

Climate Action Briefing, September 2019

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Introduction

The City of London Corporation (City Corporation) is the governing body of the Square Mile, dedicated to a vibrant and thriving City within a globally successful UK. Our reach extends far beyond the Square Mile's boundaries across the private, public and charitable and community sectors. We own, operate and support a variety of assets in pursuit of a flourishing society, a thriving economy and outstanding digital and physical environments for the benefit of the residents, learners, workers, visitors and cross-sectoral stakeholders we work with. We recognise the urgency with which we must address the impacts of climate change throughout our operations, as well as positively influencing those we work with externally, for the benefit of current and future generations.

This briefing on climate action outlines our climate action ambitions, in terms of carbon reduction and climate resilience activities, across our own operational activities and for the whole of the Square Mile as separate but connected workstreams. It demonstrates our support for the climate change ambitions set out by central Government and the Mayor of London regarding the UK being a net zero carbon place to live, work and do business in.

This briefing provides us with a plan for a nine-month window between September 2019 and June 2020 in which we can fully ensure we have the right data, information and resources in place to rise to the climate challenge across all areas of our work and throughout the Square Mile. It is by taking this step that we can then develop and implement an ambitious and successful Climate Action Strategy for 2020 onwards. In short, the briefing provides:

- An overview of our strategic ambition on climate action and climate resilience.
- The gaps in our own operational data and Square Mile-wide data that need to be resolved in order for us to set credible yet ambitious targets as part of a long-term Climate Action Strategy that we will launch next year.
- An appraisal of the level of investment and resourcing required to deliver a full strategy.

The briefing is available to all elected Members and officers and can be shared externally with key stakeholders that will be vital in ensuring its implementation. The full Climate Action strategy will be a publicly facing document available to all internally and externally.

Ultimately, this is a time-limited document that provides a road map to writing a full Climate Action Strategy by June 2020.

Why does Climate Action matter to us?

Our definition of Climate Action:

Positive action to reduce carbon emissions and increase resilience to changed weather patterns due to climate change.

The Paris Agreement, signed in 2015, has shown significant scientific and political consensus on climate change, pointing to the urgent need to limit carbon emissions globally in order to avoid catastrophic impacts to the society, economy and environment worldwide. The urgency of the climate agenda has been further reiterated in recent months through the following:

- The 2018 IPCC report which warned that the next 12 years will be crucial in limiting temperature rise to below 2 degrees.
- UK Climate projections from 2018 which predict temperature rises of up to 5 degrees if urgent actions are not implemented.
- UK Committee on Climate Change Land Use report calling for a radical change in diets to address the climate impacts of eating meat; and
- David Attenborough's intervention at the UN climate change talks in Poland in December 2018 through the 'People's Seat', stressing the real-life consequences of climate inaction by governments and administrators for individuals and communities.
- Raised public interest and impatience throughout 2018 and 2019 at the pace of action as demonstrated through school climate strikes and pressure group activities.
- For the City, based within the Square Mile, to remain a competitive global financial centre it needs to be a place where, despite a changing climate; is a comfortable and desirable place for people to live and work in.

It is therefore imperative that both the City Corporation and the Square Mile take timely and appropriate action towards tackling these issues.

For the City of London Corporation:

As a multi-sector organisation with a reach extending far beyond the Square Mile and convening power that enables us to promote the interests of people and organisations across London, the UK and internationally, we are in a strong position to address this issue positively. We have:

- A unique portfolio of work, assets, multi-sector stakeholders and geographical reach.
- A lot of convening power, influence and access.

Meaning that we can:

- Assist with a 'just transition' that has minimal negative impacts on individuals and communities to a low carbon economy.
- Act now and future proof our response to climate change.
- Mitigate operational and reputational risk.
- Be proactive, not reactive, resulting in us staying ahead of the curve.
- Establish a leadership role for London and the UK.

Consequently, we avoid:

- Being left behind, whilst others, including businesses and cities, such as Land Sec, British Land, New York, Manchester, Bristol, Copenhagen and more all invest in climate action innovations and commitments to transition to zero-emissions.
- The reputational damage of not acting now.
- Failing to meet the needs of our key stakeholder groups, including Londoners, businesses and government.
- Having assets and buildings that cannot be let/used or insured, with the consequential loss of business, providing the required critical mass of a global financial city.
- Loss of revenues.
- Higher energy bills.
- Higher carbon taxes.

For the Square Mile:

At this point, even the most ambitious carbon reduction scenario will result in climate impacts. For the Square Mile this includes an increased risk of flooding, more frequent heatwaves, an increase in extreme weather events and water shortages. Addressing these risks will position the City – the global financial and commercial centre within the Square Mile – as a resilient place to do business, compared with more vulnerable global financial centres. The City is a world leader in green finance and insurance, and so reducing climate impacts and responding to climate threats is key to its role as a leading global financial centre. To remain credible in promoting these business priorities the City, with support from the City Corporation, must be at the forefront of climate action through its own activities and innovation in the climate action space, in order to reinforce the City's position as:

- A secure and progressive place to do business.
- A global leader in Green Finance.
- The insurance capital of the world.
- A credible place of power, influence and access.

Consequently, the City, based within the Square Mile, with support from the City Corporation, will play its part in preventing:

- An adversely affected UK economy with GDP at significant risk, e.g. the 2018 freeze cost the UK economy £1.3bn a day.
- Companies losing an estimated \$1.2tn globally over the next 15 years, by failing to invest in climate action and mitigation activities now.
- CO₂ emissions continuing to rise unless collective action is taken across all sectors throughout the UK.
- Continuing and worsening extreme weather patterns, including increases in temperature, which we are not prepared for.
- Drought, flood and over-heating risk in London, which could reduce economic productivity, educational attainment and positive public health outcomes.
- Having assets and buildings that cannot be used/let or insured.
- A potential loss of revenue.
- Water shortage.
- Higher energy bills.
- High carbon taxes.
- Opportunity losses for business operations and capital flows.

Corporate and strategic links

Climate action will support the delivery of all aspects of our Corporate Plan for 2018-23, especially our aims 'To contribute to a flourishing society', 'To support a thriving economy' and 'To shape outstanding environments'. The work that is being designed and delivered around climate action specifically relates to Corporate Plan **outcomes one, three, five, six, seven, eight, 11 and 12** as follows:

1a – Prepare our response to natural and man-made threats.

3a – Promote and champion diversity, inclusion and the removal of institutional barriers and structural inequalities.

5b – Model new ways of delivering inclusive and sustainable growth.

6a – Promote regulatory confidence founded on the rule of law.

7a – Support organisations in pioneering, preparing for and responding to changes in regulations, markets, products and ways of working.

7c – Preserve and promote the City as the world-leading global centre for financial and professional services, commerce and culture.

8a – Promote the City, London and the UK as attractive and accessible place to live, learn, work and visit.

11 – We have clean air, land and water and a thriving and sustainable natural environment.

12 – Our spaces are secure, resilient and well-maintained.

This work also supports our strategies on **Responsible Business, Air Quality, Transport, the Local Plan, the emerging City Plan, Waste and Local Flood Risk Management.**

Our vision

By taking decisive action now, the Square Mile and the City Corporation’s assets across London and beyond will be climate positive and climate resilient environments where people and businesses can thrive for generations to come.

It is our intention that by implementing the activities outlined in this briefing, we will be able to set credible net zero carbon targets that set us on a path to be climate positive in the Square Mile and across our own assets, as well as enabling us to determine the climate resilience and climate adaptation measures we will need to invest in, within our Climate Action Strategy for 2020 onwards, at which point we will be able to predict when we can become carbon positive.

Our outcomes

The purpose of this briefing is to support us to deliver the following outcomes, which will be the same outcomes that we will use in our Climate Action Strategy from 2020 onwards:

- The City Corporation’s buildings, operations and investments are exemplary in terms of climate action.
- Carbon emissions both with City Corporation’s operations and across the Square Mile are decreasing.
- The Corporation’s assets and the entirety of the Square Mile is resilient to a changing climate and responsive to weather emergencies.
- Open Spaces carbon storage and carbon sequestration

Our current position

As an organisation we must continue to deliver positive actions in pursuit of our climate-related ambitions. These include:

- Our involvement in a wide range of climate change related actions involving planning, procurement, and advocacy roles.
- Driving down carbon emissions from new buildings.
- Purchasing renewable energy for our operations.
- Switching to LED streetlights.
- Cutting carbon emissions across the Square Mile by almost 48% between 2005 and 2015, through the accelerated decarbonisation of national electricity supplies.
- Promoting the City, based within the Square Mile, as a hub for green investment through the Green Finance Initiative.

- Progressing climate resilience measures which protect the Square Mile from flooding, overheating and extremes of weather.
- Increasing green infrastructure throughout the Square Mile.

However, in order to set a target date for becoming climate positive, we must address our organisational data gaps on Scope 1, 2 and 3 emissions. These emissions are defined by the Greenhouse Gas (GHG) Protocol as:

- **Scope 1:** Direct emissions from owned or controlled sources.
- **Scope 2:** Indirect emissions from the generation of purchased energy.
- **Scope 3:** Indirect emissions (not included in Scope 2) that occur in the value chain of the organisation or area, including both upstream and downstream emissions.

The table below (Figure 1) highlights what data we already collect or have access to in relation to Scope 1, 2 and 3 emissions in the Square Mile and across our own assets:

Figure 1: Quality of data available for Scope 1, 2 and 3 emissions for the City Corporation and the Square Mile

| Scope | Area | City Corporation | Square Mile |
|---------|---|------------------|-------------|
| 1 and 2 | Transport | Green | Green |
| | Commercial Buildings (power) | Amber | Green |
| | Residential Buildings (power) | Amber | Green |
| 3 | Downstream leased assets | Red | Red |
| | Purchased goods and services (procurement) | Amber | Red |
| | Capital Goods | Red | Red |
| | Business and Commuter Travel | Red | Red |
| | Water | Red | Red |
| | Waste | Amber | Amber |
| | Air Quality | Green | Green |
| | Investments and assets under management | Amber | Amber |
| | Green indicates that data is either regularly collected on emissions, or that a recent independent study has verified the data. | | |
| | Amber indicates that some data is available but may not adequately reflect emissions. | | |
| | Red indicates missing data or unknown emissions. | | |

The diagrams below give an indication of the level of data needed for us to set ambitious and credible targets for Scope 1, 2 and 3 emissions. We can set a timeline for the Scope 1 and 2 trajectory to zero carbon for the Corporation and the Square Mile using data from the 2018 AECOM Zero Emissions City Report and with the data on carbon sequestration from City Corporation managed open spaces. Substantial effort will be needed to establish total Scope 3 emissions for the Square Mile and the City Corporation – these are usually estimated at 3-4 times the Scope 1 and 2 emissions – and so should be tackled incrementally.

Figure 2: Data needed to set Net Zero Carbon targets for the CITY CORPORATION

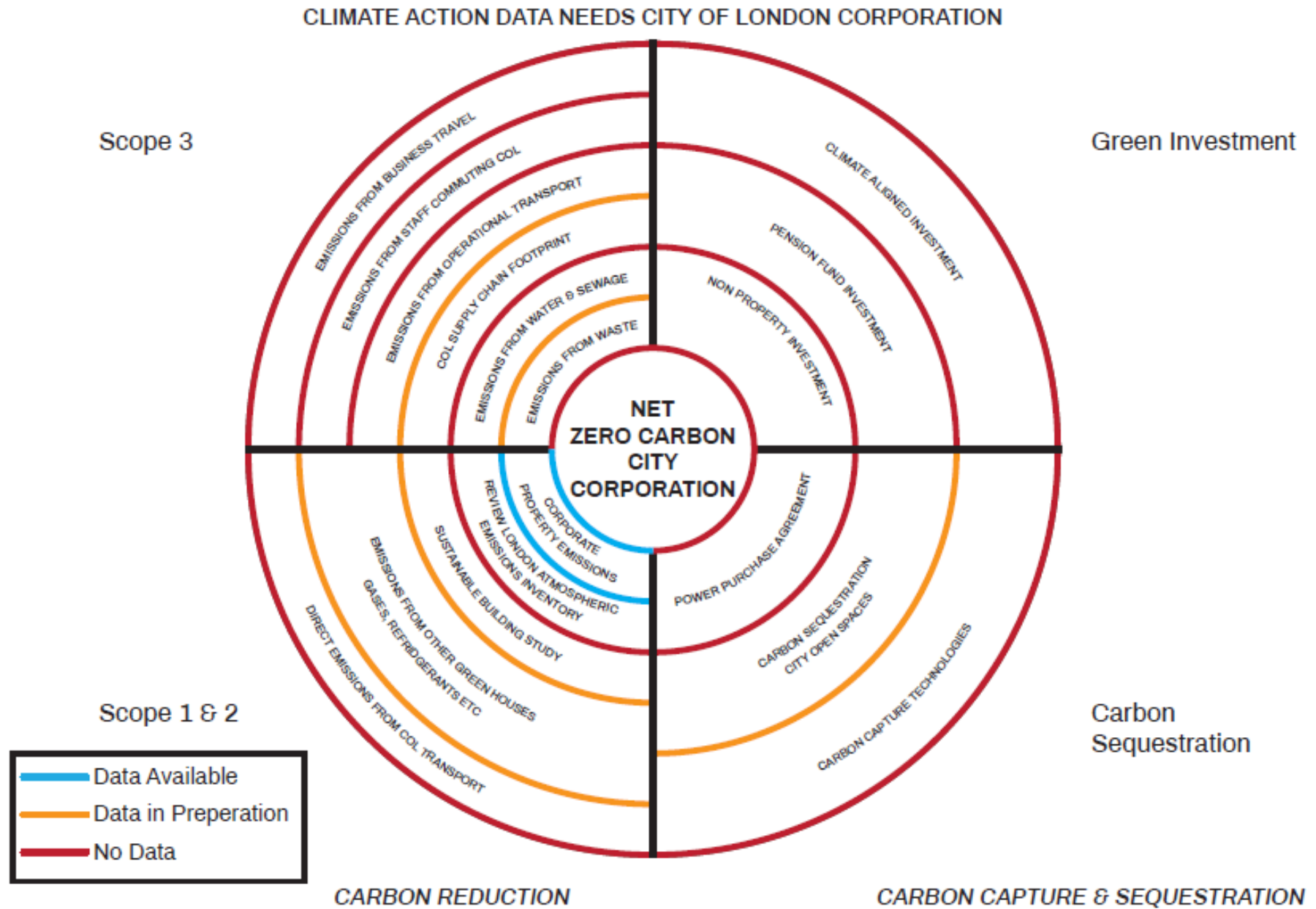
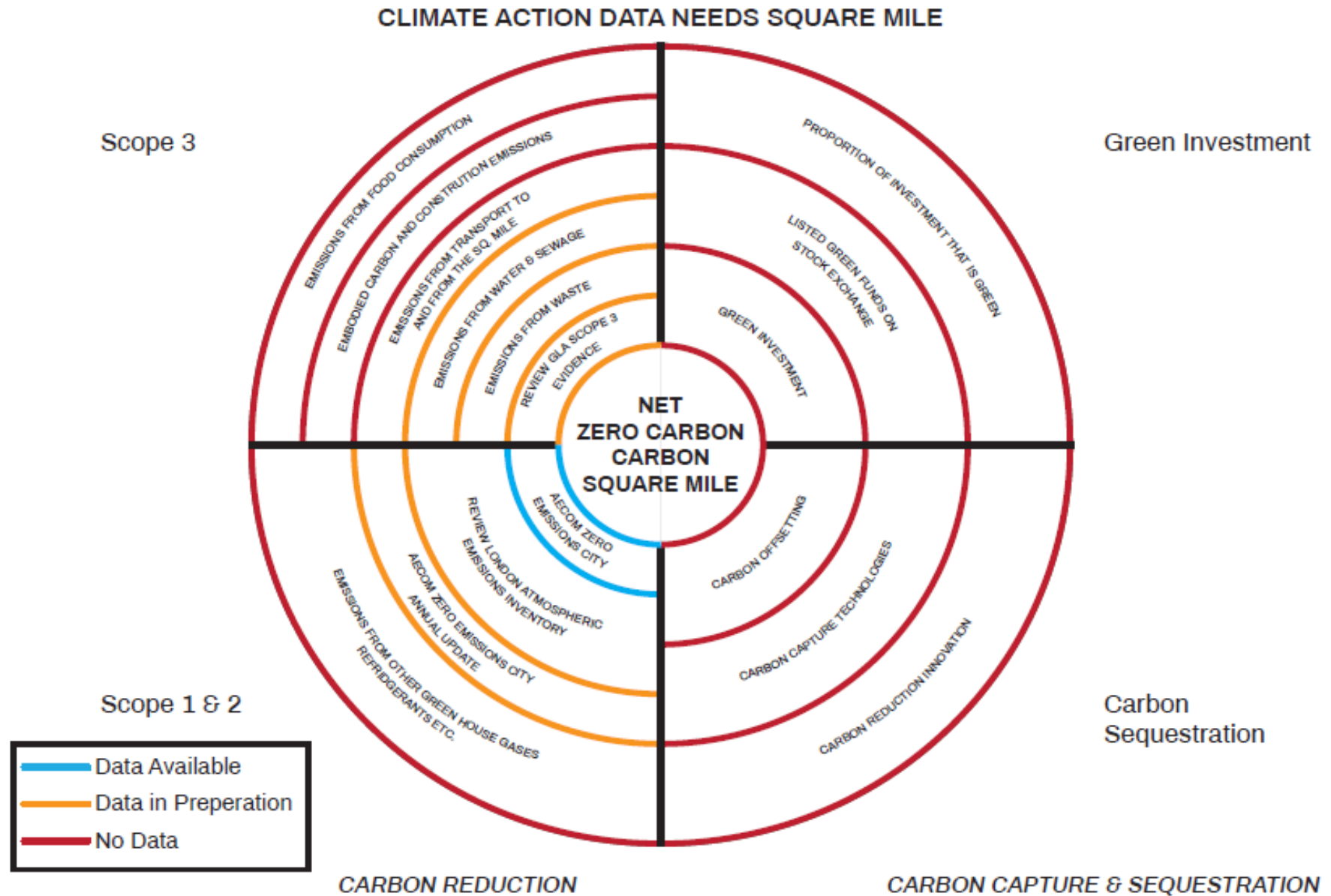


Figure 3: Data needed to set Net Zero Carbon targets for the SQUARE MILE



In parallel with this we must identify climate and weather-related trigger points so that we can pre-empt adverse impacts such as failure of transport infrastructure, adapting beforehand rather than reacting when they occur.

Our way forward

This briefing recommends that we continue to build on the successes and actions that have already been adopted by the organisation, as outlined in ‘Our current position’. However, there is still much we must do around carbon reduction and resilience, and the action plan below demonstrates the key data gaps and the steps we must take between now and the launch of our Climate Action Strategy in June 2020. The action plan is divided into three key areas of focus: Scope 1 and 2; Scope 3; and Climate Resilience.

Carbon reduction actions – Scope 1 and 2

With regards to Scope 1 and 2 emissions we are able to achieve reductions across our own operational assets and the Square Mile. We are able to do this by implementing the findings of the AECOM [Zero Emissions City Report](#) with updates being provided on an annual basis, led by the Senior Sustainability Planning Officer.

We will reduce our Scope 1 and 2 emissions by:

| Action | Lead department |
|--|---------------------------|
| Switching to renewable electricity | Procurement, Chamberlains |
| Investing in renewable energy infrastructure (Power Purchase Agreements) | Procurement, Chamberlains |
| Sharing district heating infrastructure | City Surveyors |

We will influence Scope 1 and 2 emissions from the Square Mile by:

| Action | Lead department |
|--|-----------------------------------|
| Ensuring all new buildings are zero carbon through our planning policy, whilst improving the carbon performance of existing buildings | Built Environment |
| Promoting and influencing progress on decarbonisation of grid electricity | Remembrancers |
| Working in partnership with Square Mile businesses, infrastructure providers, Government and NGOs to promote a zero carbon Square Mile | Town Clerks – communications team |

In parallel we will capture carbon by:

| Action | Lead department |
|--|------------------------|
| Switching to greening and land management for carbon sequestration (CoL Open Spaces) | Open Spaces |

To inform future action we will:

| Action | Lead department |
|---|------------------------|
| Monitor and publish annual assessments of progress towards a climate positive Square Mile through annual update of the Zero Emissions City Report | Built Environment |

Data gaps and resourcing – Scope 1 and 2

The AECOM Zero Emissions City report provides a trajectory to zero carbon for Scope 1 and 2 emissions from the Square Mile with suggested targets for the next 3 carbon budget periods (to 2032). Data on operational carbon emissions (Scope 1& 2) from our own activities will need to be determined in order to set organisational targets and demonstrate leadership in carbon reduction for the Square Mile. Alongside this we need to establish the carbon sequestration potential of the Open Spaces and greening within the Square Mile and through our land holdings elsewhere. These data gaps need to be filled to progress with a credible Scope 1 and 2 strategy for our organisation and the Square Mile.

Scope 1 and 2 resourcing needs to 2027:

| | Officer time | Staff cost | Consultancy | Outcome |
|---|---|--------------------------------|--------------------|---|
| To June 2020 Scope 1& 2 carbon reduction targets | 1x FTE grade F-G with carbon accounting and carbon offsetting expertise | 87k (using existing resources) | 190k | Implementable and auditable targets for Scope 1 and 2 emissions for Square Mile and City Corporation. Carbon offsetting scheme using City Corporation land management |
| June 2020 – 2022 | 1x FTE grade F-G | 87k pa | 45k pa | Implementation and auditing of Scope 1 and 2 climate action and carbon offsetting for current carbon budget period |
| 2022-2027 | 2x FTE grade F- G | 87k pa | tba | Implementation and auditing of Scope 1 and 2 climate action and carbon offsetting for next carbon budget period |

Carbon reduction actions – Scope 3

The Square Mile’s Scope 3 emissions are estimated to be 3-4 times bigger than its operational emissions (Scope 1 &2). There are significant data gaps in our understanding of Scope 3 emissions but while we develop the evidence to on what we do in the future, there are actions we can take now.

We will reduce Scope 3 emissions from the Square Mile by:

| Action | Lead department |
|---|------------------------------------|
| Cutting emissions from the Square Mile’s waste | Built Environment |
| Reducing emissions from water and sewerage | City Surveyor’s |
| Minimising transport related emissions | Built Environment |
| Working with Square Mile Businesses, government and NGOs to set a carbon accounting and reporting framework for the Square Mile | Built Environment & City Surveyors |

In parallel, the City, based within the Square Mile, as a leader in Green Finance, will enable investment in carbon reduction by:

| Action | Lead department |
|---------------|------------------------|
|---------------|------------------------|

| | |
|--|-----------------------|
| Enabling investment in low carbon infrastructure | Innovation and Growth |
| Reduce carbon emissions through green finance for carbon capture technologies | Innovation and Growth |
| Increasing assets under management that are classified as 'green' | Innovation and Growth |
| Ensuring all property and investment portfolios linked to the City Corporation align to our Responsible Investment Policy and the 'Principles of Responsible Investments' (formerly UNPRI) | Chamberlains |

To inform future action we will:

| Action | Lead department |
|--|----------------------------------|
| Fill the data gaps to identify the top 10 actions with the highest greenhouse gas reduction potential in the Square Mile through assessment of emissions from waste water & sewerage, transport, construction and embodied carbon, procurement, leased assets, food consumption, other green house gases refrigerants etc. | Built Environment Open Spaces |

Data gaps and resourcing needs - Scope 3

Scope 3 emissions are estimated to be 4-5 times the level of Scope 1 &2 emissions for an area (source GLA). In common with other local authority areas and businesses our data and measurement metrics for Scope 3 emissions are deficient. The City Corporation needs to work with others to develop parameters and metrics to demonstrate accurate measurement and reporting of Scope 3 emissions for a wide range of activities including waste water & sewerage, transport, construction and embodied carbon, procurement and supply chain, leased assets, food consumption, other green-house gases refrigerants etc. In addition to this we need to identify the impact of green finance and investment in reducing emissions. Some data gaps (waste, water, supply chain footprint) can be filled relatively easily using bench marking and established methodologies but will need carbon accounting expertise to ensure an auditable outcome. Others will be more difficult and must be the subject of ongoing research.

Scope 3 resourcing needs to 2027:

| | Officer time | Staff cost | Consultancy | Outcome |
|--------------------------------|--|------------------------------------|-------------|---|
| Short term to June 2020 | 2x FTE Grade F-G Carbon accounting, project management and building expert | 174k (using existing resources) | 100k | Scope 3 targets and carbon reduction plans for waste, water, transport & COL supply chain footprint |
| June 2020 – 2022 | 2x FTE grade F-G professional expertise 1.5 FTE grade E (implementation, data and accounting) | 174k pa 90k pa | 80k pa | The top 10 actions with the highest green-house gas reduction potential in the Square Mile. Ongoing implementation, monitoring and reporting of climate action for current carbon budget period. |
| 2022-2027 | 2x FTE grade F-G 1.5x FTE grade E | 174k pa 90k pa | tba | Ongoing implementation, monitoring and reporting of climate action for next carbon budget period |

Climate resilience actions:

As the climate changes we need to be ready for hotter drier summers, warmer wetter winters and more extreme weather events. This will make the Square Mile more vulnerable to flooding, overheating and sea level rise.

To combat the increased flood risk in the Square Mile we will:

| Action | Lead department |
|--|-------------------|
| Reduce the danger from surface water and sewer flooding by incorporating greening and SuDS in the Square Mile's buildings and public realm | Built Environment |
| Reduce the danger from sea level rise by developing a strategy for flood defence raising along the Thames | Built Environment |

To combat overheating in the Square Mile we will:

| Action | Lead department |
|--|----------------------------------|
| Improve the Urban Greening Factor of the Square Mile to provide cooling and shading and increase the amount of green infrastructure on public land | Built Environment Open Spaces |
| Ensure through planning policy that new buildings are designed for passive cooling avoiding the need for carbon intensive air conditioning | Built Environment |

To combat water shortages in the Square Mile we will:

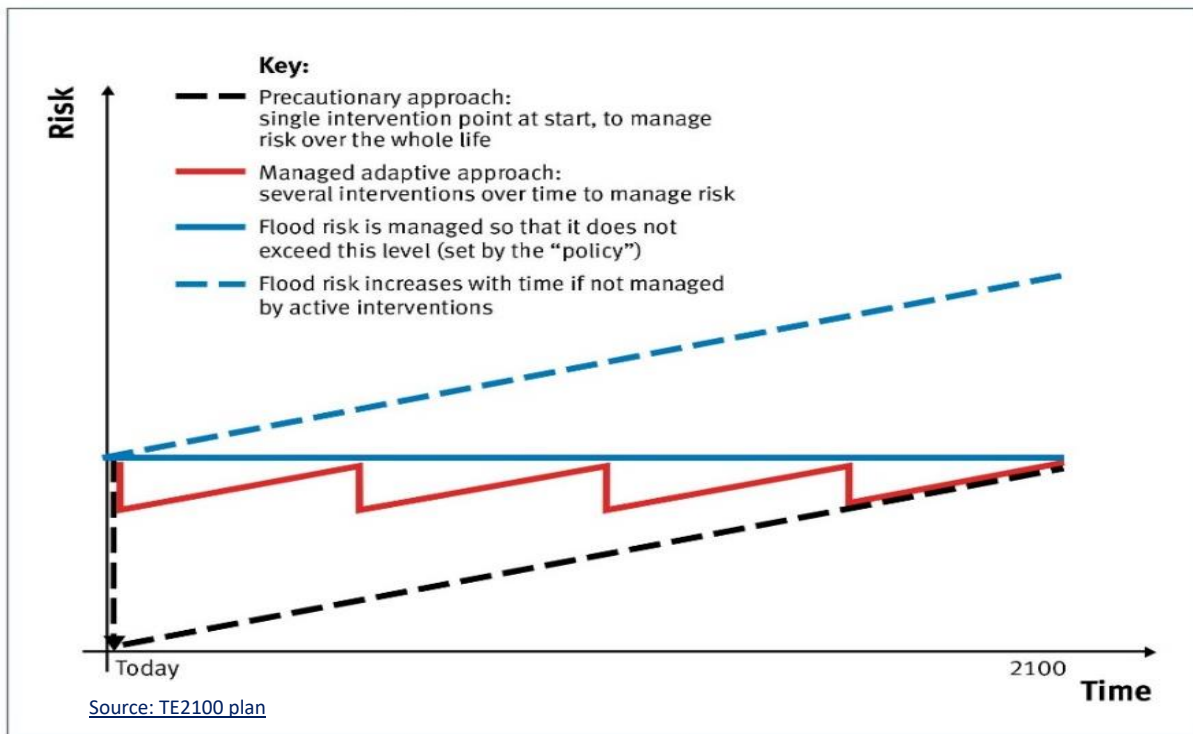
| Action | Lead department |
|--|----------------------------------|
| Ensure through planning policy that grey water recycling and rainwater harvesting are incorporated into new development | Built Environment Open Spaces |
| Ensure through planning policy that new buildings are designed for passive cooling avoiding the need for carbon intensive air conditioning | Built Environment |

To inform future action we will:

| Action | Lead department |
|---|-------------------|
| Develop an adaptive pathways plan which enables us to anticipate and prepare for climate impacts before critical thresholds are reached | Built Environment |

Figure 4 shows a series of different approaches to climate resilience. The black dashed line represents a precautionary approach which involves preparing now for the worst-case scenario. This can be costly and may result in over preparation if climate impacts are less severe than expected. The blue dashed line shows the impact of no interventions or preparation for climate impacts resulting in greater likelihood of damage. In contrast the red line represents a series of interventions which are implemented incrementally to avoid dangerous thresholds being reached. The cost of this "adaptive pathways" approach can be spread over a longer period and ensures that proportionate measures are implemented as the risk evolves. The adaptive pathways approach is the preferred approach and can be applied to a range of impacts including flood risk, overheating and infrastructure protection

Figure 4: Adaptive pathways approach to flood resilience



Data gaps and resourcing needs for Climate Resilience

The UK Climate Projections 18 (UKCP18), City of London Strategic Flood Risk Assessment (SFRA) and the Thames Estuary 2100 plan provide data on the likely impacts of climate change on the Square Mile in terms of temperature changes, rainfall and sea level rise. The challenge for the Square Mile is to establish what we need to do and by when. An adaptive pathways study would identify the thresholds and adaptation measures needed to avoid disruption to Square Mile businesses and inconvenience to residents, workers and visitors. This is needed to set targets for preventative flood risk, overheating and infrastructure measures.

Climate Resilience resources needed to 2027:

| | Officer time | Staff cost | Consultancy | Outcome |
|--------------------------------|--|--|--------------------|--|
| Short term to June 2020 | 0.5x FTE F grade 1x FTE D-E grade | 37k pa 60k pa (using existing resources) | 60k | Ongoing environmental resilience work and Adaptive pathways study report |
| June 2020 – 2022 | 0.5x FTE E-F grade 1x FTE D-E grade | 37k pa 60k pa | 20k pa | Ongoing Climate resilience work and SFRA review current carbon budget period |
| 2022- 2027 | 0.5x FTE E-F grade 1x FTE D-E grade | 37k pa 60k pa | tba | Ongoing climate resilience work next carbon budget period |

Climate Change Risk Assessment

Alongside the above activity, we will work together to add Climate Action to the corporate risk register. This is another way in which we ensure climate action remains a strategic corporate priority for which there is the necessary oversight and due diligence.

Conclusion

This briefing provides a detailed summary of the actions in relation to the following for both our own organisation and its assets and the Square Mile:

1. Carbon Reduction Actions – Scopes 1 and 2
2. Carbon Reduction Actions – Scope 3
3. Climate Resilience Actions

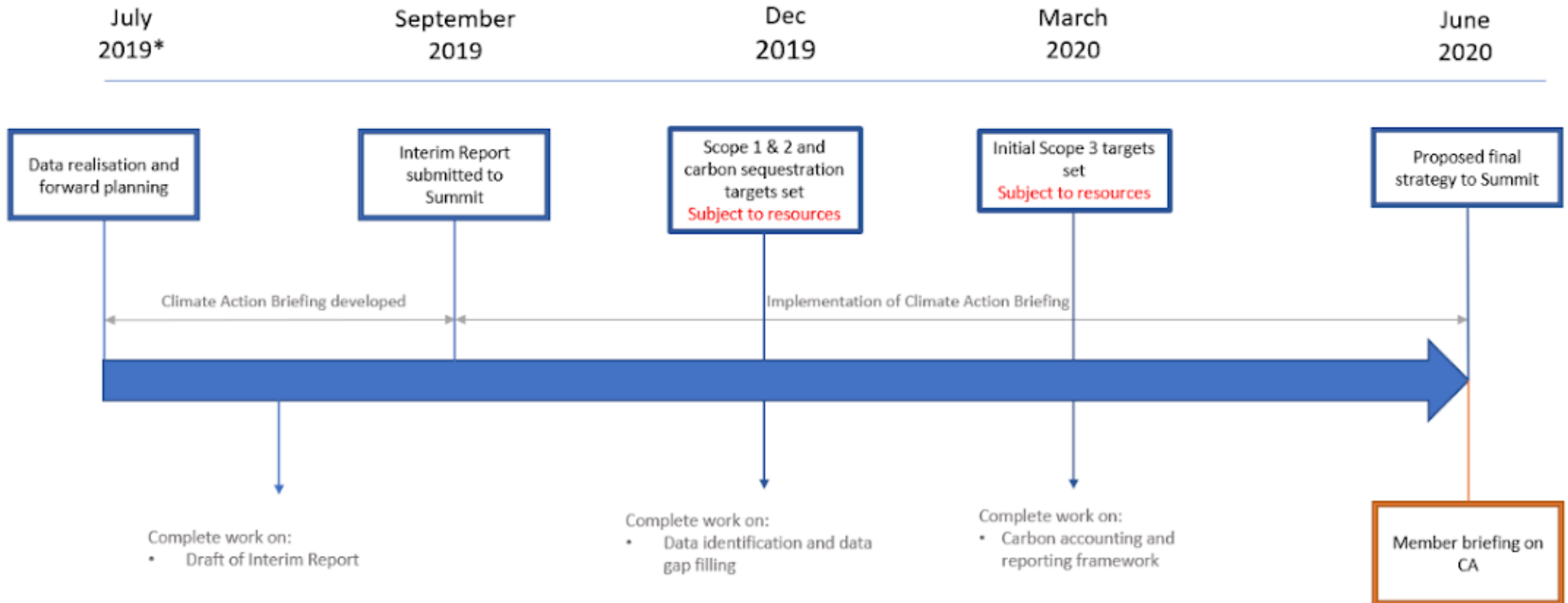
For each priority area we have highlighted the key actions and next steps that we must prioritise between September 2019 and June 2020, and this is also mapped out on the timeline on the next page. We believe that **an additional £350,000 of funding** for consultancy services is required in **the next nine months**. This funding should be sought from 2019/20 in-year underspend and it is recommended that **climate action is prioritised by departments** as per the actions above listed under 'data gaps and resourcing', in order for this briefing to be delivered successfully. This will enable us to produce a credible and clear Climate Action strategy in 2020 that shows exactly how we will achieve our vision to take decisive action now, so that the Square Mile and the City Corporation's assets across London and beyond will be climate positive and climate resilient environments where people and businesses can thrive for generations to come.

In the next nine months, we believe that we can:

- **Set a Scope 1 and 2 trajectory to zero carbon** for the City Corporation and the Square Mile, using the AECOM Zero Emissions City Report and other resources.
- **Set a net zero carbon target date**, by collecting data on carbon sequestration from our Open Spaces.
- Establish a **robust evidence base and carbon accounting practices**.
- Begin to incrementally and credibly **establish what the Scope 3 emissions** are for both the City Corporation and the Square Mile as separate but connected evaluations.
- **Develop a plan for Scope 3 emission reduction**, by investing in specialist technical support.
- **Establish an adaptive pathways approach to climate resilience**, which will determine effective actions to prevent disruption due to changed weather patterns.
- Determine **the exact resourcing requirements** the organisation will need on an ongoing basis to deliver its Climate Action Strategy – this is likely to be a **dedicated team of 6 officers with consultancy support**.

Our timeline

We are working towards a deadline of June 2020 to submit a proposed final version of the Climate Action Strategy to Summit Group as set out below:



*March – July 2019

- Held three TFG meetings Scheduled two meetings with technical group in July
- Regular meetings between Corporate Strategy and Performance Team and Janet (strategy lead)
- Invested time in understanding our evidence base and commissioned additional research from the Carbon Trust and Daisy Whiting (work experience Masters student)
- Included a Climate Action 'lens' to support all Fundamental Review decision making
- Re-drafted the original strategy outline summary.