumption.
3	Renewable Energy	Procure 100% renewable electricity and gas.
4	Council Fleet	Switch to an electric vehicle fleet.
Offset Residual Emissions		
5	Solar Farms	This initiative would help the Council become more resilient to energy price fluctuations and volatile supply chains, as well as generating a revenue stream.
6	Renewables Investment	Assess investment opportunities in offshore/onshore wind and solar installations.
7	Woodlands, Parks & Greenspaces	Additional tree planting and development of green infrastructure.
8	Certified Carbon Offsets (from UK-based projects)	This is considered a last resort option when all other options have been exhausted, as Bromley's preferred option is to tackle our carbon emissions directly.

- 3.21 During the first several years of CMP3, the Carbon Management Team will continue working on both mobilising carbon reduction projects and assessing the feasibility of initiatives that could potentially feed into our overall net zero action plan.
- 3.22 It is worth noting several factors that will play a significant role in influencing LBB's total carbon emissions, particularly in 2020:
- **Covid-19 pandemic:** the impact of the pandemic has resulted in the majority of Council staff working from home for a prolonged period. This will have a significant impact on emissions arising from office paper/water use, LBB energy consumption, staff commuting, office waste and business travel.
 - **Flexible working:** prior to the pandemic the Council began implementing a flexible working policy, allowing employees to partly work from home where appropriate. The Covid-19 pandemic catalysed this, and it is now envisaged that a significant percentage of staff will continue this new way of working post Covid-19. Therefore, it is expected that emissions mentioned above will continue to remain low for the foreseeable future.
 - **Paperless office and digitalisation:** as the Council continues to push ahead with its paperless office environment (supported by a wide digitalisation exercise), it is expected that paper emissions will reduce significantly.
 - **National grid decarbonisation:** electricity emission factors are expected to continue to decrease over time as more national grid electricity is generated from renewables and fossil fuels are phased out. This will help lower LBB's emissions from electricity consumption. However, there remains significant uncertainty over the rate of this change, hence why strong action to implement energy efficiency measures will remain imperative for achieving carbon neutrality by 2029.
- 3.23 The Parks and Greenspaces LED Lighting Upgrade exercise (previously included in the Net Zero Carbon Strategy) continues to make progress – technical assessments are underway for two parks that will help inform an LED upgrade programme roll out across all parks. However, given that our approach is to focus efforts on the most impactful initiatives, this initiative has been excluded from the net zero action plan since parks lighting accounts for less than 1% of total electricity.

NET ZERO CARBON (NZC) ACTION PLAN

- 3.24 This section outlines the actions we will take to achieve carbon neutrality by 2029. It includes an update on our progress since the Council committed to a net zero target in 2019.
- 3.25 LBB's NZC Action Plan comprises 8 key initiatives outlined in table 2: initiatives 1 to 4 will help drive down the Council's direct emissions as far as possible, whilst initiatives 5 to 8 will be assessed to determine the best mix for offsetting the Council's remaining residual emissions.
- 3.26 The Carbon Management Team (CMT) will take a pragmatic approach by initially focusing on a mixture of projects offering the greatest and best value for money carbon reductions. However, over the life of the ten year plan the CMT will continue to expand its remit to additional areas for reduction, including efforts to affect staff behavioural change.
- 3.27 Each of the eight initiatives are described below, including our progress to date and the key actions moving forward. The tables in Appendix A summarise each initiative with indicative costs, carbon savings, timescales and action owners.

3.28 Initiative 1: STREET LIGHTING LED UPGRADE

Electricity consumption from Bromley's 28,000 street lights currently accounts for approximately 37% of the Council's carbon emissions. Of the 28,000 lights, 10,000 have already been replaced with energy efficient LED lanterns, achieving annual cost savings in excess of £670,000.

The Council are now keen to build on past achievements and convert the remaining 14,000 street lights to LEDs that could achieve an estimated 18% reduction in total organisational carbon emissions.

Key Actions:

- Upgrade all 10m and 8m traffic route lanterns
- Develop/deliver a phased upgrade programme for updating the remaining 10,000 non-LED lights. The potential carbon and energy savings potential will be assessed, however it is worth noting that the remaining columns will predominantly be 6m columns with relatively low wattage lamps, therefore offering lower energy savings compared to the old high wattage lanterns used for the 10m and 8m columns.

Progress:

A project to upgrade a further 3,700 traffic route street lights (10m and 8m columns) to LEDs with dimming capability and photocells was approved in 2019. During early 2020 the design was tweaked to improve upon the original design - better energy efficient lanterns were sourced, and a different dimming profile adopted. The new design will help realise a further £130k annual cost savings and a 220 tCO₂e reduction in carbon, all for the same total project cost.

Due to Covid-19 lockdown measures, the production/supply of the new lights was impacted, consequently delaying the planned installation date. However, production has recommenced, and installation works began last month (October). Apart from the benefits of improved light quality for both pedestrians and road users, this latest project is set to achieve the following:

- Annual cost saving: £360k
- Annual carbon saving: 663 tCO₂e
- Project payback: 3.1 years

3.29 Initiative 2: BUILDINGS (ENERGY EFFICIENCY)

Energy consumption from the operation of LBB's buildings accounts for 58% of the total carbon emissions profile, comprising: electricity (22%) and gas (36%). To realise cost/energy/carbon savings it is imperative that the Council continues to improve the energy efficiency of the estate and move towards the use of low carbon energy sources for heating whenever feasible.

As more buildings (heating) and vehicles switch towards electricity, it becomes increasingly important to ensure that electricity is supplied by renewable sources to not only relieve pressure on the national grid, but to also provide security of electricity supply and protect against electricity price increases.

Key Actions:

- Undertake a full energy audit of the top 10-15 most energy intensive buildings to identify energy efficiency opportunities.

- Develop an energy efficient upgrade programme for the priority sites.
- Ensure any site refurbishments and new build projects incorporate low carbon design elements and solar photovoltaic (pv) installation wherever viable.
- Roll out an Automated Meter Reading (AMR) meter installation programme to achieve more accurate and timely billing and energy monitoring capability.

Progress:

During 2020 the Carbon Management Team has developed a project for the design and installation of solar pv system on the rooftop of the Civic Centre's North Block building, that will help supply the Council with its own generated electricity.

A tender exercise is currently underway via a national public sector energy efficiency framework, with Dec 2020/Jan 2021 being the anticipated installation date. This project will be used as a template for developing further solar rooftop projects across the Council's estate.

An exercise to assess LBB's most energy intensive properties in 2020 has been delayed due to Covid-19 restrictions. LBB's Energy Manager is now aiming to deliver a planned assessment of the LBB estate in 2021 and develop a programme to install AMR meters at strategic sites. Based on the energy efficiency assessment findings, a planned upgrade programme will be developed that will in turn inform accurate carbon savings.

3.30 Initiative 3: 100% RENEWABLE ENERGY

The most effective solution for reducing emissions is a rapid shift to 100% renewable electricity. Electricity associated emissions currently accounts for nearly 60% of LBB's total net zero profile emissions, whilst gas emissions accounts for 36%.

Procuring 100% renewable energy therefore offers the most impactful opportunity for carbon reduction – a potential 96% reduction – by allowing LBB to discount all their energy emissions.

Approximately 25-30% of the national grid's electricity comes from renewables (not to be confused with zero-carbon electricity that includes nuclear). Renewable Energy Guarantee of Origin certificates (REGOs) can be purchased from energy suppliers that certify the electricity coming from the renewable energy element of the national grid. However, energy suppliers can purchase as many REGOs as they like to sell on to organisations/households, without purchasing/offering any true green energy itself. Hence, REGOs do not always come from suppliers with strong environmental credentials. The most credible way to purchase 100% renewable energy is to switch to a green supply that directly leads to increased renewable generation (i.e. where demand translates into new sources of green, renewable energy being built).

Key Actions:

- Quantify any additional costs for switching to 100% renewable energy.
- Review green energy options for both gas and electricity when the existing energy contract nears expiry, including Power Purchase Agreement options to purchase directly from a renewable energy generator.

Progress:

On 23rd October 2020 the Leader of the Council made an executive decision that the Council proceeds with the procurement of green energy.

A tender exercise is currently underway via an energy procurement framework, and a preference for renewable energy has been specified. Initial offers received suggest an increased cost for green gas which could be offset by a decreased green electricity tariff. Hence, the additional costs for switching to credible green energy could potentially be minimal to the Council. However, it is important to note that offers have a very short acceptance window and are being frequently revised, meaning that the tariffs offered are prone to change until a contract is signed.

3.31 Initiative 4: COUNCIL FLEET ELECTRIFICATION

Council fleet refers to vehicles directly managed by the Council but not vehicles used by the Council's contractors (e.g. Veolia for Waste Services). The remaining fleet operated directly by the Council now consists of a mixture of light vehicles, minibuses operated at three educational establishments, and several pool cars. Our gritters are owned by LBB but operated by our contractor as part of the Highways contract.

Although the Council's fleet accounts for less than 1% of the Council's net zero emissions, this is deemed an important initiative for helping to advance vehicle electrification in the broader context. Also, the benefits of electrifying the Council's fleet extend to improving air quality, which feeds into Bromley's Air Quality Action Plan objectives.

Key Actions:

- Install electricity charge points at the main depot to enable electrification of both the Council's own fleet and the next fleet of refuse collection vehicles.
- Switch to a 100% electric fleet

Progress:

The Council continues to assess electric vehicle options as and when existing fleet vehicles are either decommissioned or lease agreements renewed.

The installation of electric charge points has been included in the Council's capital works programme for the depot.

3.32 Initiative 5: SOLAR FARMS

As the largest geographical borough in London, Bromley is well placed to accommodate solar farm installations. With solar panel prices reducing significantly over the past few years, solar farms have become an attractive proposition for reducing electricity bills, demand on the national grid, and carbon emissions, as well as providing energy security and optional income streams. Indeed, another London borough is already pushing ahead with two potential developments.

Well-designed solar farms can be naturally screened from view, with medium-large sites offering the opportunity for some tree planting and enhanced biodiversity through wildflower meadows.

Key Actions:

- Compile a short list of the most suitable LBB-owned sites
- Commission a technical/commercial feasibility study
- Develop a detailed business case for any sites considered technically and commercially viable.

- Public engagement.
- Develop and submit planning applications where appropriate.

Progress:

The Carbon Management Team has conducted a high-level desk-top study to identify and assess the suitability of all Council-owned sites, which highlighted five key sites offering the greatest potential.

A consultant has recently been appointed to conduct a detailed technical and commercial feasibility study for all five sites. Their recommendations will help inform the next steps to be taken in developing a business case in 2021 for any sites deemed suitable/viable.

3.33 Initiative 6: RENEWABLES INVESTMENT

Following the government’s recent announcement for the UK to become a world leader in clean wind energy and all homes to be powered by renewable energy by 2030 it is envisaged that renewable investment opportunities will increase during the course of this plan, allowing organisations to either use the generated electricity themselves, offset their emissions, or create a revenue stream.

Key Actions:

- Explore commercial renewable investment opportunities as and when they materialise
- Explore joint partnership opportunities with other Councils

Progress:

No viable investment opportunities have been identified over the past year. However, the Carbon Management Team will continue to actively monitor the market.

3.34 Initiative 7: WOODLANDS, PARKS & GREENSPACES

Tree planting is a medium to long term solution for carbon sequestration because young trees absorb small amounts of carbon during their early years. In the context of the Council’s ten year net zero target, a significant number of trees/saplings would have to be planted across vast acres of land to make an impact. Tree establishment also comes with its challenges – a robust maintenance programme to stimulate healthy growth, and tree/site protection is vital for its success.

However, the Council recognises the value and many benefits that greenspaces, parks and woodlands provide to residents and natural ecosystems, and the need to protect and enhance them for future generations. As more and more carbon is sequestered over time, this initiative will help the Council maintain its net zero target post 2029 and reduce borough wide emissions.

Key Actions:

- Produce a new Tree Management Strategy
- Consider offsetting opportunities associated with registering new tree planting under the government approved Woodland Carbon Code.
- Quantify/compare carbon sequestration levels for native trees, grasslands, wild meadows, hedgerows, verges.

- Conduct feasibility assessments for shortlisted LBB-owned sites deemed suitable.
- Deliver suitable projects in a cost-efficient manner, maximising grant funding opportunities where possible.

Progress:

The Council’s Arboriculture team are currently producing a new Tree Management Strategy to take forward from 2021 onwards.

LBB’s Parks and Greenspaces team are currently preparing applications for a range of woodland and other habitat grants to manage the rare and priority habitats overseen by our contractor’s Bromley Countryside Team. In addition, a few large projects are being prepared ready for funding applications along with a range of smaller ones.

The Carbon Management team has begun joining up its carbon mitigation objectives with the Parks & Greenspaces and Arboriculture teams, their respective service providers, the public, and councillors to develop and implement a holistic strategy that is able to satisfy cross service objectives.

A shortlist of potential sites has been produced for further consideration to develop natural ecosystems (woodlands/grasslands/meadows or otherwise) that will deliver carbon reductions against the Council’s NZC target.

3.35 Initiative 8: CERTIFIED CARBON OFFSETS

Purchasing certified carbon offset credits remains a last resort option for offsetting any residual carbon emissions that cannot viably be offset through initiatives 5 – 8. If the Council does exercise this option the preference will be for a UK-based project, typically involving tree planting, new woodland creation or peatland bog restoration.

Key Actions:

- Research suitable UK-based carbon offset projects.
- Purchase offset credits in an honest and transparent way.

Progress:

The Carbon Management Team will look to identify the most appropriate and cost-effective carbon offsetting credits further into the ten year plan, once all of the above initiatives have been fully appraised.

4. GOVERNANCE AND REPORTING

- 4.1 Performance against LBB’s 2029 Net Zero Carbon target will be closely monitored, measured and reported by the Carbon Management Team.
- 4.2 Achieving net zero emissions will be iterative, remain ambitious and subject to change as technology evolves, the regulatory environment changes, and more government funding becomes available. Hence, continual review will be required to ensure the action plan is on track.
- 4.3 Each new project/initiative will be quantified in terms of carbon, energy and financial savings, and show before and after statistics to help assess project performance.

- 4.4 Carbon Management Performance reports are provided to the Director of Environment & Public Protection on a monthly basis at the Departmental Management Team (DMT) meetings. This report will include information pertaining to the progress of projects and other relevant carbon reduction work.
- 4.5 The Carbon Management team will report biannually to the Environment Portfolio Holder on the progress made towards LBB's net zero target, and annually to the Environment and Community Services Policy Development and Scrutiny Committee.
- 4.6 Approval to spend the Carbon Neutral Fund on suitable projects will be sought through the Executive Committee as and when required.
- 4.7 The annual 'Bromley's GHG Emissions Performance' report will continue to quantify the Council's performance in reducing their emissions and provide yearly progress statistics against the net zero target. It will include project specific information and report on actions taken to help reduce both scope 3 and borough-wide emissions, ensuring that reporting is accurate, complete and transparent (via the Council's website).

5. POLICY IMPLICATIONS

- 5.1 Aligning with the Transforming Bromley Agenda, the initiatives proposed in table 2 complement the following corporate priorities:
 - **Responsible Financial Management Strategy:** reduced future costs to the council through lower energy bills.
 - **Maintaining Organisational Resilience:** A 25-year installation with forecasted output provides stability to external electricity price shocks.
 - **Modern, Efficient and Flexible Work Environment:** As part of the accommodation strategy to modernise Civic Centre buildings.
 - **Effective Resident Engagement:** Demonstrates our environmental commitments to the wider public.
 - **Improving the Public Realm, maintaining our Green Spaces and Promoting Economic Growth:** Safeguarding the environment and promoting a green recovery.
- 5.2 This plan will contribute to achieving the Council's 2029 Net Zero Carbon target commitment.

6. FINANCIAL IMPLICATIONS

- 6.1 At this point in time it is difficult to know the amount of funding required for LBB to become a carbon neutral council due to the uncertainty of which projects will be most suitable. However, Appendix A provides an indication of costings for some of the key initiatives at various stages in their development and funding commitments. Feasibility assessments are being conducted to identify and help inform the most viable and cost-effective projects/initiatives to take forward.
- 6.2 Outlined below are several potential funding streams available to the Council for the initiatives described in this report. More financial options have become available over time as the government introduces further green deals to accelerate national and regional decarbonisation.
- 6.3 Carbon Management Recycling Fund (£500k): Although the total fund amount has been committed to a street lighting LED upgrade project, as soon as the works are completed (estimated to be Spring 2021) LBB will start paying back the fund from the energy savings.

Hence, the fund will start building up again, and the money will be made available for further invest-to-save projects.

- 6.4 Salix Energy Efficiency Loan Scheme (SEELS): Salix Finance provides interest-free government funding to the public sector to improve energy efficiency, reduce carbon emissions and lower energy bills. Interest-free loans, from £5k to over £10m, can be used on a wide range of small to large invest-to-save energy efficiency projects, and paid back through the predicted savings on energy usage.
- 6.5 Salix Decarbonisation Fund: An interest-free loan that works in a similar way to the recycling fund in that LBB would have to provide 50:50 match funding.
- 6.6 The Mayor of London's Energy Efficiency Fund (MEEF): An investment fund, established by the GLA, which will help achieve London's ambition of being a zero carbon city by 2050. MEEF has been developed with Local Authorities as a core sector given their leadership in the low carbon development industry. MEEF has access to £500m of financing that can provide funding for up to 100% of the capital cost of a project. Features include: minimum investment size of £1m; fixed term interest rate; as well as funding individual projects MEEF can also fund estate wide maintenance and refurbishment.
- 6.7 Carbon Offsetting Funds (s106 contributions): To be used on a variety of carbon reduction projects across the borough. Projects can include energy efficiency measures on council property and street lighting. The current available balance is c.£282k with further funding of c.£800k (from 'approved' planning applications) projected.
- 6.8 With all of the above options, projects would need to satisfy certain energy/carbon savings over their lifetime. The Salix/SEELS funding is largely based on payback periods, whilst the Carbon Offsetting Fund (COF) is based on the cost of reducing a ton of carbon.
- 6.9 The GLA's "accelerator" frameworks aims to finance projects in their development stage, such as the commissioning of feasibility studies, consultation services, public engagement etc. With this enabling financial mechanism, the Carbon Management Team envisages more viable projects in the future at no cost to the Council throughout the project's development stage. This mechanism is also designed to deliver projects at pace by streamlining the process to achieve financial and carbon savings earlier.
- 6.10 Carbon Neutral Fund: In recognition of new investment being required to achieve LBB's net zero target, as part of approving the 2020/21 revenue budget the Council agreed to establish a Carbon Neutral Fund. This will provide pump-priming funding of £0.875m for new initiatives to reduce the Council's carbon footprint whilst reducing its long-term energy costs.
- 6.11 Capital Programme Funding: For future energy efficiency initiatives as part of the Environment Work Programme, such as building refurbishment, further street lighting upgrades, and renewable energy projects.
- 6.12 Each initiative to achieve the Council's net zero target will need to be assessed through a detailed business case process, taking into account available funding, revenue budget savings and other investment priorities. Savings generated from these projects will need to be factored into consideration of the Council's future budget strategy.

7. PROCUREMENT IMPLICATIONS

7.1 No procurement implications.

Non-Applicable Sections:	Impact on Vulnerable Adults and Children Legal Implications Personnel Implications
Background Documents: (Access via Contact Officer)	Carbon Management Programme: Executive Report ED98067 (7 October 2008) <u>Bromley Council's GHG Emissions Reporting</u>

APPENDIX A: Net Zero Carbon Action Plan Matrix

Initiative 1: Street Lighting LED Upgrade			
Upgrade remaining 14,000 non-LED street lights (including dimming capability and photocells)			
Cost	Approx. £4.5m		
Carbon Savings (tCO₂)	1,600 - 1,800		
Reduction of LBB's Total Carbon Emissions (%)	24 - 27%		
Action	Timescale	Action Owner	Progress to Date
Upgrade all 10m and 8m traffic route lanterns	2020 - 2021	Highways / Carbon Management	Project approved to upgrade ~ 3650 lights at a cost of £1,121m. Installation works commenced Oct 2020.
Develop/deliver a phased upgrade programme for updating the remaining 10,000 non-LED lights.	2020 - 2026	Highways	Upgrade of remaining non-LED lights now being considered.

Initiative 2: Buildings (energy efficiency)			
Identify and install energy efficiency measures and smart technology across Bromley Council's estate			
Cost	tbc (dependent on opportunities identified)		
Carbon Savings (tCO₂)	380 - 765		
Reduction of LBB's Total Carbon Emissions (%)	5 - 10%		
Action	Timescale	Action Owner	Progress to Date
Undertake a full energy audit of the top 10-15 most energy intensive buildings to identify energy efficiency opportunities.	2021	Strategic Property / Carbon Management	Exercise delayed to 2021 due to (Covid-19) building access restrictions.
Develop/deliver an energy efficient upgrade programme for the priority sites	2021 - 2029	Strategic Property	Dependent on opportunities identified from energy audit.
Ensure any site refurbishments and new build projects incorporate low carbon design elements and solar photovoltaic (pv) installation wherever viable	2020 - 2029	Strategic Property / Carbon Management	Tender exercise currently underway for the installation of solar panels on the rooftop of the Civic Centre's North Block building. Currently investigating scope of LED upgrade project with facilities management contractor. Work streams dependent on outcomes of Capital Works Programme.
Roll out an Automated Meter Reading (AMR) meter installation programme	2021 - 2026	Strategic Property	Assessment to begin 2021.

Initiative 3: 100% Renewable Energy			
Procure 100% renewable electricity and gas			
Cost	tbc (dependent on green tariffs offered at time of energy contract renewal)		
Carbon Savings (tCO₂)	Up to 6,273		
Reduction of LBB's Total Carbon Emissions (%)	Up to 95%		
Action	Timescale	Action Owner	Progress to Date
Quantify additional costs for switching to 100% renewable energy.	2020	Strategic Property	Energy procurement tender currently underway, which will identify any additional costs.
Review green energy options for both gas and electricity when the existing energy contract nears expiry.	2020	Strategic Property / Carbon Management	Green energy options being considered as part of energy procurement tender

Initiative 4: Council Fleet Electrification			
Switch to an electric fleet			
Cost	tbc (varying costs for leased and LBB-owned vehicles)		
Carbon Savings (tCO₂)	Up to 32% (dependent on electricity supply source and electricity transmission and distribution emissions)		
Reduction of LBB's Total Carbon Emissions (%)	< 1%		
Action	Timescale	Action Owner	Progress to Date
Install electricity charge points at the main depot	2021 - 2023	Strategic Property	Included in the Council's capital works programme.
Switch to a 100% electric fleet	2020 - 2029	Transport Operations	The Council continues to assess electric vehicle options as and when existing fleet vehicles are either decommissioned or lease agreements renewed.

Initiative 5: Solar Farms			
Develop solar farm options			
Cost	c. £1.3m per 2MW (10 acre site)		
Carbon Savings (tCO₂)	600 (2MW site)		
Reduction of LBB's Total Carbon Emissions (%)	10% for smallest (10 acre) sized site		
Action	Timescale	Action Owner	Progress to Date
Compile a short list of the most suitable LBB-owned sites	2020	Carbon Management	High-level desk-top study completed - five key sites offering the greatest potential identified.
Commission a technical/commercial feasibility study	2020	Carbon Management	Consultant appointed to conduct feasibility study in Oct/Nov 2020.
Develop a detailed business case for any sites considered technically and commercially viable.	2021	Carbon Management	To be actioned in 2021
Public engagement.	2021 - 2022	Carbon Management	To be actioned in 2021/2022
Develop and submit planning applications where appropriate	2021 - 2022	Carbon Management	To be actioned in 2021/2022

Initiative 6: Renewables Investment			
Assess investment opportunities in offshore/onshore wind and solar installations			
Cost	tbc (as and when opportunities present themselves)		
Carbon Savings (tCO₂)	tbc (dependent on investment scheme)		
Reduction of LBB's Total Carbon Emissions (%)	tbc		
Action	Timescale	Action Owner	Progress to Date
Explore commercial renewable investment opportunities as and when they materialise	2020 - 2029	Carbon Management	Ongoing
Explore joint partnership opportunities with other Councils	2020 - 2029	Carbon Management	Ongoing

Initiative 7: Woodlands, Parks & Greenspaces			
Additional tree planting and development of green infrastructure			
Cost	tbc		
Carbon Savings (tCO₂)	50 (based on 1,020 new whips being planted in 2021)		
Reduction of LBB's Total Carbon Emissions (%)	<1% by 2029		
Action	Timescale	Action Owner	Progress to Date
Produce a new Tree Management Strategy	2020 - 2021	Arboriculture	Currently being written.
Consider offsetting opportunities under the government approved Woodland Carbon Code.	2021 - 2022	Carbon Management / Arboriculture	To be actioned in 2021
Quantify/compare carbon sequestration levels for native trees, grasslands, wild meadows, hedgerows, verges.	2021	Carbon Management / Arboriculture	Initial discussions commenced in 2020.
Conduct feasibility assessments for shortlisted LBB-owned sites deemed suitable	2021 - 2022	Carbon Management / Arboriculture / Parks & Greenspaces	5 priority sites identified - to be further assessed.
Deliver suitable projects in a cost-efficient manner, maximising grant funding opportunities	2021 - 2029	Carbon Management / Arboriculture / Parks & Greenspaces	Potential grant funded schemes/opportunities identified in 2020.

Initiative 8: Certified Carbon Offsets			
Purchase certified carbon offset credits (UK-based projects) as a last resort option			
Cost	From £12/tCO ₂ upwards		
Carbon Savings (tCO₂)	Dependent on residual emissions		
Reduction of LBB's Total Carbon Emissions (%)	Dependent on residual emissions		
Action	Timescale	Action Owner	Progress to Date
Research suitable UK-based carbon offset projects.	2024 - 2029	Carbon Management	To be actioned in 2024
Purchase offset credits in an honest and transparent way	2025 - 2029	Carbon Management	To be actioned between 2025 - 2029

