

Committee(s)	Dated:
Planning & Transportation Committee	22/02/2022
Subject: Climate Action Strategy: Square Mile and Resilience Projects Update	Public
Which outcomes in the City Corporation's Corporate Plan does this proposal aim to impact directly?	1, 5, 7, 10, 11, 12
Does this proposal require extra revenue and/or capital spending?	No
If so, how much?	n/a
What is the source of Funding?	CAS programme funding
Has this Funding Source been agreed with the Chamberlain's Department?	
Report of: Juliemma McLoughlin, Executive Director Environment	For Information
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Summary

The City Corporation adopted a Climate Action Strategy in October 2020. The Strategy committed the Corporation to mitigating the impact of climate change by achieving net-zero emissions for the City Corporation and its activities; supporting residents and business to achieve net zero in the wider Square Mile; and preparing the Square Mile for the inevitable impacts of a changing climate. Two areas of work that fall within the responsibility of the Planning & Transportation Committee are: delivery of Square Mile projects targeting the achievement of net zero carbon emissions within the wider Square Mile, and environmental resilience measures across the City.

During 2021, progress has been made on a number of Square Mile and environmental resilience projects. Square Mile projects include: appointment of a workstream manager to drive the Square Mile projects forward; appointment of consultants to scope the potential for a Climate Action Fund to deliver carbon reductions; and preparatory work for the publication of further planning guidance on carbon reduction from buildings that will be published later this year.

In terms of environmental resilience work has begun on a series of pilot projects, testing measures that will help the Square Mile and the City Corporation's operations and services to be resilient to disruption from hotter drier summers, warmer wetter winters, more frequent extreme weather events and sea level rise. The findings from these trials will be incorporated into design guidance for a climate resilient Square Mile

Recommendation(s)

Members are asked to:

- Note the update on progress towards achieving Square Mile and Climate Resilience projects under the Climate Action Strategy that fall within the remit of this Committee.

Main Report

Background

1. The City Corporation adopted a Climate Action Strategy in October 2020, which committed the Corporation to mitigating the impact of climate change by achieving net-zero emissions for the City Corporation and its activities and the wider Square Mile. It highlighted the need to take preventative steps to protect the City and its assets from the physical and commercial risks from climate change. 10 workstreams were developed, working across 6 departments. The Climate Action Strategy set out overall ambitions of being:
 - Net Zero in our own operations by 2027
 - Net Zero in our value chain by 2040
 - Net Zero in the Square Mile by 2040
 - Climate resilience in our buildings, public spaces and infrastructure.
2. Two key areas of work that fall within the responsibility of the Planning & Transportation Committee are:
 - a. Delivery of Square Mile projects targeting the achievement of net zero carbon emissions within the wider Square Mile by 2040;
 - b. Environmental resilience measures.
3. This report updates the Committee on progress on delivery of these projects during 2021.

Square Mile Project Plan

4. Buildings are the largest contributor to the City's direct carbon emissions. The Square Mile project focuses on the built environment and aims to engage with developers, businesses and other organisations across the City of London to promote the adoption of low carbon approaches and technologies.
5. The key actions within this project are:
 - a. New Supplementary Planning Guidance: development of detailed planning guidance to deliver carbon improvements in new development, including addressing whole life carbon.
 - b. Square Mile Climate Action Fund: design and delivery of a fund that businesses can contribute to and which can be used to reduce and remove hard to treat residual emissions in the Square Mile.
 - c. Square Mile Local Area Energy Plan: development of a strategy to reduce energy-related emissions for buildings in the Square Mile.

- d. Historic Building Energy Retrofit Challenge: a project to incentivise improvements in the carbon performance of heritage assets through practical examples.
- e. Development of Exemplar Guidance on Square Mile Refurbishment: linked to the Retrofit Challenge, but also drawing on best practice in carbon reduction in refurbished buildings.
- f. Square Mile Value Chain Emissions Strategy: development of a strategy to improve the carbon performance of business value chains, encouraging a holistic approach to decarbonisation.

Square Mile 2021 Project Update

6. The key areas of progress during 2021 have been:

a. Supplementary Planning Guidance

A Supplementary Planning Document is being drafted to provide further guidance and support to the development industry on meeting Local and London Plan requirements for net zero carbon new buildings and delivering carbon improvements through the refurbishment of existing buildings. The SPD will be structured around RIBA development stages with an emphasis on the need to factor zero carbon principles into building design at an early stage. The draft SPD is expected to be published for consultation later in 2022.

In advance of the full SPD, an initial Member training session on Whole Life Carbon was run by Arup on 8 June 2021. Officers are now drafting further planning guidance on whole life carbon appraisals and considering how information can be presented in a consistent and coherent way to inform delivery of the Climate Action Strategy. A Planning Advice Note will be drafted and brought back to the Planning & Transportation Committee for consideration in late spring.

b. Climate Action Fund

Consultants have been appointed to undertake scoping of the potential for a Climate Action Fund. This Fund would seek to leverage investment from City businesses which, in turn, can be used to reduce and remove hard to treat residual emissions in the City, principally through new infrastructure in and around the City aimed at delivering measurable carbon reduction. This scoping will be completed by the end of March 2022 and, subject to the outcome, will be followed by a more detailed piece of work on structures and governance for the Fund.

c. Local Area Energy Plan

A brief is being prepared to commission consultancy advice on the development of a Local Area Energy Plan for the City of London. This brief is aligned with the work of the City Corporation's Energy Team.

d. Appointment of City Workstream Manager

A new member of staff, with experience in cross organisational and cross boundary working on climate matters, has commenced work within the Environment Department. He will take the lead in managing the Square Mile projects and drive delivery over the course of 2022.

Environmental Resilience project update

7. Work has begun to trial various climate resilience measures such as sustainable drainage systems (SuDS), climate resilient planting and shade creation in the City's public realm. Appendix 1 shows the progress to date on the Year 1 projects. Working with consultants we have developed a resilience measures catalogue which includes over 30 possible interventions which we plan to trial.
8. Many climate resilience interventions rely on below ground opportunities to accommodate SuDS, tree roots and cool spaces etc. Identification of such spaces can be challenging given the congestion from utilities, basements and archaeological assets in the City. Work in underway with the British Geological Survey (BGS) to map the City's subsurface through the "[Cubic Mile](#)" project. Part funded by Natural Environment Research Council (NERC) this project is due to propose suitable below ground opportunities later in 2022.
9. The effectiveness of interventions is being assessed through the use of on-site sensors to measure parameters such as temperature, humidity, soil moisture, rainfall and gully fill levels. Working with Kings College London (KCL) projects will be monitored over the next 3-5 years to inform design guidance for climate resilient public realm projects.
10. Sea level rise will affect the tidal Thames requiring the local flood defences to be raised by up to 0.5m by 2065 and 1m by 2100. The City's Riverside Strategy which this Committee approved for adoption in November 2021 provides a mechanism for the flood protection to be incorporated into development and planned works avoiding the need for urgent and costly interventions later this century.
11. It is essential that climate impacts are considered when progressing projects across the City Corporation. Workshops and training sessions and "climate chats" have involved officers from across the City Corporation to help them to include climate considerations in plans, strategies and decision making.

Corporate & Strategic Implications

12. The CAS supports delivery against the following outcomes in the Corporate Plan, 2018-23:
 - Outcome 1: People are safe and feel safe
 - Outcome 5: Businesses are trusted and socially and environmentally responsible
 - Outcome 7: We are a global hub for innovation in financial and professional services, commerce and culture
 - Outcome 10: We inspire enterprise, excellence, creativity and collaboration
 - Outcome 11: We have clean air, land and water and a thriving and sustainable natural environment
 - Outcome 12: Our spaces are secure, resilient and well-maintained.
13. The strategy builds upon existing strategies and policies, including: The Responsible Business Strategy 2018-23, the Responsible Investment Policy, the City Procurement Strategy 2020-24, the Local Plan 2015, the draft City Plan 2036, the Transport Strategy, the Air Quality Strategy 2019-24, the Biodiversity

Strategy 2021. It is aligned to ongoing reviews of the City Corporation's financial and property investment portfolio.

Financial implications

14. Funding for these projects has been agreed by Policy & Resources Committee under the Climate Action Funding Programme

Legal implications

15. There are no legal implications arising from this report.

Equalities implications

16. A Test of Relevance was undertaken on the Climate Action Strategy and several positive impacts were identified for people in at least one of the following five protected groups - age, disability, race, pregnancy/maternity and gender. No negative impacts were identified. Potential equalities impacts will be investigated and assessed on an ongoing basis.

Risk implications

17. To manage risk effectively in the programme, all projects have a risk register and the overall risks are controlled through a corporation level risk CR30 – Climate Action Strategy.

Climate implications

18. The projects contribute towards meeting agreed objectives for the Climate Action Strategy.

Security implications

19. There are no direct security implications.

Conclusion

20. The Climate Action Strategy was adopted by the City Corporation in October 2020. Two key areas of work lie within the remit of the Planning & Transportation Committee, the Square Mile Workstream and the Environmental Resilience Workstream.
21. During the first full year of implementation of the Climate Action Strategy, work has progressed on further planning guidance on carbon emissions and sustainability and work has commenced on the Climate Action Fund. A City Workstream Manager has been appointed to drive forward key Square Mile projects during 2022.
22. Work is underway to trial interventions that will help to avoid disruption to the Square Mile, and the City's assets elsewhere, from climate change.

Appendices

- Appendix 1: Climate Resilience update on Year 1 projects

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Appendix 1 Climate Resilience update on Year 1 projects

Site	Proposed measures	Progress summary	Outputs	Indicative Cost (£)	Spend to date
Bevis Marks	Installation of rain garden permeable paving trees and climate resilient planting	In design Gateway 5 approval early 2022 delegated Construction Start date April 2022 Completion June 2022	<p>Measures included in the design for Bevis Marks</p> <ul style="list-style-type: none"> • SuDS – raingardens with channels and reprofiled footways • Permeable paving • Trees • Climate resilient planting <p>Monitoring planned</p> <ul style="list-style-type: none"> • Temperature, humidity, and soil moisture – Urban controls – connected to mesh network • Gully sensors - supplier tba 	250K	Subject to Gateway 5 approval
Jubilee Gardens	Installation of Sustainable Drainage System (SuDS) green wall trees and climate resilient planting	In design Gateway 5 approval April 2022 delegated to chief officer Construction Start date summer 2022 Completion Autumn 2022	<p>Measures included in the design for Jubilee Gardens</p> <ul style="list-style-type: none"> • SuDS soakaways • Green wall • Trees • Climate resilient planting <p>Monitoring planned</p> <ul style="list-style-type: none"> • Temperature, humidity, and soil moisture Urban Controls – connected to mesh network • Gully sensors - supplier tba 	150K	Subject to Gateway 5 approval
Greening Cheapside	Installation of SuDS, permeable paving and climate resilient planting	In design Gateway 5 approval Jan 2022 Construction Start date April 2022	<p>Measures included in the design for Greening Cheapside site:</p> <ul style="list-style-type: none"> • SuDS soakaways – reprofiling footways to drain to landscaping around trees • permeable paving – bound gravel for all paved surfaces • Climate resilient planting <p>Monitoring In collaboration with Kings College London and Ambiotek the following sensors are in place:</p>	180K	Subject to Gateway 5 approval

		Completion June 2022	<ul style="list-style-type: none"> • Temperature & humidity • Soil moisture • Air quality • Weather station (on Boys' School Roof) 		
Riverside Planters City of London School	Climate resilient planting in water retentive soils, removal of artificial irrigation, retention of existing trees	In design Planting date spring/ autumn 2022 Completion November 2022	Measures included in the design for the Riverside Planters <ul style="list-style-type: none"> • Alternative planting mediums – water retention • Retention of existing trees • Climate resilient planting Monitoring planned in conjunction with Kings College London & Ambiotek <ul style="list-style-type: none"> • Temperature & humidity • Soil moisture • Chlorophyll leaf monitoring sensors Plus comparison with commercial sensors	55K	Subject to Gateway 5 approval
Climate Resilient Planting	Climate resilient planting at four pedestrian priority sites	Planting complete monitoring programme in design	Measures <ul style="list-style-type: none"> • Planting for these sites was completed in 2021 Monitoring planned <ul style="list-style-type: none"> • Temperature, humidity and soil moisture – Urban Controls connected to the mesh network • Chlorophyll leaf monitoring sensors 	20K	See Gateway 2 update
35 Vine Street	Tree planting (6 trees- 3 species)	Planting date Spring/ Autumn 2022 Completion Nov 2022	Measures <ul style="list-style-type: none"> • Eight trees of 2 different species Monitoring <ul style="list-style-type: none"> • Temperature, humidity and soil moisture Urban Controls connected to mesh network • Chlorophyll leaf monitoring sensors 	5K	See Gateway 2 update
Total	Capital costs			660K	Nil

Maintenance and monitoring of all sites	To evaluate the effectiveness of the measures for combating climate risks and identify any additional operational costs	To be met by Climate Action Strategy revenue funds		114K funded from CAS revenue – not to be included in total	
Total	Capital and revenue costs			774K	Nil