

Committee(s): Epping Forest Consultative – For Information	Dated: 10022021
Epping Forest & Commons – For Information	08032021
Open Spaces and City Gardens – For Information	27042021
Subject: Climate Action Strategy – Open Spaces “Carbon Removals” (SEF 10/21)	Public
Which outcomes in the City Corporation’s Corporate Plan does this proposal aim to impact directly?	11
Does this proposal require extra revenue and/or capital spending?	N
If so, how much?	To be outlined in the forthcoming Gateway report
What is the source of Funding?	Climate Action Strategy
Has this Funding Source been agreed with the Chamberlain’s Department?	Y
Report of: Colin Buttery, Director of Open Spaces	For Information
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Summary

This report provides an introduction to the Open Spaces Department’s contribution to the delivery of the City of London Corporation’s Climate Action Strategy (CAS). One of the main goals of the CAS is to reduce the Corporation’s direct carbon emissions to net zero by 2027; currently the Open Spaces are estimated to offset existing emission by around 44%. Within the Carbon Action Strategy, the Open Spaces Department will be undertaking work under the *Carbon Removals* project whose aim is to enhance carbon sequestration to further offset carbon emissions, alongside work being carried out across other parts of the Corporation to reduce the organisation’s carbon emissions. *Carbon Removals* works will include reversion of arable land to areas of trees and grassland, tree establishment on some grasslands, management of woodland and trees and grazing of grassland. This project will not only contribute to addressing the Global Climate Emergency, but also the global biodiversity crisis.

Epping Forest and its Buffer Lands currently offers opportunities for undertaking these works. Land management, to start in 2021, has been identified which will allow carbon sequestration land management activities to be started as soon as possible to enable the maximum possible annual sequestration target to be reached by 2027. There are likely to be other land management activities that would be undertaken across the Open Spaces between 2021 and 2027. Studies to identify further carbon sequestration enhancing opportunities will be commissioned to allow additional land

management activities to be scheduled after 2021. The funding for the *Carbon Removals* work will come from funds identified for the Climate Action Strategy, and officers would then seek to lever in additional external grant income. Funding will be drawn down from the Climate Action Strategy through the Gateway process, reports of which will be presented to your Committees.

Recommendation(s)

Members are asked to:

- Note the report.

Main Report

Background

1. The City of London Corporation has adopted a radical Climate Action Strategy (CAS) as its contribution to addressing the Global Climate Emergency. The CAS sets out how the Corporation is committed to reducing its contribution to the factors that cause climate change, as well as adapting to the impact of a changing climate and the extreme weather events, such as storms and flooding, that are likely to increase in frequency and severity. The CAS sets out the steps towards achieving net zero, building climate resilience and championing sustainable growth.
2. The current CAS covers the period 2020-2027. It recognises the Corporation's contribution to climate change factors through the apportionment of emissions to one of three categories: its direct emissions from its own activities or those controlled by the organisation ("scope 1 emissions"); indirect energy emissions related to the consumption of energy that are not controlled by the organisation ("scope 2 emissions"); and other emissions which are a consequence of the organisation's activities which occur at sources the Corporation does not own or control ("scope 3 emissions").
3. The CAS sets out to achieve net zero on the scope 1 and 2 emissions by 2027. The Departments of the Built Environment, City Surveyor's, Chamberlain's and Open Spaces are beginning to undertake projects that will achieve net zero on the 36 kilotonnes of carbon dioxide equivalents (kt CO_{2e}) (greenhouse gases that cause global warming) from the Corporation's scope 1 and 2 emissions.
4. Vegetated habitats absorb and sequester carbon dioxide from the atmosphere and sequester this within plant matter and, most importantly, the soil. This is one mechanism to lock up carbon emissions. In 2020 a study by the University of Surrey, commissioned by the City Corporation Climate Action Team, estimated the quantity of the existing annual sequestration capacity of all the Open Spaces sites (4,250 ha) at 16 kt CO_{2e}.
5. This total of 16 kt CO_{2e} represents an estimated 44% offsetting of the Corporation's scope 1 and 2 emissions, highlighting the importance of the Open Spaces, and their continuing conservation management, to the Corporation and to London in the face of the Climate Emergency.

6. Alongside the declared Climate Emergency, there is a biodiversity crisis taking place across the world, where species are being lost or populations reduced at an accelerating and wholly unsustainable rate. Locally and internationally, the Corporation's Open Spaces sites are vital refuges for species and habitats under threat in temperate Europe. In addition to their intrinsic value, healthy populations of species and healthy habitats provide ecosystem services such as clean water, crop pollination, soil protection, amelioration of air pollution, buffering against climate heating and more besides.
7. Through land management activities, biodiversity can be enhanced at the same time as the carbon sequestration rate can be increased. This will enhance the value of the work being undertaken across the City Corporation to achieve net zero on its scope 1 and 2 emissions. This report outlines the projects that the Open Spaces Department (and its likely successor) would undertake between 2021 and 2027 to achieve an increase in carbon sequestration.

Current Position

8. The report by the University of Surrey, commissioned by the City Corporation in 2020, identified land management activities that would increase carbon sequestration and improve biodiversity. It is thought sequestration could increase by around potentially 6-10 kt CO₂e annually. The use of this report, combined with further analysis, has revealed that the greatest sequestration possibilities would be in converting arable land to areas of meadows and trees alongside allowing tree establishment on some grasslands, where it is appropriate, and can enhance the biodiversity. Other activities such as management of woodland and trees and grazing of grassland might be able to sequester additional carbon. The key reference for these calculations has been Natural England's report, *Carbon Storage by Habitat* (NERR043) by Alonso et al. (Natural England 2012). Additional and more recent studies have been used to provide further reference points for details of project proposals.
9. These findings have been considered in relation to the opportunities available across the Open Spaces to implement these activities. Given the nature of the various Open Spaces sites, only the Epping Forest Buffer Lands currently offers opportunities for the conversion of arable land and tree planting which includes the estate of Copped Hall, Woodredon and Warlies, Birch Hall Park, Monkams and North Farm. Epping Forest may also be appropriate for additional woodland and tree management, conservation grazing of grasslands and heaths and maintaining healthy soils.
10. The carbon sequestration potential values given in Alonso et al. 2012 demonstrate that arable reversion will yield significant increases in carbon sequestration. It also shows that woodland management results in an increase in carbon sequestration. The report is limited in the number of different types of land management activities considered. To identify further land management activities studies will need to be undertaken to understand opportunities for additional carbon sequestration.
11. The work across the Open Spaces sits within the Climate Action Strategy programme and the project is formally designated as "*Carbon Removals*". Land management has been identified for implementation starting in 2021 based on the information above. Studies to understand further beneficial work will need to

be commissioned to allow land management activities to be scheduled for 2023-2027. Therefore, land management will be done in phases. The approval to undertake *Carbon Removals* work will be done through the Gateway process, reports of which will be presented to your Committees.

Options

12. The Gateway report will present options for approval.

Proposals

13. The Gateway report will present the proposal that the *Carbon Removals* project be undertaken in a phased approach. This will allow carbon sequestration land management activities to be started as soon as possible to enable the maximum possible annual sequestration target to be reached by 2027. Further phases, in parallel, will encompass the commissioning of studies to identify further opportunities and the delivery of these opportunities.
14. The first phase is being proposed to involve carbon sequestration on the Epping Forest Buffer Lands. These sites provide the greatest potential for relatively rapid carbon assimilation rates in the early years of the project. The CAS funding would ensure that available arable land would be converted to grassland cover and that the costs of the management of this land, to protect and increase the carbon stored in its soils, could be ensured. Having made this immediate change of land use, officers would then seek to lever in external grant income, such as Stewardship, to enable additional work for biodiversity and heritage conservation. Such grant income would seek to amplify the annual income on the land to match or exceed any previous or potential agriculture-based income.
15. Whilst the current opportunities have been identified at Epping Forest and its Buffer Lands, there are likely to be other land management activities that would be undertaken across the Open Spaces between 2021 and 2027. These additional activities will be important in enabling a further increase towards the desired carbon sequestration target.

Key Data

16. The Open Spaces Department is estimated to already offset approximately 16 kt CO₂e of the City Corporation's emissions (~44%).
17. The City Corporation's Climate Action Strategy aims to reach net zero on its scope 1 and 2 emissions, amounting to a total of 36 kt CO₂e annually by 2027.
18. It is thought additional land management activities undertaken by Open Spaces could realise a potential additional 6-10 kt CO₂e of sequestration annually, if the measures outlined above are implemented. The increase in sequestration capacity is dependent on final site evaluation, species and planting densities. Carbon sequestration will be measured through the *Carbon Removals* project.
19. An additional key metric is likely to measure changes in biodiversity, the method for doing this needs to be defined, and this is likely to be done in the studies that will be commissioned.

Corporate & Strategic Implications

20. The Carbon Action Strategy is complementary to London-wide and national efforts to reduced emissions and improve resilience of our communities and urban spaces in the face of the Climate Emergency. This includes the draft London Plan, the Greater London Authority's London City Resilience Strategy 2020, the UK Committee on Climate Change Climate Risk Assessment 2017 and National Adaptation Programme, as well as the landscape of policies set out by government.
21. The *Carbon Removals* project within the Climate Action Strategy will meet Outcome 11 of the Corporate Plan: "*We will have clean air, land and water and a thriving and sustainable natural environment*". The Climate Action Strategy builds upon existing City Corporation strategies and policies including: The Responsible Business Strategy 2018-2023, the Climate Mitigation Strategy, the Carbon Descent Plan, the Responsible Investment Policy, the City Procurement Strategy 2020-2024, the Local Plan 2015, the draft City Plan 2036, the Transport Strategy 20218-2043, the Air Quality Strategy 2015-2020, the Transition to a Zero Emission Fleet Policy, the Renewable Electric Policy & Sourcing Strategy.
22. By aiming for net zero, the City Corporation will be contributing to the UK government's Nationally Determined Contribution, which commits the UK to reducing economy-wide greenhouse gas emissions by at least 68% by 2030. This legal commitment has been made by the UK Government under the UK Climate Change Act 2008 (revised 2019), which has enshrined in law both a target of net-zero emissions by 2050 and requirements for measures for climate adaptation.
23. As described above, some of the Buffer Lands have been identified as essential for enabling the *Carbon Removals* project to meet its aims and to contribute to the required proportion of the Climate Action Strategy's net zero target.
24. In addition to enabling a response to the Climate Emergency, the original purpose of the Buffer Lands as a refuge for wildlife can now be enhanced significantly. The *Carbon Removals* project will provide opportunities and funding to ensure meaningful Biodiversity Net Gain through the expansion of protected wood-pasture and parkland, a UK priority habitat, adjacent to the internationally-important Epping Forest.

Financial implications

25. The financial requirement will be detailed in the relevant Gateway reports. These reports will request release of funds that have been set aside by the Policy and Resources Committee to fund delivery of the Climate Action Strategy (the dashboard at the beginning of this report indicates no extra revenue and/or capital spending is required).
26. Whilst funding is available through the Climate Action Strategy (around £1.93 million), there are a number of external funding opportunities which may be available to contribute to the cost of delivering the works. These will be explored and appropriate funding will be applied for to reduce the amount requested from the Climate Action Strategy funding.

Resource implications

27. Staff resource is required to manage and deliver this project. This will encompass corporate reporting requirements, undertaking tendering, commissioning studies and contractors, and overseeing works. The initial project management is being undertaken by the Conservation and Trees Manager at North London Open Spaces and then Environmental Stewardship Officer at Epping Forest. The initial delivery of works will be undertaken by the Grazing and Landscape Project Officer and Biodiversity Officer at Epping Forest. Long term delivery will be resourced through the recruitment of four new roles that will be funded by the Climate Action Strategy (£1.35 million). Over the long term the roles mentioned above will continue to input to the project and facilitate works where required.

Legal implications

28. Any works being undertaken on protected sites will require a Site of Special Scientific Interest consent from Natural England under the Wildlife and Countryside Act 1981.
29. Certain qualifying work may require an assessment under the Environmental Impact Assessment as required under Environmental Impact Assessment (Forestry) (England and Wales) Regulations 1999, as amended.

Risk implications

30. The land management works currently identified to return the most significant carbon sequestration increase would be required to be undertaken on arable land on the Epping Forest Buffer Lands which is currently tenanted. The termination of these tenancies need to be negotiated with tenant before the land can be made available.

Equalities implications

31. A Test of Relevance was undertaken on the options put forward for the whole Climate Action Strategy and presented to Resource Allocation Sub Committee in June 2020. No detrimental impacts on the protected groups defined in the Equality Act 2010 were identified. The *Carbon Removals* project would provide additional open spaces for general public use.

Climate implications

32. The *Carbon Removals* project is part of the City Corporation's Climate Action Strategy which demonstrates the Corporation's commitment to reducing its contribution to factors that cause climate change and adapting to the impact of a changing climatic conditions, including extreme weather events.

Security implications

33. None.

Charity Implications

34. Epping Forest is a registered charity (number 232990). Charity Law obliges Members to ensure that the decisions they take in relation to the Charity must be taken in the best interests of the Charity. In the long term works may also be undertaken on land within the other charities Burnham Beeches and Stoke Common (number 232987), Ashted Common (1051510), Hampstead Heath (803392), West Wickham Common and Spring Park Wood (232988), Coulsdon and Other Commons (232989). In carrying out its charity trustee duties in respect of its various open spaces charities, the City as trustee must have regard only to

whether proposals and their effects are in the best interests of each of the charities (not to whether they benefit any wider City interests, for example by helping achieve net zero carbon emission targets for the wider City). In respect of the proposals in this report, there are clear benefits to the charitable purposes of the various open spaces charities for the reasons set out in this report including, protection of habitats and amelioration of adverse environmental impacts on the open spaces. The strategic aims of the wider City are explained in this report for context. However, pursuit of the proposals is considered fully justified on the sole basis of the benefits to the open spaces charities.

Conclusion

35. The City Corporation has committed to reducing its contribution to the factors that cause climate change and adapting to the impact of a changing climate through its adoption of its Climate Action Strategy. Its aim is to achieve net zero on its scope 1 and 2 emissions by 2027. The Open Spaces already contributes an estimated 44% offset of these emissions and is preparing to undertake new land management activities to increase further its capacity to sequester carbon. The Open Spaces activities would be achieved through the *Carbon Removals* project that sits within the Carbon Action Strategy Programme. In the early stages of the *Carbon Removals* project, works will be focussed at Epping Forest and its Buffer Lands, involving the reversion of arable land to natural habitats and promoting ecological processes as a way of enhancing carbon storage. Studies are required to identify further opportunities to increase carbon sequestration. These will inform the next phase of works to deliver this increased sequestration capacity. Sites across the Open Spaces will be considered. The funding that has been committed to deliver the Carbon Action Strategy will be requested through the City Corporation's Gateway process.

Appendices

- None

Background Papers

Climate Action Strategy, Report to Open Spaces Chairs, 9th September 2020

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