ROYAL borough of GREENWICH

Third Year Emissions Report

CARBON NEUTRAL PLAN

Section 1: Purpose and Background: Carbon Neutral Plan Third Year Emissions Report

Purpose

The Royal Borough Greenwich (RBG) Carbon Neutral Plan (CNP) outlines the Council's and Borough's path to become carbon neutral by 2030, in line with the scientific target necessary to limit global temperature rise to 1.50C. Actions outlined in the CNP are how residents and stakeholders can hold the Council's progress in achieving carbon neutrality to account, whilst also providing an update to climate action in key sectors. Climate action requires concerted effort at all levels: individuals, communities, organisations, national government and international organisations and the CNP therefore serves as a basis to bring all types of stakeholders together.

Background – CNP Development

In November 2019 Element Energy, on behalf of the Council, produced an Evidence Base to support the development of a pathway to carbon neutrality by 2030, which in turn led to the development of the CNP. The Evidence Base set out three pathways of varying ambition, of which the Maximum Ambition pathway is followed by the Council.

A consultation on the draft CNP was held in 2021 by hosting online events with residents, selected businesses and other organisations, to gather feedback, comments and suggestions to shape the climate agenda. In the interests of strategy alignment and the opportunities for knowledge sharing and lessons learnt, RBG has set out its climate priorities through seven climate themes which mirror the strategic work being undertaken at a pan London level, whilst also considering the views of the borough's residents.

Background – Climate Themes

The seven climate themes are listed in table 1 below. The climate action plan and subsequent progress in reducing our operational emissions and the borough's emissions is assessed through these key themes. Many themes overlap as they are complementary in their objectives – this makes the CNP more efficient in its delivery but also ensures a holistic approach is taken when implementing climate specific initiatives.

RBG Climate Theme	Theme Descriptor
1. Buildings	Retrofitting existing buildings to consume less energy, save carbon and money
2. New Development	Ensure newly constructed buildings are low carbon and are of quality environmental and social design
3. Transport	Reduce transport emissions
4. Energy Supply	Renewable energy generation and consumption
5. The Circular Economy	Reduce waste sent to landfill and reduce consumption of natural resources
6. The Natural Environment	Natural and regenerative solutions to climatic stresses, preserving our beautiful green spaces
7. Empowering Wider Change	Develop partnerships and empowering our communities to develop new projects, initiatives and actions that reduce carbon emissions

Table 1

Section 5 will assess the progress of each climate theme, covering both Operational and Borough emissions, and will be structured as follows:

- Theme Headline: key summary information on the theme's aims.
- Progress: Operational and Borough achievements through theme delivery
- Our Key Asks of Others: areas for further action, requirements from public and government.

Background – Programme Delivery

The second climate action plan was adopted by Full Council in February 2024 and outlines overarching strategic objectives up to 2030. This sets a long-term strategic view where the Council knows that continuous action is required in these emissions sectors year-on-year. These strategic objectives are further broken down as interim actions for delivery up to 2025, enabling a focus around specific project mobilisation that enables these longer-term objectives. Where possible we will always report on emissions saved (actual or estimated).

This document is the third annual emissions monitoring report since the CNP was adopted in 2021. Each iteration seeks feedback from the previous year's reports so that accessibility and understanding is improved. Changes from the previous second year report are minor and are mainly concerned with improving data visualisation. Changes are explicitly stated. This report serves to update stakeholders on the climate themes' progress (and the associated emissions) and therefore does not take a systematic review of the CNP by assessing each action. Progress against each action is outlined in the updated climate action plan.

The next full review of the CNP is therefore expected to be published in winter 2026, once these interim actions have been completed and analysis undertaken. The Council will continue to publish its emissions reports in the interim years prior to this review. The CNP programme overview is summarised in Figure 1. below.

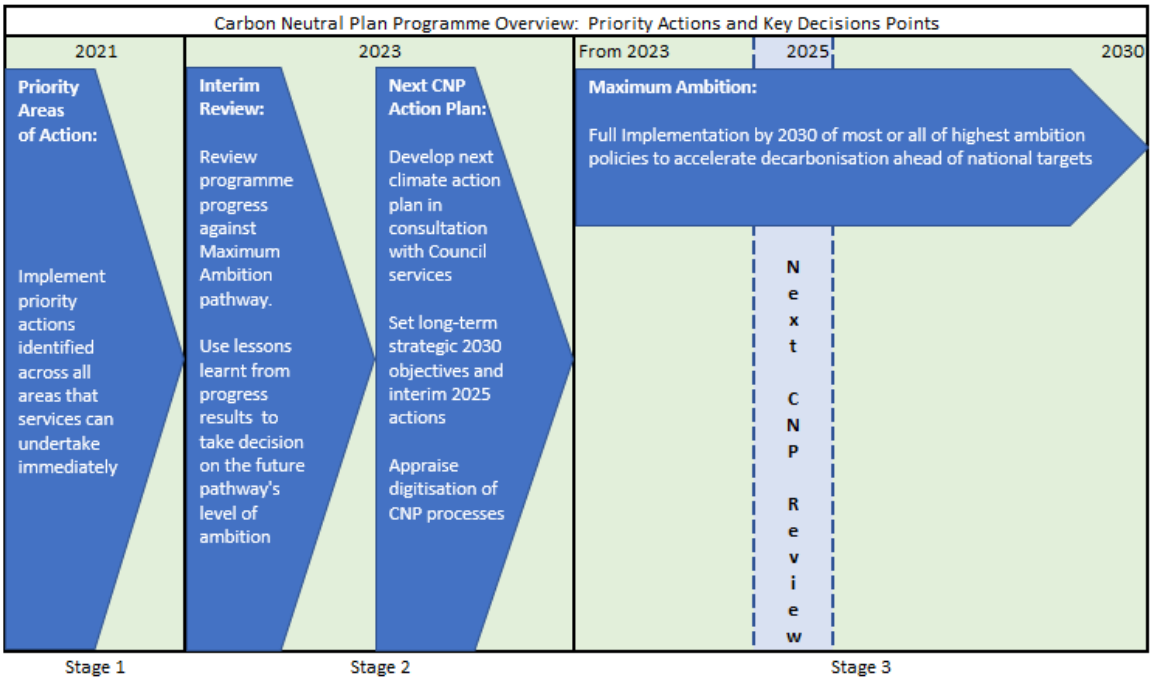

Figure 1

Section 2: Methodology and Reporting Periods

The Greenhouse Gas Protocol (GHG Protocol) provides a standard methodology for businesses and cities to report their emissions. This approach categorises emissions into "Scope 1" (emissions released on-site from energy use, usually gas or transport fuel) "Scope 2" (emissions released off-site from energy use, typically from generating electricity) and "Scope 3" (indirect emissions from everything else an organisation uses, purchases or sells).

This methodological approach to borough emissions is summarised in Figure 2.

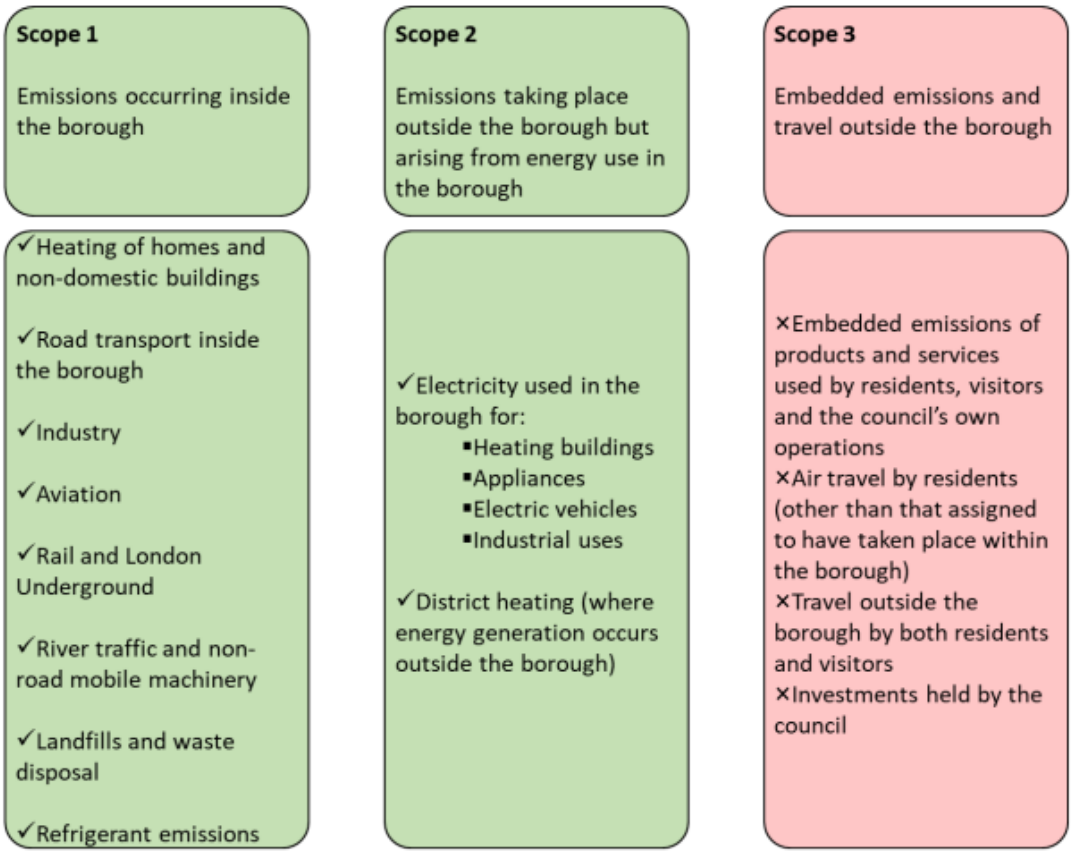

Figure 2

Datasets for borough emissions have only been released for the calendar year 2022. This is an industry standard as the London Emissions Greenhouse Gas Inventory (LEGGI) typically release the data up to 24 months *after* the reporting year-end (as it takes time to verify the changes in emissions levels). Furthermore, the basis on which the data is compiled has changed as information capture techniques have improved. This means previous years' data must be recast and, therefore, **previous years' reports cannot be directly compared with this report, figures are instead updated to reflect the most recent datasets which supersede all previous versions.**

For the Council's operational emissions, we review the actions agreed and undertaken for the period of 2023/24 and provide an assessment of the progress made. This uses the most up to date data we have recorded. Although not technically considered a part of the Council's operational emissions; we have included Council-owned homes and its maintained schools as sectors in which we can lever influence over. This goes beyond our reporting requirements but demonstrates our commitment to reducing emissions in all areas that we possibly can. These areas are covered in further detail in table 3 below.

Consequently, there is a discrepancy in the reporting periods between operational emissions and the borough emissions of this report: our operational emissions activities are recorded for the financial year 2023-2024; and the borough emissions for 2022 calendar year. We contextualise the progress of these emissions by providing data from previous reporting periods.

Considering the feedback provided from the previous reporting exercise, we have now set the baseline year at 2019 (2019/20 for operational emissions) due to a more complete data inventory compared to the original 2015 period. This reporting approach is summarised in the table 2 below.

Reporting Periods	Operational Emissions	Borough Emissions	Comments
Historic Reporting periods	FY 2019/20	Calendar Yr. 2019	Previous emissions reports used a 2015 baseline. This has been supplanted with the 2019 reporting periods due to better and more complete data inventory.
1st Year Report	FY 2021/22	Calendar Yr. 2020	Previous Emissions Reports
2nd Year Report	FY 2022/23	Calendar Yr. 2021	
3rd Year Report	**FY 2023/24**	**Calendar Yr. 2022**	The 18-24 month lag in borough data cannot be avoided. Where relevant, we have made it explicit that reporting activity in the borough is not comparable to similar activities reported within the operational emissions section.

Table 2

Section 3: Summary of Achievements to Date

Summary of achievements

- Operational emissions reduced by 2.2%, a 29% decrease compared to the 2019/20 baseline
- Borough emissions reduced by 2%
- Achieved lowest per capita borough emissions on record (2.4 tco2e)
- Greenwich has the 10th lowest per capita emissions of all London boroughs
- Investment in Council maintained buildings, retrofitting 39 sites and saving 1,717 tco2e per annum (to date).
- Investment into Council owned homes: £20m retrofitting programme over 600 properties
- Successful PSDS 3c funding: approximately £1.7m secured in to retrofit our maintained schools - achieving 147 tco2e savings per annum
- Achieved over 50% of target to plant 5000 trees by 2026

- Phase 2 (2022-2026) of the Greenwich Builds programme is underway, with potential delivery of up to 1000 new zero carbon homes.
- Successfully launched the Greenwich Green Investment scheme – aiming to raise £1m in community fund raising for low carbon development across the borough
- Successfully completed Phase I of the Local Area Energy Plan – Subregional Report
- Tonnes of waste per household has dropped by 9%
- Landfill emissions are down by 162%
- Emission based parking costs have been implemented across CPZs
- The Repairs and Investment team delivered energy efficiency measures to over 1000 households, with an estimated 406 tco2e saved per annum.
- The Woolwich Library of Things has mitigated 7.2 tco2e and saved residents approx. £47,143 in new item purchases.

Summary of Operational Emissions

The first-year review (undertaken in 2022) provided a solid foundation of RBG's operational emissions and improved on the original emissions baseline through the inclusion of better data. Recorded data has been collected from the services and subsequently calculated into carbon emissions. Where scope 3 data was available, it was included to reflect our ability to influence these emissions – such as T&D losses. Better data scrutiny and the onboarding of additional, outside of scope, emissions demonstrates we are committed to improving our monitoring, reporting and mitigation of the emissions sectors within our ability to lever influence.

RBG's operational emissions are summarised in table 3 and figures 3 and 4 below. As stated above, we provide the emissions from the previous reporting periods to contextualise the progress made in our second year. Stakeholder feedback regarding the second year annual emissions report was that table 3, depicting RBG's operational emissions progress, could be simplified for ease of reading. Several changes have therefore been implemented to accommodate for this including:

- Fleet and Plant Machinery have been combined.
- 2019/20 has been set as the earliest reporting year due to 2016/17 baseline year having incomplete data.
- Year 1 (2021/22) has been removed to present the data more concisely – readers can still visit these figures in previous emissions reports.
- Office paper use has been removed due to negligible carbon figures.
- We have included staff commuting carbon estimates for the first time.

Over 2023/24, our operational emissions decreased by 2.2% (0.5 ktco2e) compared to the previous reporting period (2022/23). **Our current 22.5 ktco2e operational emissions are 9.2 ktco2e (29%) lower than 2019/20**, which is the first reporting year with full data and, for practical purposes, can be considered the proper CNP baseline. It should be noted that an additional 0.3 ktco2e of staff commuting emissions have been newly added to this analysis. If one were to exclude these emissions, RBG would have achieved a 3% decrease (0.8 ktco2e) reduction against the previous reporting period.

Figures 3 and 4 show our operational emissions trajectories: it provides a forecast based on our previous reduction rate (Current Trajectory) and forecasts the emissions reduction required to reach to zero emissions (Required Trajectory). These trajectories are provided for both operational emissions that include and exclude our Council owned housing stock. In all cases, the trajectories are for illustrative purposes to contextualise the scale of mitigation by 2030. In reality, emissions may go up before they go down. For example, construction emissions associated with the installation of renewable systems may result in an overall increase short term only to drop in subsequent years as emissions are offset due to onsite generation.

	CNP Operational Emissions Progress						
	Previous Reporting Periods (ktco2e)		Current Reporting Period (ktco2e)				
	2019/20 (Year 0*)	2022/23 (Year 2)	2023/24 (Year 3)	Annual Change	Annual Percentage Change	% Of Total Emissions	% Against Baseline
Corporate	8.4	5.8	5.8	-0.02	-0.3%	26%	-32%
Temporary Accomodation	8.5	7.3	7.2	-0.13	-2%	32%	-15%
Schools	6.7	5.7	5.2	-0.46	-8%	23%	-22%
Unmetered Supply (Street lighting etc.)	4	1.1	1.1	-0.06	-5%	5%	-73%
Fleet & Plant Machinery	3.5	2.42	2.4	-0.04	-2%	11%	-32%
Commuting			0.3			1%	
Transmission and Distribution Losses	0.6	0.6	0.6	-0.01	-1%	3%	-5%
Total (tCO_2e/yr) excl. Council Owned Homes	32	23	22.5	-0.5	-2.2%	100%	-29%
Council Owned Homes	64	61	61	-0.4	-0.7%	73%	-5%
Total (tCO_2e/yr) incl. Council Owned Homes	96	84.4	83.5	-0.9	-1%	100.0%	-13%

* First full year of baseline reporting data

Table 3

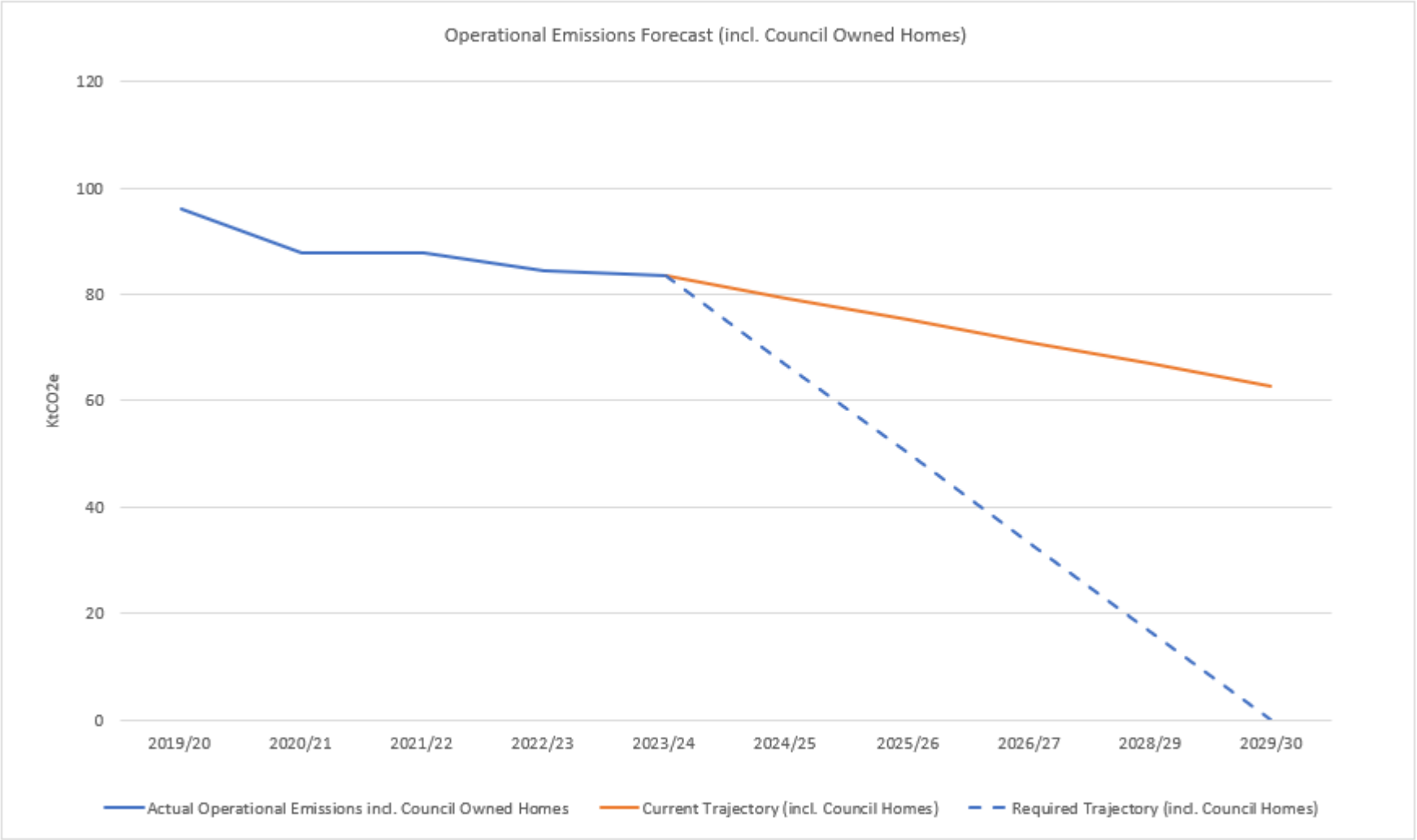
Operational Emissions Forecast (incl. Council Owned Homes)
120
100
80
60
40
20
0
KtCO2e
2019/20
2020/21
2021/22
2022/23
2023/24
2024/25
2025/26
2026/27
2028/29
2029/30
Actual Operational Emissions incl. Council Owned Homes
Current Trajectory (incl. Council Homes)
Required Trajectory (ind. Council Homes)

Figure 3

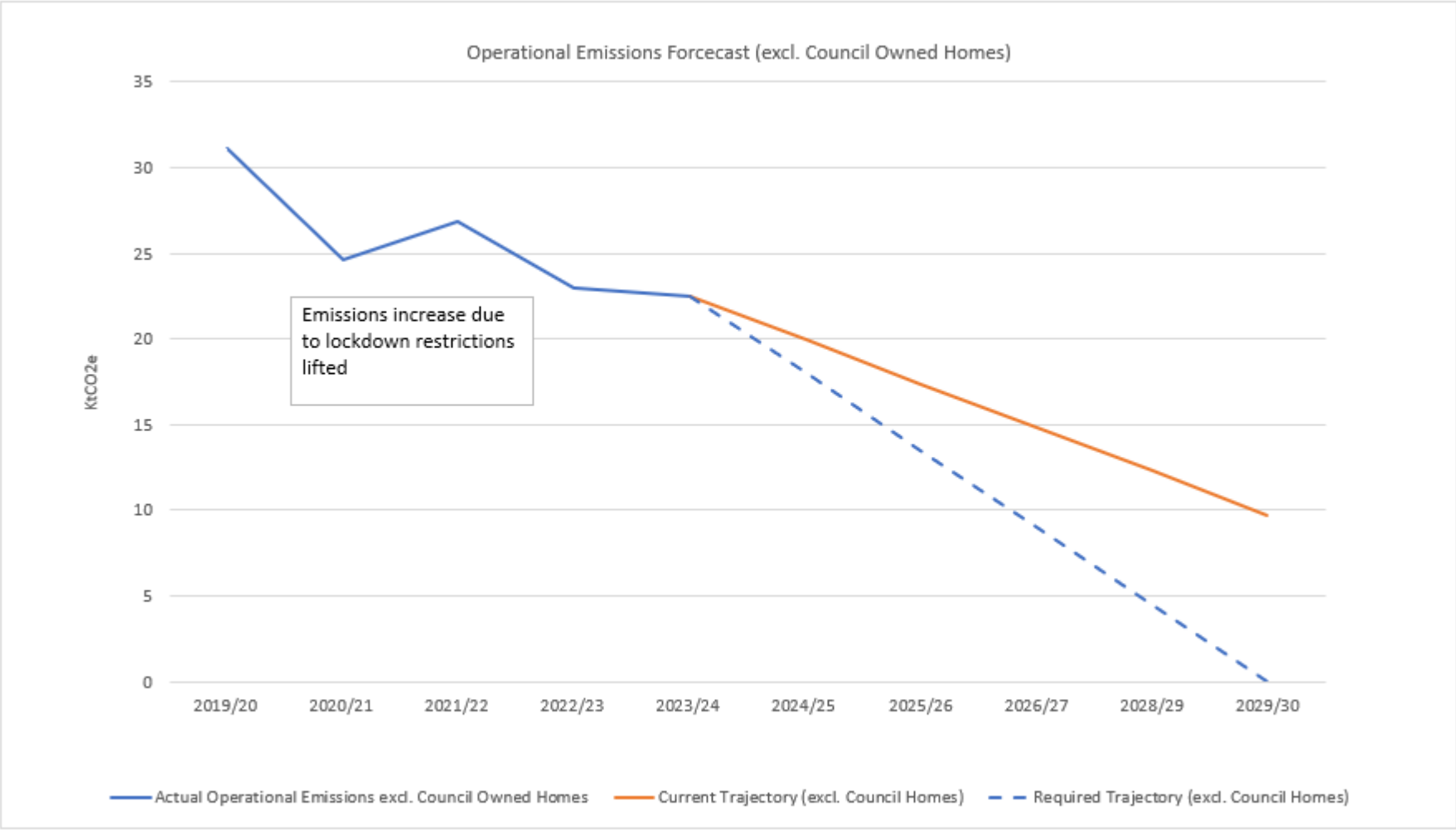
Operational Emissions Forecast (excl. Council Owned Homes)
35
30
25
20
15
10
5
0
KtCO2e
Emissions increase due to lockdown restrictions lifted
2019/20
2020/21
2021/22
2022/23
2023/24
2024/25
2025/26
2026/27
2028/29
2029/30
Actual Operational Emissions excl. Council Owned Homes
Current Trajectory (excl. Council Homes)
Required Trajectory (excl. Council Homes)

Figure 4

Summary of Borough Emissions

Table 4 and Figure 5 show the borough emissions by sector. Overall. there was a modest 2% decrease in total borough emissions in 2022. Homes continue to make up the largest emissions sector (36%) across the borough and it is encouraging to see domestic sector emissions fall by 8% on the previous year, making Greenwich one of the better performers out of the London Boroughs. Transport emissions make up 32% of Greenwich's emissions, the second highest sector. For all London Boroughs, transport emissions rose by 3-8%, meaning Greenwich's 4% increase was at the comparatively lower end of such rises. Workplaces closely followed transport with 31% of total borough emissions, a modest 2% drop, this is primarily attributed to warmer temperatures in 2022 resulting in less energy being used to heat buildings. It may have also been affected by higher energy prices, particularly towards the end of the year as companies sought to mitigate increased operational costs by reducing consumption.

	2019	**1st Year - 2020**	**2nd Year - 2021**	**3rd Year - 2022**		
	ktCO2e	ktCO2e	ktCO2e	ktCO2e	% of total	% change
Homes	300	308	278	258	36%	-8%
Workplaces	233	218	226	222	31%	-2%
Transport	257	210	220	230	32%	4%
Total	**790**	**736**	**725**	**709**	**100%**	**-2%**

Table 4 – Figures have been rounded.

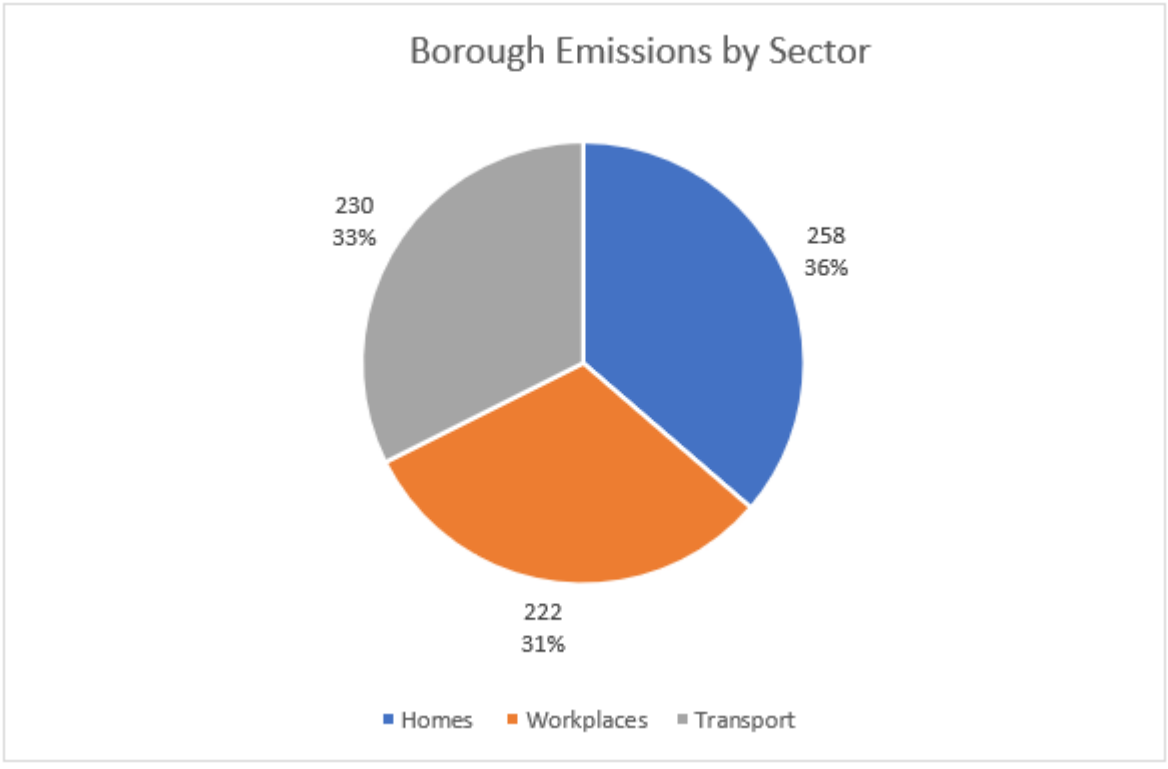

Figure 5

Figure 6 shows the estimated borough emissions trajectories based on the borough's current and historic progress. This trajectory is compared to the emissions pathways outlined in the Evidence Base (2030 Baseline and the Maximum Ambition Scenarios). The borough is therefore on track to outperform the Baseline Scenario but currently falls short of the Maximum Ambition Scenario. We are therefore mindful that whilst we continue to make progress, we are dependent upon the national policy such as the acceleration of grid decarbonisation and further government funding for retrofit schemes if we are to meet our targets. Readers should also note that the emissions decrease from 2019-2020 and the subsequent increase from 2019-2020 are not considered "business as usual" years and it will require further annual reporting to fully assess the performance due to such Covid-19 impacts, including any rebound effects.

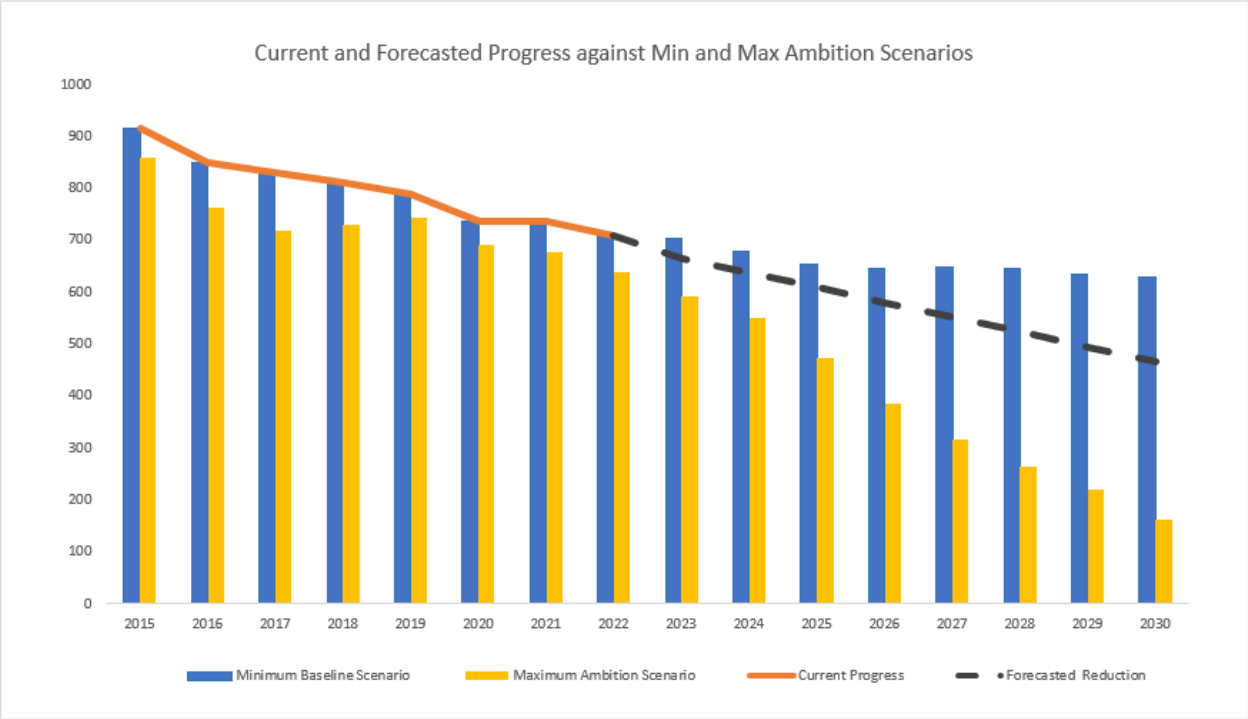

Figure 6

The population also grew by approximately 1200 households between 2021 and 2022 (1% increase) meaning total borough emissions figures are not fully illustrative of the borough's performance. It is therefore better to show progress on an emissions per capita basis, which is summarised in Figure 7. Comparatively, Figure 8 shows Greenwich ranks 10th of all London boroughs on a per capita basis. To date, emissions reductions in London have largely been driven by decarbonisation of the national grid, increased efficiency of gas boilers and a shift away from heavy industry towards service sectors. Per person, London's emissions were 3.3 tCO2e/person in 2022, which is the joint lowest on record for London, tied with the 2020 pandemic year. London's per capita emissions remain significantly lower than the UK average (5.5 tCO2e/person). This is largely thanks to high building occupancy rates and extensive use of public transport instead of private vehicles. At 2.4 tco2e/person, RBG has lower per capita emissions than the London average and significantly below the national average. When taking the *per capita* emissions metric, RBG has achieved its lowest levels on record.

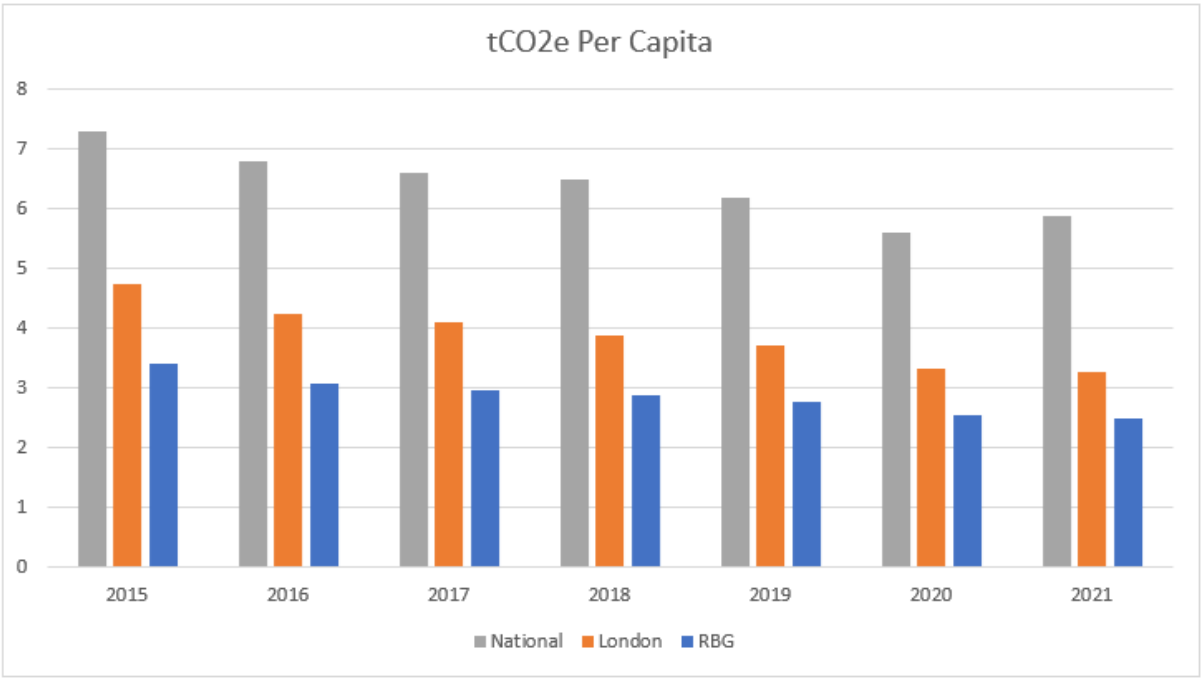

Figure 7

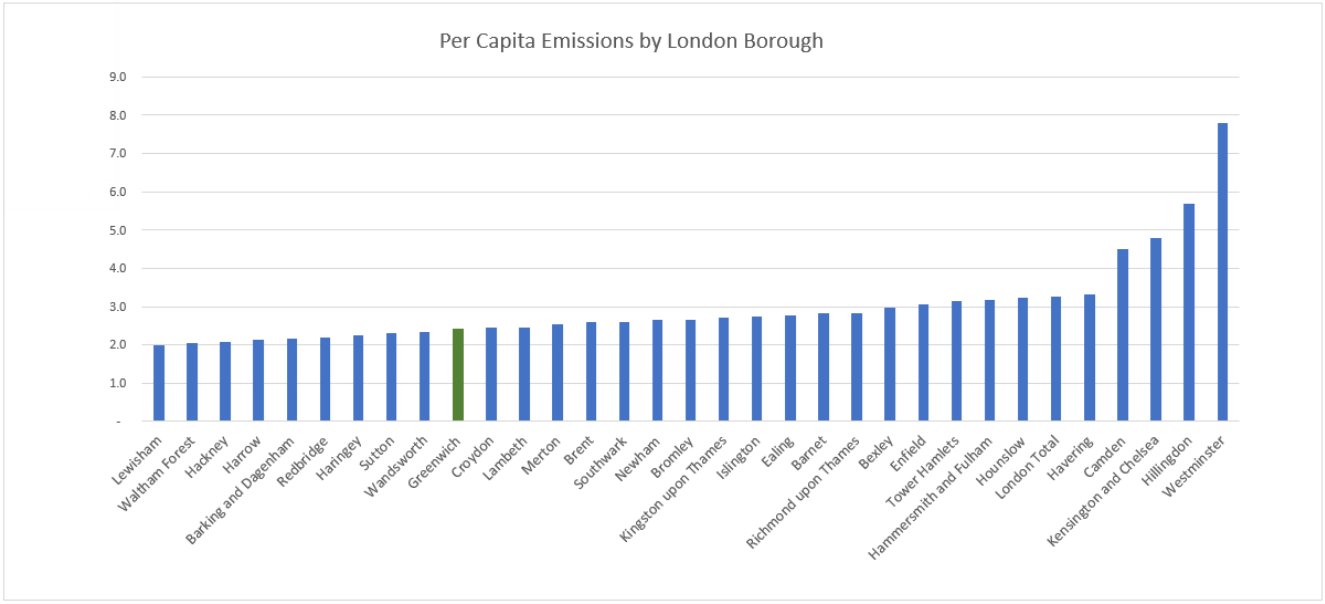

Figure 8

Section 4: Summary of Challenges

There are a number of external historic, current and anticipated challenges which have and will continue to impact the delivery of the CNP's objectives.

1. Policy

Global

Nearly half of the world's electricity is set to be powered by renewable energy by 2030, adding the equivalent power capacity of China, the European Union, India and the US combined amount to approximately 5,500 gigawatts (GW). In terms of technologies, solar PV alone is forecast to account for a 80% of the growth in global renewable capacity between now and 2030. And despite ongoing challenges, the wind sector is also poised for a recovery, with the rate of expansion doubling between 2024 and 2030, compared with the period between 2017 and 2023. However, this considerable progress is still set miss a goal set last December by the UN of tripling global renewable capacity by the end of the decade[1], meaning much more is required from the global community.

National

The UK has committed to reach a 68% reduction in emissions by 2030 (relative to 1990 levels) and to reach a legally binding target of net zero emissions by 2050. The UK has set interim 'carbon budgets' which cap the emissions within different carbon budgetary periods. The current fourth carbon budget requires a 52% reduction in emissions by 2027. The UK is set to over achieve the 4th carbon budget but there are some doubts about its ability to meet future budgets as targets become more demanding. *The Carbon Budget Delivery Plan* was subject to legal challenge , due to its reliance on unproven and high-risk technological fixes. In February 2024, the High Court ruled that the government is required to publish a revised and legally compliant plan by Winter 2024. Prior to the 2024 general election, the Conservative administration rolled back on several policy commitments including: moving back the proposed ban on the sale of new vehicles by five years, so all sales from 2035 will be zero emission; boilers and new coal heating for off-gas-grid homes from 2026 to 2035; and scrapping policies to force landlords to upgrade the energy efficiency of their properties.

After the general election the new Labour government announced several bills that are relevant to net zero, which included:

- Great British Energy Bill (to set up a publicly owned clean power company to accelerate investment in renewable energy)
- Crown Estate Bill (to remove restrictions and allow for easier investment in public infrastructure
- Sustainable Aviation Fuel (Revenue Support Mechanism) Bill (to support the production of this fuel).[2]

The government also announced it would pursue other policies that affect climate change mitigation and adaptation, including policies on home insulation, nature and biodiversity, land management, and the water sector. A Labour Party manifesto pledge was to decarbonise the electricity grid by 2030, which industry experts have signalled will be a significant challenge without increased funding. Progress against these commitments will be assessed in the next annual emissions report.

[1] Renewables 2024 – Analysis - IEA
[2] CBP-9888.pdf

Regional

The Mayor of London committed to bring forward London's net zero target from 2050 to 2030. Like most London's local authorities, we have followed suit. We were explicit in the CNP's consultation that a 2030 target represents a substantial increase in ambition relative to a 2050 target and will require action at a London-level in a timeframe that goes beyond that which is currently supported or funded at the national-level.

2. Supply Chain Disruption

The COVID-19 pandemic years witnessed substantial disruptions in global energy markets, with over 100 countries implementing lockdown measures by March 2020. China, hosting over 80% of the world's solar PV module manufacturing capacity and accounting for 58% of onshore wind turbine manufacturing, was the first to initiate lockdowns. In recent years, some countries and regions have sought to localize critical parts of the manufacturing processes, as evidenced by the EU's 2030 objective to produce at least 40% of key products domestically to decrease greenhouse gas emissions. While the pandemic presented an opportunity to translate the temporary emissions drop into longer-term progress, compounding impacts such as geopolitical tensions, "higher for longer" interest rates and other uncertainties have complicated the energy transition path[3].

Businesses around the globe are facing supply chain bottlenecks as economies continue to emerge and recover from lockdowns. However, the situation in the UK has worsened on account of Brexit, which has caused major supply chain disruptions. Over the recent months, there have been delayed deliveries, stock shortages, and increased prices. A quarter (26%) of medium and large firms have been affected by supply chain disruption due to Brexit and coronavirus, according to ONS figures. Almost one-third (30%) of businesses in manufacturing and wholesale and retail trade reported being impacted by global supply chain disruption. The solar panel market has been impacted from supply chain disruptions due to reduced manufacturing output, increased production costs, stock shortages and a post-covid shipping industry.

Recent geopolitical events, including the Russia-Ukraine war, Middle East conflicts and others, further solidify the need for local resilience, both in clean and conventional sources.

3. Energy Crisis

An energy crisis happens when there isn't enough supply to meet demand and it becomes more expensive to buy wholesale gas and coal. This can happen for a variety of reasons including wars, overconsumption, market manipulation, tax hikes, regulation of the energy sector, strikes, problems at the oil refineries and ageing infrastructure. The UK continues to suffer because of 'a perfect storm of market forces' that has hit the sector

- Working from home during the pandemic increased demand
- Natural gas and coal prices reached record highs due to global competition
- Extreme weather conditions have caused problems with supply
- Energy regulator Ofgem increased its price cap that limits what suppliers can charge
- Infrastructure of energy supply has required maintenance – further reducing delivery of supply
- Russia invaded Ukraine (they supply around 12% of the world's gas)

[3] 2.3 A Lookback on COVID-19 Impacts - Fostering Effective Energy Transition 2024 | World Economic Forum

Whilst expensive energy rates make cases for investment more attractive (due to shorter payback periods), the increases to our energy bills will severely impact our available capital to invest in the CNPs actions.

Unstable wholesale energy market, coupled with the UK's reliance on energy imports, makes it inevitable that energy bills will rise from current levels – with the cap being raised again in Autumn 2024, pushing the number of UK households in fuel poverty up to 6 million. This leaves households facing yet another winter with bills hundreds of pounds higher than pre-pandemic levels.[4]

Government assistance in dealing with price shocks can only go so far as it cannot overcome the effects of a volatile international energy market on bills. It is only by continuing our transition away from fossil fuels, towards secure and sustainable domestic energy sources, that we can reduce our exposure to such international drivers and, in turn, stabilise our energy prices.

4. Resource Implications and Access to funding

With a £30 million budgetary shortfall, RBG has had to make substantial financial savings this past year. Covid and the subsequent energy crisis has inevitably affected our ability to invest in carbon saving initiatives and the delivery of the CNP. There is currently not as much money available as was assumed at the CNP's conception – either from our own internal funding streams, GLA regional funding, or the from the impending closure of national grant funding. The government has stated that there will be no return to austerity but such implications will be revealed once the budget has been fully analysed.

Section 5: Progress by Climate Theme

Section 6 will assess the progress of each climate theme, covering both Operational and Borough emissions, and will be structured as follows:

- **Theme Headline:** key summary information on the theme's aims.
- **Progress:** Operational and Borough achievements through theme delivery
- **Our Key Asks of Others:** areas for further action, requirements from public and government.

Buildings

There are over 120,000 homes and over two million metres squared of non-domestic floor space in the borough. Heat and electricity used in buildings in the borough accounted for 66% of emissions in 2022. Emissions from homes alone were 36% of the borough's total. Reducing these emissions will involve a combination of:

- making buildings more energy efficient
- replacing fossil fuel heating systems with low carbon alternatives
- deployment of renewable energy and district heat networks
- behavioural change – operating our buildings more efficiently

Operational

Council owned homes constitute 9% of the borough's emissions but are assessed as part of RBG's emissions given our maintenance responsibilities, accounting for 73% of operational emissions when included. Through the Social Housing Decarbonisation Scheme (SHDF), the Council is investing over

[4] Cornwall Insight release price cap forecasts for 2024 - Cornwall Insight (cornwall-insight.com)

£20m to improve over 600 homes. In 2023/24 the Repairs and Investment team delivered a Housing Capital Programme totalling £48.4m, against a £45.1m Annual Spend Requirement, carrying out much needed and overdue works benefitting 12,135 homes. These projects were delivered despite a challenging year, with Contractors still suffering from an industry wide supply problem and general economic difficulties. 481 homes benefitted from more efficient A-rated boiler replacements, 267 had their windows replaced and 110 benefitted from improved communal heating services. The estimated annual carbon savings achieved is 406 tco2e.

Temporary accommodation now accounts for 32% (7.2 ktco2e) of RBG's operational emissions, a decrease of 130 tco2e on the previous year. This is the largest source of our operational emissions when excluding council owned homes. The domestic sector is therefore a clear area of priority given the co-benefits (health, financial) of reduced energy bills for vulnerable residents in temporary accommodation.

RBG successfully applied to the Public Sector Decarbonisation Scheme (PSDS) Phase 3c to provide the capital to improve its maintained schools. Schools account for 5.2 ktco2e (23%) of RBG's emissions, a 460 tco2e (8.2%) decrease on the previous year, the largest area of reduction in operational emissions. The PSDS grant, totalling £0.9m, covers a range of decarbonisation measures, such as air source heat pumps (ASHPs), photovoltaic panels (PV), LED lighting upgrades and valve/pipe insulation.

Corporate property stock accounts for 5.8 ktco2e (25.6%) of RBG's operational emissions a 0.4% decrease from the previous year. It should be noted that despite this modest decrease, a 11% decrease was achieved the previous year and some efficiency projects have yet to finalise and come online. For example, RBG was successful in securing £5.7m PSDS Phase 3c grant funding, retrofitting 4 sites and amounting to 818tco2e/yr savings. It is therefore expected that next year's report will evidence a larger decrease.

Borough

The largest share of emissions in the borough by sector is homes (36%) and we estimate that some 14,285 (12%) households in the borough experience fuel poverty. It is broadly accepted that retrofitting existing housing stock is set to be the costliest of the climate measures and is also high risk in deliverability. RBG facilitated the Local Authority Delivery Scheme – which supported over 150 properties with substantial energy efficiency upgrades such as cavity & external wall insulation, solar PV, air source heat pumps, averaging about £10,000 of investment per low-income household.

Our fuel poverty outreach service supported 306 low-income households with a total estimated saving of was 125 tco2e. This included 118 tco2e of savings from energy efficiency measures, 24 tco2e from behavioural change advice and 37 tcxo2e from new boiler installations.

Industry and commercial CO2 emissions are responsible for approximately 31% of the borough's carbon footprint and had increased in 2021 due to the re-opening of the economy after lockdown. This has now dropped by a modest 2% and is below the 2019, pre-pandemic, baseline. We estimate 2,299 jobs that could be created per annum from a household net-zero retrofitting programme up to 2030.

Our Key Asks of Others

Recent backsliding on national policy has resulted in lost progress – this includes the delay in ban to gas boilers in the domestic sector and the energy performance requirements in the private rented domestic sector. We therefore call upon the Government to do more in funding schemes such as the

PSDS (which now require Councils to match fund - posing further barriers to decarbonisation) whilst also providing stable, long-term policy that is aligned with climate science.

New Development

Low-carbon development is a holistic approach to design and construction that comprises evolving, energy-efficient, and environmentally friendly practices used to build a better future. An additional 30,000 homes are expected in the borough by 2030, with the potential to add significant new carbon emissions if the strictest emissions standards are not applied. Reducing emissions from new buildings through better design is generally a cost-effective opportunity since any new builds not built to a zero-carbon standard will ultimately require more costly retrofitted measures in the future.

Operational

Since 2018 the Council was again able to build council homes – known as "Greenwich Builds". The initial programme (2018-2022) is on course to deliver around 790 new homes – most of which are zero carbon and all with achievements of upwards of 90% above the Part L baseline. Phase 2 (2022-2026) is also underway with the first 16 sites having been designed and submitted for planning approval with a further 12 sites in feasibility stage. This second phase will deliver around 1000 new homes. It should be noted that due to build cost inflation and the complexity of some of these sites there are ongoing viability challenges. The Council is continuing to develop the Supplementary Planning Document (SPD) which will provide additional guidance to the local plan – and will seek to align with the Council's waste, transport and carbon policies to ensure a holistic, sustainable approach is taken by developers.

Borough

We have improved the emissions data capture through our planning processes. The total recorded operational carbon prevented due to local planning policy criteria is approximately 31 ktco2e over the developments' 30-year lifespan. These emissions are likely to be higher and we are working to record and monitor the planning data all in one place. These emissions are based upon the secured offset payments received.

Our Key Asks of Others

The Council is currently drafting its new Local Plan, which will set out its vision for development over Royal Greenwich up to 2036. It will provide a succinct and up-to-date framework for addressing the borough's housing needs and other economic, social and environmental priorities. It will also give local people a platform to shape their surroundings. The preparation of the new Local Plan will include several stages of drafting and consultation, with previous consultations held in 2023 and Summer 2024 to inform the first draft. It is intended to consult on the first draft of the local plan next year 2025 - asking residents, businesses, community groups and developers for feedback. The Plan is expected to be submitted for examination in public in late 2026.

Transport

We're committed to delivering a world-class transport network, one which enables our residents, businesses and visitors to make the most of all the opportunities offered throughout Royal Greenwich, London and the wider region. Our transport system will be one that our residents and communities can be proud of, providing the safe, reliable and future-ready connections needed for living, learning, working and playing. It will be easy for everyone to walk, cycle or to use public

transport, helping us all to be healthier, tackle our carbon emissions and manage congestion on our roads.

Operational

Our fleet emissions are down by 5% (0.12 ktco2e) on the previous year to 2.2 ktCO2e which includes the emissions arising from the 30 EVs in the Council's fleet and our wholly owned contractor's fleet. The operational emissions summary table combines fleet emissions with fuel used by the parks operators (plant machinery) as emissions were negligible in that area. This currently makes up 11% of our operational emissions. We still report progress around parks machinery in the Natural Environment theme. When combining total fuel used across all services, a 2% reduction is achieved overall. This reduction is in part attributed to a less carbon intensive diesel fuel blend. With the electric charging infrastructure at Birchmere Depot already operating at capacity, the transition to an entire EV fleet will require a significant upgrade to the electrical infrastructure presenting an opportunity to also electrify the heating systems at the Birchmere premises. The council is committed to achieving 100% zero tailpipe emission fleet by 2030 and is still on target to achieving this goal, with colleagues from across the Council involved in a project to drive this key work forward.

Although technically outside of the scope of our operational emissions, through the 2024 staff survey, we have estimated staff commuting emissions at 0.3 ktco2e and included this as part of our operational emissions. The logic behind this is that the entire workforce has a role in delivering the CNP and travel choices can be influenced by positive staff behavioural change. This represents a first for RBG in calculating these emissions.

Borough

Transport emissions are the second largest category of emissions (31%) behind Homes. Our borough wide Transport covers issues such as street safety and accessibility; encouraging low/zero carbon and healthier travel alternatives; improved borough connectivity and cleaner air. The Transport Strategy provides a medium to long-term approach to meeting the Borough's transport vision. We will require further emissions data to measure the success of these strategies. We are investing £3.1 million to improve our transport network. The funding, including £1 million of the Council's own budget and £2.1 million from Transport for London (TfL), will continue to support the delivery of a number of key transport priorities over the next year, identified in the Council's new Transport Strategy, including:

- Emissions based parking charges has been implemented with multiple paid for parking schemes have been put in place. Data gathering for improved insights will be finalised by the next annual report.
- Collaborating with TfL to analyse traffic data and promote mode shift from car to active travel and public transport for work commuting. Engagement with local businesses in Greenwich to identify opportunities for sustainable delivery interventions.
- An additional 200 charge points (annual target) will be installed by March 2025 as well introducing our collaborated Low Emission Vehicle Infrastructure Funding bid and joint procurement consisting of an electric vehicle infrastructure bid with Lewisham Council
- improvements to pedestrian and cycle infrastructure to encourage people to walk, cycle and wheel more; concentrating on Strategic Cycle Routes
- tackling traffic and improving air quality by introducing traffic management schemes in neighbourhoods where residents have reported serious congestion and safety problems;

- introducing 20mph speed limits, Parking Controls and School Streets in priority areas as part of Sustainable Streets programme;
- delivering free cycle training and a 'try before you bike' scheme, run with Peddle My Wheels.

Our Key Asks of Others

Support from the District Network Operator (DNO) will remain essential in upgrading the Birchmere Depot for further fleet electrification. Much of our work around delivering safe and sustainable transport is TfL funded. Several projects were placed on hold throughout the Covid-19 pandemic due to the loss of revenue experienced by TfL but additional funding to RBG has returned. Our efforts around decarbonising transport emissions are therefore dependent on a mixture of national and regional policies: petrol and diesel ban of new car sales and TfL funding respectively.

Energy Supply

The Labour government's 2024 General Election manifesto pledged to decarbonise the national electricity grid by 2030. There has yet to be a major announcement reading how this might be achieved and industry experts have stated that this is unlikely with current funding regimes. However, it does, for the first time, align with our own 2030 policy target and this is encouraging news if such a national ambition can be achieved. While changes to the national electricity grid ultimately rely on national policy, action can be taken locally to roll out decentralised, sustainable energy, and to develop smart approaches.

Operational

All progress in the energy supply theme is assessed through the Borough analysis as we continue to drive work through the focus of local energy generation and supply to the borough – of which our corporate estate will benefit from. On-site generation to existing buildings is covered in retrofit schemes highlighted in the Buildings theme.

Borough

Energy demand reductions are generally the most cost-effective way to reduce carbon emissions with less systemic or behavioural change required. However, supply is essential to ensure that what is consumed is sourced from low/zero carbon sources. The Council is committed to exploring the development of decentralised heat network(s) related to areas of high potential. This includes appraising the opportunity for an overall transmission main from the east of the Borough to the existing areas of high demand. The Council has secured funding to further develop the technical, financial, commercial, and legal aspects of the district heat network opportunity and intends to develop an outline business case to generate interest in the market by Summer 2025.

We have also collaborated with the GLA to develop a Subregional Local Area Energy Plan (LAEP). The programme aims to take a whole system, place-based approach to energy planning, to define optimised pathways and delivery plans for decarbonisation across London. The report covered the 'South' subregion which includes 8 boroughs: Kingston, Merton, Sutton, Croydon, Lambeth, Southwark, Lewisham and Greenwich. The report focused on a data driven approach, using the Mayor's Accelerated Green' decarbonisation pathway to identify the impacts on London's energy systems at various scales of a transition to net-zero carbon emissions. A particular focus was placed

on integrating heat network zoning into local area energy plans and to identify opportunities for cross-boundary and cross-sectoral working to accelerate progress and make best use of resources.

RBG will now explore the costs of taking the subregional report and cascading down to a Greenwich (borough specific) LAEP, the findings of which will assist in the post 2025 CNP strategic review.

Our Key Asks of Others

The Council is already undertaking stakeholder engagement with potential heat off-takers, partners and those expected to have an input into the studies and/or final design. It is an incredibly exciting opportunity and RBG will require enthusiasm and committed engagement from all stakeholders. We will continue to monitor for additional funding opportunities from the government to both enhance the feasibility studies and inform the procurement routes, but also to identify capital funding in the long term.

Circular Economy

The circular economy is a “cradle-to-cradle” system where materials never become waste and nature is regenerated. In a circular economy, products and materials are kept in circulation through processes like maintenance, reuse, refurbishment, remanufacture, recycling, and composting. The circular economy tackles climate change and other global challenges, like biodiversity loss, waste, and pollution, by decoupling economic activity from the consumption of finite resources.

Operational

Our Parks team circular green waste practises have saved approximately 44 tco2e of emissions. The Council has set up a Circular Economy Matchmaker board, which has representation from the Waste, Sustainability and Business teams. The aim of the board is to promote the CE to businesses and residents across the borough, with the ultimate aim to embed the culture of circularity as standard practise.

Borough

Between winter 2023 –2024, the Woolwich Library of Things kiosk have resulted in approximately 7.2 tco2e in avoided consumption emissions. This has also saved residents a total of £47,143 in new item purchases.

As part of the Towards Zero Waste service changes, we introduced a range of measures to reduce our carbon footprint in managing the borough’s household waste. This includes the introduction of fortnightly collection of general waste and the no side waste policy. There has been a drastic decrease in recorded contamination since the new three stage contamination policy was introduced in November 2022. Tonnes of total waste per household has dropped by 9% and landfill emissions are down by 162% (due to almost halving the total waste sent to landfill from the previous year). The total number of households receiving waste collection services have also increased by 1,200. Despite this increase, the municipal waste collected has decreased by 78kg per household which is not an insignificant sum when considering we offer collection services to over 120,000 households.

Our sustainable food activities seek to reduce waste, produce locally and sustainably and promote healthier diets. The Family Action Food Club has over 1300 users and has saved over 200 tco2e in emissions. We have also maintained five community gardens to grow local produce and supported over twenty five settings to implement the Good Food in Greenwich Charter.

There have been changes to the way emissions arising from waste have been reported. To avoid double counting, recyclate and energy from waste are now attributed to their end users, as opposed to those who generated the waste. Municipal waste emissions are therefore limited to the transportation of such waste (which are covered under the Transport theme) to the waste transfer stations. This does not affect waste sent to landfill and we therefore continue to record this. Municipal waste emissions are now 0.5 ktco2e.

Our Key Asks of Others

We are keen to encourage all our residents and businesses to consume more sustainably. The best way to do this is to prevent unnecessary purchases occurring in the first place, but we also encourage people and businesses to buy/manufacture locally (which grows the local economy); increase the reuse and recycling of the products that are bought; and to consider leasing instead of purchasing items through services such as the Library of Things.

Natural Environment

The Council owns and manages approximately 554 hectares of parks and green spaces that makes up most of green spaces within the borough. We plan to make changes which will increase the climate change resilience within our local green infrastructure and reduce emissions of our maintenance operations. The storage of carbon by trees and carbon-rich ecosystems can play an important role in tackling climate change. It can also help us to adapt to the changing climate, providing co-benefits of flood protection and temperature regulation within cities.

Operational

We have electrified almost 40% of our parks operators' tools and are using a bio-blend fuel for those tools which still rely on conventional fuels. This equates to 0.4% of our operational emissions. We have surpassed 50% of our 5000 additional trees to be planted by 2026. The next tree planting regime will take place in Winter 2024/25. Our street trees capture an estimated 7.4 ktco2 per annum.

Our Parks and green spaces team also scooped three awards at this year's London in Bloom. London in Bloom recognises local authorities, parks, friends of parks, community groups, and schools across the capital for making areas greener, cleaner and safer.

Borough

The natural environment delivers many benefits beyond carbon capture including healthier living, increased biodiversity, air quality improvements, climate adaptation measures such as flood prevention and overheating. It also adds value to property prices as living closely to green spaces is highly desirable in London. Greenwich's tree canopy covers a total borough carbon capture of 88.7ktco2e per annum. Our analysis estimates £31m in calculated annual benefits.

Our Key Asks of Others

The Biodiversity Net Gain (BNG) criteria is a way for developers in the borough to contribute to the recovery of nature while developing land. Importantly, it is making sure the habitat for wildlife is in a better state than it was before development and we are therefore working with ecologists and developers in ensuring the Royal Borough Greenwich is a full beneficiary of the scheme.

Empowering Wider Change

The Empowering Wider Change theme underpins the preceding themes and can be regarded as a set of capacity building measures and activities that *enable* the future reduction of carbon. The activities in this section empower business, council staff and young people to take on an active emissions reduction role. They are united by their “second order” influence – council actions here are facilitating others to make emissions reductions. This also includes educational and behavioural change initiatives and feasibility studies. Although less tangible carbon reductions can be measured through this theme, it is an incredibly powerful tool to help communities and individuals feel empowered through climate action. Where possible, we make estimations on carbon reduction figures and take a conservative approach so as not to over-estimate our success.

Operational

Most of our Empowering Wider Change actions are related to reducing borough emissions through community capacity building. However, we continue to acknowledge the areas where our decisions can reduce carbon emissions, including our procurement processes and pension investments.

As a London Borough we have relatively strong buying power which can lever influence over our procurement and investment decisions. We have therefore established governance processes which require Officers to submit a climate impact assessment when submitting decision reports.

The council proactively engaged with the University of College London (UCL) to support their Insights Report for Net Zero Tools and Toolkits Developers/Commissioners. The report is an industry first as it provides a holistic assessment and subsequent recommendations and user insights for those who develop local authority net zero-related tools and toolkits. These include insights into how tools/toolkits are sourced, why they are trusted and used, positives and negatives, and current gaps/challenges. Officers also participated in discussions with UCL to develop the Policy Brief on Local Authorities Scope 3 Emissions Reporting. This brief highlights the need for centralised guidance on Scope 3 emissions measurement and reporting for local authorities. It has recommendations on expanding the scope of the 'Public sector emissions monitoring and reporting guidance' currently in development and taking lessons learnt from the Scottish policy landscape integrating Scope 3 and procurement guidance and policy. The final, third, output is due to be produced imminently – which will provide is guidance for local authorities on net zero tools/toolkits which offer some form of Scope 3 measurement. Cost free tools/toolkits have been analysed according to the validation criteria developed through interviews and focus groups with local authority climate officers – including those from RBG. This is with the view to assist local authorities with capacity-building when measuring Scope 3 emissions. When appropriate, Officers will provide a summary of all three reports and update Members on possible next steps.

Although not within scope of our operational emissions, we have successfully calculated the carbon intensity of our Pension Fund between 31 March 2022 and 31 March 2024. This is measured through the total carbon dioxide equivalents per million GBP invested (tCO2e/mGBP). In the year since 31 March 2023 the Funds implicit temperature has decreased from between 2 and 3 degrees Celsius (59,390 tCO2e) to less than 1.75 degrees Celsius resulting in the Fund being aligned with the objectives of the Paris Agreement. Fossil fuel exposure per value of holdings has decreased to 9% from 12.24% since 31 March 2023 with the Funds revenue weighted exposure at approximately 2.%. the Pension Fund is looking to invest in a Nature Based Solutions (NbS) Fund via the London LCIV, for which we have sat on the SEED Investor Group (this is a working group made up of various borough within the pool who input into the creation of the Fund). The Fund focuses on sustainable forestry and agriculture.

We successfully launched the Greenwich Green Investment scheme – aiming to raise £1m in community fund raising for low carbon development across the borough. Green and climate

investment schemes are a way for councils, like ours, to raise funds that are invested back into projects that tackle climate change, improving local people's quality of life. Our Greenwich Green Investment is a low-risk way to invest in climate action. Investments can be as small as a one-off £5 and guarantees money is spent on our borough.

We have established a Greenwich Climate Networking Group – giving all types of stakeholders across the borough to discuss the delivery of the CNP, decarbonisation ideas and share best practise. We will structure our sessions around the 7 climate themes to generate a wide ranging, encouraging discussion around climate action.

Borough

The Council is developing partnerships and empowering our communities to develop new projects, initiatives and actions that reduce carbon emissions. Our communities include businesses, council staff and education providers, and voluntary organisations as well as residents. Partnering with the University of Greenwich and SELCC, we successfully delivered the 2024 Greener Greenwich Summit with over 160 representatives of Greenwich businesses in attendance.

Our Greener Greenwich skills/learning hub funded by the local Skills Improvement Fund and DfE, - is now completed and the council and London South East Colleges are looking forward to welcoming the learners to new provision during the academic year. This will build on those courses already provided by Flower Skills one of the council's Adult Skills Training Providers who in the last academic year delivered 4 construction retrofit courses with 17 borough residents achieving level 2 construction skills qualifications.

We are supporting UCL with *The Climate Ambassadors* programme, which is a DfE-funded scheme that aims to support education settings as they develop and implement Climate Action Plans. This is in line with the DfE strategy that stated the need for all education settings have a sustainability lead and climate action plan by the end of 2025. The UCL Climate Action Unit are hosting the London regional hub and intends to invite 5-10 Greenwich Schools to take part in a funded pilot project. They will recruit and train appointed ambassadors who will be trained to work with school staff to co-produce climate action plans through a 6-8 week programme. The aim of the Climate Action Unit is to accelerate the uptake of climate action and the transition to net-zero across society.

Our Key Asks of Others

We cannot achieve our climate ambitions alone and require every stakeholder in the borough to do their bit. This means people need to be the change they want to see – including being more conscientious of their consumption habits, actively attempt to reduce their energy consumption and explore healthier active travel options if they are able to do so.

The most important requirement we call for is for regional and national authorities to rapidly build the green economy. London needs to double the size of its green economy and, over the next few years, stakeholders will need to focus on building a robust evidence base for boroughs to act to support the growth of the green economy in their area and ensure a just transition including developing data and metrics to enable London to collectively track its progress and identify the right interventions. Alongside this, the theme will grow our understanding of the skills and business support needed to ensure the growth of key sectors and engage partners in developing plans to address these gaps. New models for financing and delivering climate infrastructure are needed to support to boroughs to navigate the right funding sources for their projects.

Section 6: Conclusion of Third Year Emissions Report

The Carbon Neutral Plan (CNP) outlines both RBG's and the borough's aspirational objectives to becoming carbon neutral by 2030, in line with the scientific target necessary to limit global temperature rise to 1.50C. It requires concerted action at all levels: individuals, communities, organisations, national government and international organisations.

It is important to note that this report is not a review of the CNP policy or the climate action plan, it is a performance report to update the borough and operational emissions progress against our 2030 aspirational target. The report therefore takes a lighter touch when providing analysis compared to the First-Year Review. A final review will take place post 2025 and will fine tune recommendations for a final phase delivery to 2030.

We covered both operational emissions and the borough's emissions under our seven climate themes; providing a summary of the emissions by specific sources and the carbon reduction initiatives we committed to implementing in these areas. We provide actual or estimated carbon figures where possible and use qualitative evidence when we are unable to do so.

For operational emissions we review the climate themes for the financial year 2023/24 and provide an assessment of the progress made. This uses the most up to date data we have recorded internally. For the borough we provide 2022 calendar year emissions data. 2022 is the most recent available data nationally as there is a reporting time lag of about 18-24 months as emissions are verified.

We follow the GHG Protocol approach to our carbon accounting, and we are continuously improving our data collection processes to better reflect the influence we have over some additional carbon emissions. Better data scrutiny and the onboarding of additional scope 3 emissions (such as the recent addition of staff commuting emissions) demonstrates we are committed to improving our monitoring, reporting and mitigation of the emissions categories within our ability to lever influence.

Our operational emissions have decreased by a modest 2% compared to the previous financial year, excluding Council owned homes. The largest total reduction in emissions in the built environment was the maintained schools stock. Temporary accommodation is now the largest source of operational emissions (when excluding council owned homes) accounting for approximately one third of operational emissions.

There was a modest decrease of 2% in overall borough emissions in 2022. The domestic sector remains the largest source of borough emissions with 36% of the total and approximately 90% of homes supplied with gas heating, forming an area of priority. The borough has a lower per capita emissions than the London average and significantly below the national average. When taking the *per capita* emissions metric, RBG is currently at its lowest levels on record.

Our current trajectories indicate we are not on course to meet our 2030 carbon neutral target. We are therefore mindful that whilst we continue to make good progress, we are dependent upon the national policy such as the acceleration of grid decarbonisation and further funding for retrofit schemes if we are to meet our targets.