Committees: Open Spaces and City Gardens Committee *[for decision]* Operational Property and Projects Sub *[for decision]* Streets and Walkways Sub *[for decision]*	**Dates:** 05 December 2022 16 January 2023 17 January 2023
Subject: City Greening and Biodiversity – Phase 3 of the Cool Streets and Greening Programme **Unique Project Identifier:** *12332*	**Gateway 3/4:** **Options Appraisal (Regular)**
Report of: Executive Director, Environment **Report Author:** Melanie Charalambous	**For Decision**
PUBLIC	

1. Status update	**Project Description:** This project (City Greening and Biodiversity) forms Phase 3 of the Cool Streets and Greening programme. The project aims to introduce more trees and planting in the public realm across the City and enhance biodiversity. **RAG Status:** Green (as at last report to Committee) **Risk Status:** Medium (low at last report to committee). Risk status has increased largely as a result of inflation. **Total Estimated Cost of Project (excluding risk):** £2.5m **Change in Total Estimated Cost of Project (excluding risk):** None **Spend to Date:** £49,804 **Costed Risk Provision Utilised:** None **Funding Source:** OSPR (Climate Action Strategy) **Slippage:** The project has been delayed by 2 months as a result of the capital projects review. The project is anticipated to be implemented across 2023-2025.

2. Next steps and requested decisions

Next Gateway: Gateway 5: Authority to Start Work

Next Steps:

- Undertake local stakeholder engagement
- Finalise detailed designs and construction information
- Prepare detailed cost estimates and programme
- Prepare Gateway 5 reports

Requested Decisions:

1. That the proposals for re-landscaping and re-planting strategically located sites in the City are approved to reach Gateway 5 as described in this report;
2. That additional budget of £95,000 for design development of the re-landscaping and re-planting proposals is approved to reach the next Gateway, funded from the On Street Parking Reserve (OSPR) Climate Action Strategy funding agreed for the Cool Streets and Greening programme;
3. Note that the tree planting proposals have already been approved at Gateway 5 at a total estimated cost of £755,000 (excluding risk) and are to be implemented across the next two planting seasons;
4. Note the total estimated cost of the project (Phase 3) at £2.5m (excluding risk).

3. Resource requirements to reach next Gateway

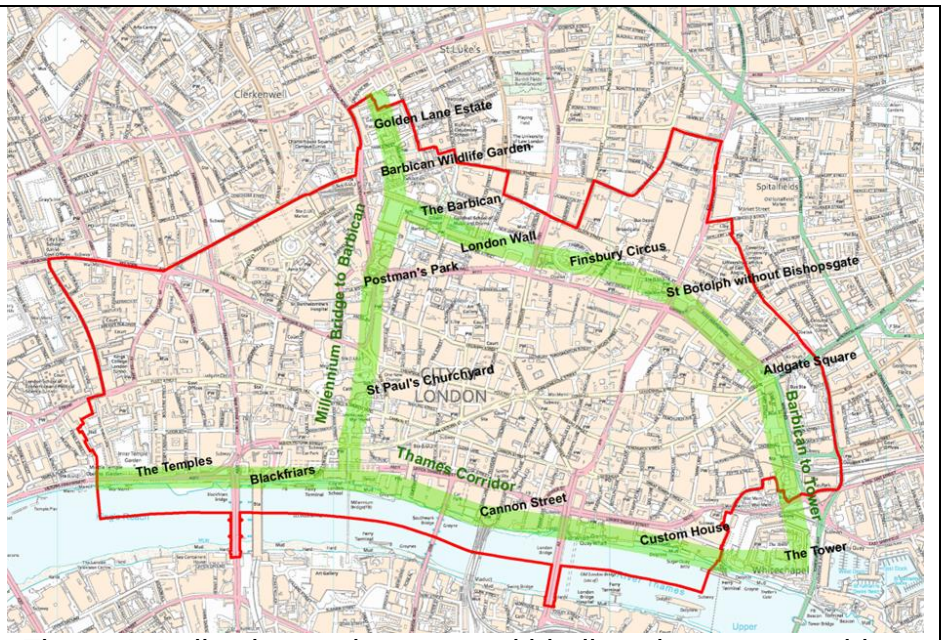
Table 1: Resources required to reach the next gateway (Re-planting and Re-landscaping)*

Item	**Reason**	**Funds/ Source of Funding**	**Cost (£)**
Fees	Surveys, design development, engineering input	CAS-OSPR	45,000
Staff costs	Project management, design development, consultation	CAS-OSPR	50,000
Total			95,000

***Tree planting proposals have been separately approved at Gateway 5

	Costed Risk Provision requested for this Gateway: None
4. Overview of proposals	**<u>Context</u>** 4.1 The Cool Streets and Greening Programme was approved by Committees in 2021 as part of the Climate Action Strategy. It is a £6.8m four-year programme to create resilient streets and open spaces in the Square Mile. Please also refer to the Programme summary in Appendix 5. 4.2 Natural urban greening measures such as trees, planting beds and vertical greening aid in softening the built environment and have the potential to improve environmental conditions. They improve resilience against overheating through shade and evaporation of stored moisture, improve habitats to protect against biodiversity loss, and also filter air pollutants and reduce greenhouse gas emissions. A more varied, species-rich natural environment can not only reinforce existing habitats within the City but also provide a natural resilience to the challenges of projected future climate change. 4.3 The Climate Action Strategy acknowledges that access to green space and nature is linked to improving the health and wellbeing of individuals. There is also significant evidence of the economic benefits of introducing trees and planting into the public realm. 4.4 Urban biodiversity gain and resilience relies on ecological corridors and stepping stones for the movement and distribution of species and genetic diversity. Connection of existing open spaces, Sites of Importance for Nature Conservation (SINCs) and addition of new soft landscaping within the Square Mile and beyond into the Green Grid will conserve and enhance biodiversity. **<u>City Greening and Biodiversity project</u>** 4.5 This project was initiated in May 2022 and forms Phase 3 of the Cool Streets and Greening Programme. Following Members' feedback when the project was initiated, officers have undertaken a detailed assessment of greening opportunities across the City and have prepared a project *Masterplan* document (attached as Appendix 3). This approach differs from Phase 1 and Phase 2 of the Programme, where existing highway and public realm projects were identified, and funding provided to enhance the climate resilience of the proposals. This project is divided into three elements: • ***Tree planting*** across the City with a target to plant at least 100 new trees. Members agreed at Gateway 2 that this element of the project should proceed directly to

	Gateway 5, in order to maximise the planting opportunities within the tree planting season (November to March). This Gateway 5 report was approved by Chief Officer in November 2022. • ***Re-planting*** a number of green spaces, planting beds and planters in the City with a more climate resilient palette and biodiversity enhancements. • ***Re-landscaping*** a number of strategically selected sites in the City, to enhance climate resilience and biodiversity. 4.6 The preparation of the project Masterplan involved a prioritisation exercise which has been used to identify the proposals and locations that result in the greatest impact and benefits. 4.7 The objective is to plant trees, re-plant existing sites for climate resilience and re-landscape sites, focussing on three strategic 'green corridors'. These corridors have been identified to improve connectivity between the City's Sites of Importance for Nature Conservation (SINCs) and areas close to them, as well as providing routes across the City for pedestrians and cyclists with increased shade/canopy cover. These routes are illustrated in Figure 1 and are: • The Thames corridor • Millennium Bridge to Barbican • Barbican to the Tower 4.8 Sites along these routes have been prioritised by considering a range of parameters, including proximity to SINCs, presence of Biodiversity Action Plan target species and habitats, air quality, thermal comfort and pedestrian flows. 4.9 Additional locations have been identified because of a deficiency of greening in the area. For these locations, tree planting will be the priority, alongside the creation of at least one new pocket park. There is further scope in the future to add more greenery to these areas through the delivery of projects from Healthy Streets Plans, subject to future funding.

	 Figure 1: Indicative cool routes and biodiversity green corridors through the City
5. Risk	For the re-planting and re-landscaping elements, the main risks include: • Planting restrictions as a result of utilities and underground structures; ○ *Mitigation: carry out site assessments and surveys (including assessing existing data) to identify locations for planting and undertake trial holes.* • Affordability of the proposals and cost increases as a result of inflation; ○ *Mitigation: The project scope may need to be adjusted to ensure that it remains affordable within the programme budget. This risk will impact the re-landscaping projects the most and could result in one or two of the sites having to be omitted in order to stay within budget. Officer's will also review the scope of Phase 4 (which is at an earlier stage) to assess if some of this funding can be transferred to Phase 3 if appropriate, to cover increased costs.* • Maintenance costs limit proposals; ○ *The project will increase the amount of greening in the City which will have implications for maintenance costs. It is proposed that these costs are covered by the project budget where possible which will redirect funding away from the improvements.* • Development sites and other projects impact programme;

	○ *Mitigation: coordinate proposals with other projects and construction sites. Phased approach to delivery will assist.* • Objections to proposals from stakeholders or local occupiers; ○ *Mitigation: Engage with occupiers and stakeholders and identify alternative sites if necessary* Costed Risk Provision Utilised at Last Gateway: None Change in Costed Risk: None Further information available in the Risk Register (Appendix 2) and Options Appraisal. Please note that a separate risk register has been produced for the tree planting element which has passed gateway 5.
6. Procurement approach	It is proposed that most of the design work is carried out in-house by officers in the Environment Department. Some consultancy input will be required for the larger scale projects, and it is proposed to appoint landscape architects and engineers following approved procurement processes. The civil works (excavation, construction and paving) will be carried out by the City's Highway Term Contractor (FM Conway). The planting and soil works will be carried out by The City Gardens Team and their contractors. The project management and construction management will be undertaken by the Environment Department (Policy and Projects, City Gardens and Highways).

Appendices

Appendix 1	Project Coversheet
Appendix 2	Risk Register (for recommended option)
Appendix 3	Project Masterplan
Appendix 4	Finance Tables
Appendix 5	Cool Streets and Greening Programme - overview of Phases 1-4

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Options Appraisal Matrix

Due to the masterplan approach to project development, only one option is proposed, as described below and set out in the project masterplan in Appendix 3.

<table>
<tr><td>Project Overview</td><td></td></tr>
<tr><td>1. Brief description of option</td><td>This project (City Greening and Biodiversity) forms Phase 3 of the Cool Streets and Greening programme. The project aims to introduce more trees, improve planting and re-landscape areas of the public realm across the City to improve climate resilience and enhance biodiversity.</td></tr>
<tr><td>2. Scope and exclusions</td><td>

Tree planting is proposed to plant street trees across the City with a target of at least 100 new trees. Members have agreed that this element of the project should proceed directly to Gateway 5 in order to maximise the planting opportunities within the tree planting season (November to March). This Gateway 5 report was approved by Chief Officer in November 2022. Further details are set out in the masterplan in Appendix 3.
Re-planting: 14 sites have been identified to be either fully or partially re-planted with a more climate resilient palette and biodiversity enhancements. These are described in the table below:

<table>
<tr><th>Re-planting Sites</th><th>Proposals</th><th>Green corridor</th></tr>
<tr><td>All Hallows on the Wall</td><td>• Shrub planting with access to historic wall
• Nectar/pollen rich perennial planting in western bed</td><td>Barbican - Tower</td></tr>
<tr><td>St Dunstan’s on the Hill</td><td>• Climate resilient ‘dry’ planting
• Scope tree/shrub potential
• Improve drainage</td><td>SINC between two routes</td></tr>
<tr><td>St Dunstan’s in the East Churchyard</td><td>• Addition of permeable surfacing
• Dead wood
• New bed with nectar/pollen rich perennial upper lawn</td><td>SINC between two routes</td></tr>
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Project Overview	

	• Improve lower lawn drainage create bog style rain garden in recess	
Queen Street Place	• Replace some plants with climate resilient plants • Improve soil	Thames
Whittington Gardens	• Decompaction of soil • Soil improvements • Mulching • Invertebrate measures	Thames
Angel Lane	• Replace hedging with resilient species • Dead wood • Nectar/pollen rich shade tolerant planting	Thames
Grants Quay	• Soft landscaping of circular lawn with perennials and shrubs	Thames
Dark House Walk	• Extend riverside climate resilient planting scheme • Trial different substrates • Replace shrubs and perennials with resilient species • Invertebrate measures	Thames
St Annes and St Agnes Churchyard	• Nectar/pollen rich shade tolerant perennial planting • Tree removal for resilient understory tree • Replace/build up shrubs with fruiting species • Deadwood area • Introduce low/ground cover planting in high ASB area	Millennium Bridge - Barbican

Project Overview	

St Olave Silver Street	• Dense wild hedging 2 – 3 rows • Nectar/pollen rich shade tolerant bedding planting • Replenish ground cover planting beneath trees	Millennium Bridge - Barbican
John Carpenter Street	• Replace failing box hedging with more resilient planting	Thames
St Botolph's without Bishopsgate	• Create wildlife strip behind netball court • Introduce low/ground cover planting in high ASB area • Raise canopy to increase visibility (tree planting) • Improve management plan for enclosed shrubbery for wildlife • Investigate redesign of water feature for pond • Replant annual bedding area with nectar/pollen rich perennials and grasses	Barbican - Tower
St Mary Staining	• Create pond in raised bed • New bed beneath established tree with understory planting and fruiting shrubs • Mulch new bed area • Improve species mix in raised beds	Millennium Bridge - Barbican
St Mary Aldermanbury	• Replace box hedging with resilient species • Improve planting across site with mix of shrubs, perennials and grasses	Millennium Bridge - Barbican

<table>
<tr><td>Project Overview</td><td></td></tr>
<tr><td></td><td>

Re-landscaping: Strategically selected sites have been identified to be re-landscaped to unseal existing paved areas, enhance climate resilience and biodiversity and provide amenity space. These sites vary in scale and proposals are summarised below with further details set out in the masterplan in the Appendix. The project funding will be focussed on delivering greening and biodiversity benefits in the first instance. Paving improvements, seating and other street furniture will be secondary priorities and will only be included in scope if funding is available.

<table>
<tr><th>Re-landscaping Sites (listed in priority order)</th><th>Proposals</th><th>Green corridor</th></tr>
<tr><td>London Wall/Moorgate (significant corner space)</td><td>• Additional planters and trees and improved layout to reflect pedestrian movement
• Replacement of lawn with raised planting bed and attractive resilient planting. Protection of existing mature oak tree
• Sustainable drainage (SuDS)
• Seating (including re-positioning existing seats)</td><td>Barbican to Tower</td></tr>
<tr><td>Finsbury Circus Western Arm (existing carriageway space that has been closed to vehicles) – significant new green route</td><td>• Creation of new green public space with trees and planting beds
• Complements the enhancement of Finsbury Circus
• This project will only fund the greening elements of this scheme (the main paving , seating and drainage works are already funded by the Moorgate Crossrail project)</td><td>Barbican to Tower</td></tr>
<tr><td>Fetter Lane (north)</td><td>• Existing asphalt carriageway space that has been closed to vehicles for several years</td><td>Area of greening deficiency</td></tr>
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Project Overview			
		• Creation of new green pocket park with trees and planting • Retention of cycle route through space • Also potential for new permeable paving and SuDS as part of Phase 4, subject to underground investigations • This could link with improvements to other green spaces in the area identified through the Fleet Street Healthy Streets Plan	
	St Peter Westcheap	• Explore opportunities to adjust layout to increase space for resilient planting and ensure the existing mature plane tree is protected	Millennium Bridge to Barbican
	Fann Street west	• Replacing existing concrete planters at western end with more appropriate landscape design	Millennium Bridge to Barbican
	Playhouse Yard	• This site has been selected as a 'contingency' site to be taken forward if site constraints restrict the implementation of the above sites • There is scope to widen footways and plant trees with under-planting • There is also potential for SuDS as part of Phase 4 • This could link with improvements to other green spaces in the area identified through the Fleet Street Healthy Streets Plan	Area of greening deficiency

Project Overview	
	Biodiversity Enhancements will be critical in delivering on the key ecosystem service areas: biodiversity value, microclimate management, water management and wellbeing. The following enhancements will be considered (see table below) within the scope of the sites to maximise the opportunity for wildlife and increase the resilience of these spaces. The aims of these measures include creation/restoration of relevant habitat types, increasing breeding opportunities and to ensure an adequate level of redundancy in planting schemes to create ecological continuity.

Biodiversity Measures	**Benefits**
Nesting infrastructure	Bird breeding/distribution
Roosting infrastructure	Bat breeding/seasonal roosting
Bee posts/bug hotels/bee pots	Increase pollinator/invertebrate nesting/abundance
Bare/exposed ground/rock piles	Provision of habitat for ground nesting invertebrates
Loggeries (deadwood features)	Provision of habitat for saproxylic species
Species rich native planting types (trees, understory, shrubs, hedging, climbing/trailing and mid – low ground cover)	Increase flowering/fruiting season, provision of larval food plants, increase habitat types, thermal comfort, air quality
Standing water (ponds and rain/bog gardens)	Increase available habitat parcel types, reduce water flow into surface water drains, provision of habitat for semi aquatic macro invertebrates
Monitoring and field equipment	Collect data on species distribution and abundance, assess plants and soil viability/durability/quality

Further details are set out in the project masterplan in Appendix 3.

All proposals relate to either public highway or open spaces that the City already maintains. Private land is excluded from the scope of this project.

Project Overview	
Project Planning	

3. Programme and key dates	*Overall project: 2022- 2025*
	Key dates:
	• Undertake local stakeholder engagement (Jan 23 – June 23)
	• Finalise detailed designs and construction information (Jan 23 – July 23)
	• Prepare detailed cost estimates and programme (Jan 23 – July 23)
	• Prepare Gateway 5 reports:
	  ○ (Tree planting Nov 22)
	  ○ Re-planting spring/summer 23
	  ○ Re-landscaping summer 23
	• Implementation of works – 2023-2025 (timing is restricted by planting season: tree planting season is Nov-March, perennial planting is in spring and autumn).

4. Risk implications	Overall project option risk*:* medium Please refer to risk section in main report. Further information available within the Risk Register (Appendix 2).
5. Stakeholders and consultees	• Local occupiers • BIDs • Local interest groups • Ward Members • Churches • Local Residents

<table>
<tr><td>Project Overview</td><td></td></tr>
<tr><td>6. Benefits of option</td><td>

The recommended option will allow for trees, planting and landscaping schemes to be strategically located. This will provide maximum benefits to biodiversity by improving connectivity between Sites of Importance for Nature Conservation (SINCs).
Previous phases of the Cool Streets and Greening programme have identified existing highway/public realm schemes and re-designed these to incorporate climate resilience measures. The recommended option means that proposed schemes are not constrained by design work that has previously taken place. Maximum cost-benefits for climate resilience can be achieved and designed in from the start.
The designation of Green Corridors allows limited resources to be focused where maximum benefits can be achieved for biodiversity, as supported by the City of London SINC Review (2016) and the Biodiversity Action Plan.
A priority of the Cool Streets and Greening programme is to monitor the effectiveness of such schemes. The recommended option allows monitoring scheme/equipment to be designed in, rather than retrofitted. The schemes will be monitored as part of the wider programme.

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<tr><td>7. Disbenefits of option</td><td>The recommended option does not target all areas of greening deficiency due to the prioritisation of the green corridors approach and funding restrictions. It is recommended that these deficient areas are addressed through future projects (subject to funding).</td></tr>
<tr><td>Resource Implications</td><td></td></tr>
<tr><td>8. Total estimated cost</td><td>Total estimated cost (excluding risk): £2.5m (inclusive of maintenance).

Table 2: City Greening and Biodiversity – estimated cost
<table>
<tr><th>Item</th><th>Estimated Cost (excluding risk)</th></tr>
<tr><td>Evaluation and Design</td><td>175,000</td></tr>
<tr><td>Tree planting (100 trees)</td><td>755,000</td></tr>
<tr><td>Re-planting (14 sites)</td><td>400,000</td></tr>
<tr><td>Re-landscaping (up to 4 sites)*</td><td>1,170,000</td></tr>
<tr><td>TOTAL</td><td>2,500,000</td></tr>
</table>
*subject to detailed cost estimates ahead of Gateway 5 – see site prioritisation in table above</td></tr>
</table>

Project Overview	
	Please also refer to finance tables in Appendix 4. More detailed cost estimates will be prepared ahead of the Gateway 5 reports.
9. Funding strategy	OSPR funding as part of the Climate Action Strategy
10. Investment appraisal	*N/A* *Asset enhancement*
11. Estimated capital value/return	*N/A* *Asset enhancement*
12. Ongoing revenue implications	The detailed project costs will be developed at the next stage and will include an allowance for the establishment and maintenance of the trees and planting.
13. Affordability	Funding fully allocated as part of CAS
14. Legal implications	*None*
15. Corporate property implications	*None.*
16. Traffic implications	Some of the sites will need to be designed to accommodate existing cycle routes through.
17. Sustainability and energy implications	The project will achieve best practice/ industry leading standards The project will meet the following Climate Action Strategy Objectives: • The Square Mile's buildings, public spaces and infrastructure are resilient to climate change • People in the Square Mile and beyond benefit from a clean, green and safe environment

Project Overview	
	Relevant Climate Action Strategy Action: • Make the Square Mile public realm more climate change ready through adding in more green spaces, urban greening, flood resistant road surfaces, adaptable planting regimes and heat resistant materials The Biodiversity Action Plan (2021-26), Tree Strategy SPD (2012) and City Gardens Management Plan are also relevant as well as the Climate resilient planting catalogue that is currently being prepared. In addition, this project helps to deliver towards proposals 7 to 10 of the City's Transport Strategy in delivering the strategy outcome of "The Square Mile's streets are great places to walk and spend time"
18. IS implications	*None*
19. Equality Impact Assessment	An EQIA will be undertaken and the City's COLSAT tool will be used where appropriate to inform the design before the Gateway 5 report is submitted (for some of the relandscaping sites). Healthy streets checks will also be undertaken on these sites.
20. Data Protection Impact Assessment	*N/A*
21. Recommendation	Recommended