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 26 January 2023 17 January 2023
Subject: City Greening and Biodiversity – Phase 3 of the Cool Streets and Greening Programme	Gateway 3/4: Options Appraisal (Regular)
Unique Project Identifier:	
12332	
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

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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;
- 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)*

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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

Context

- 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.

City Greening and Biodiversity project

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.

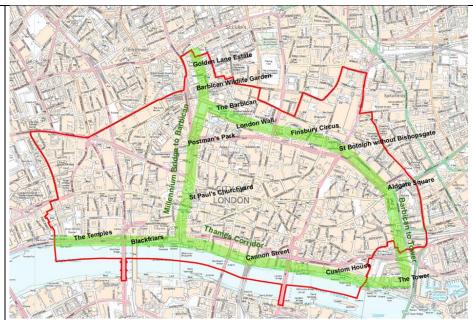
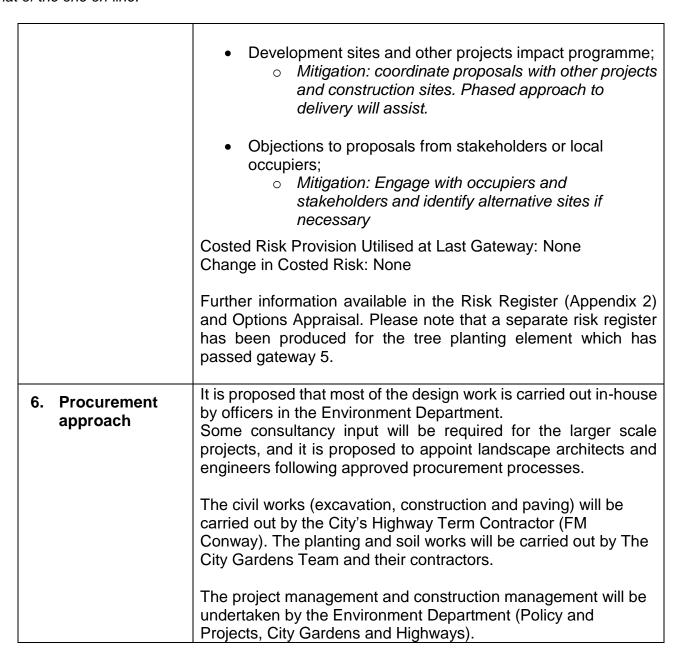


Figure 1: Indicative cool routes and biodiversity green corridors through the City

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 relandscaping 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.



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

Contact

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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.

Pi	oject Overview			
1.	Brief description of option	project aims to introduc	ning and Biodiversity) forms Phase 3 of the Cool Streets and be more trees, improve planting and re-landscape areas of the resilience and enhance biodiversity.	5 . 5
2.	Scope and exclusions			y to Gateway 5 in order per to March). This Gate
		resilient palette	sites have been identified to be either fully or partially re-pla and biodiversity enhancements. These are described in the t	able below:
		resilient palette Re-planting Sites	and biodiversity enhancements. These are described in the t Proposals	able below: Green corridor
		resilient palette	and biodiversity enhancements. These are described in the t	able below:
		resilient palette Re-planting Sites All Hallows on the	Proposals Shrub planting with access to historic wall	able below: Green corridor

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

Project Overview			
	existing paved areas, sites vary in scale and the Appendix. The pro- the first instance. Pav	ategically selected sites have been identified to be enhance climate resilience and biodiversity and proposals are summarised below with further detoject funding will be focussed on delivering greening improvements, seating and other street furnituided in scope if funding is available.	ovide amenity space. These ails set out in the masterplar og and biodiversity benefits in
	Re-landscaping Sites (listed in priority order)	Proposals	Green corridor
	London Wall/Moorgate (significant corner space)	 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) 	Barbican to Tower
	Finsbury Circus Western Arm (existing carriageway space that has been closed to vehicles) – significant new green route	 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) 	Barbican to Tower
	Fetter Lane (north)	Existing asphalt carriageway space that has been closed to vehicles for several years	Area of greening deficiency

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 Area of greening deficiency
		 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

value, microclimate management, wa considered (see table below) within t the resilience of these spaces. The a	critical in delivering on the key ecosystem service areas: biodiversity ater management and wellbeing. The following enhancements will be he scope of the sites to maximise the opportunity for wildlife and increas ims of these measures include creation/restoration of relevant habitat ties and to ensure an adequate level of redundancy in planting schemes
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	ect masterplan in Appendix 3.
All proposals relate to either public hi excluded from the scope of this proje	ighway or open spaces that the City already maintains. Private land is

Pr	oject Overview	
Pro	oject 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

Pr	oject Overview					
6.	Benefits of option	 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. 				
7.	Disbenefits of option	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).				
Re	source Implications					
8.	Total estimated cost (excluding risk): £2.5m (inclusive of maintenance). Table 2: City Greening and Biodiversity – estimated cost					
		Item	Estimated Cost			
			(excluding risk)			
		Evaluation and Design	175,000			
		Tree planting (100 trees)	755,000			
		Re-planting (14 sites)	400,000			
		Re-landscaping (up to 4 sites)*	1,170,000			
i I		TOTAL	2,500,000			
		*subject to detailed cost estimates a	ahead of Gateway 5 – s	see site prioritisation in table above		

Pro	ject 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	The project will achieve best practice/ industry leading standards	
	implications	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 	

Pro	oject Overview		
		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	

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Appendix 1 – Project Coversheet

Project Coversheet

[1] Ownership & Status

UPI: 12332

Core Project Name: City Greening and Biodiversity

Programme Affiliation (if applicable): Cool Streets and Greening (part of

Climate Action Strategy)

Project Manager: Melanie Charalambous

Definition of need:

The City's climate is changing. We need to adapt the City's environment to hotter drier summers, warmer wetter winters, sea level rise and more frequent extreme weather events.

The Cool Streets and Greening Programme is a key delivery mechanism of the City's Climate Action Strategy that aims to create resilient streets and open spaces in the Square Mile.

The benefits of greenery in the public realm are well documented. Trees and planting aid in softening the built environment and have the potential to improve environmental conditions offering shade, pollutant filtration and habitat creation as well as reducing greenhouse gas emissions.

Key measures of success:

- -To improve the Square Mile's Urban Greening Factor
- -To Increase the amount of climate resilient planting in the City
- -To improve opportunities and corridors for biodiversity and deliver on the outcomes of the City's Biodiversity Action Plan

Expected timeframe for the project delivery: 2022-2025 **Key Milestones:**

- Undertake local stakeholder engagement Feb July 2023
- Finalise detailed designs and construction information Feb July 2023
- Prepare detailed cost estimates and programme Feb July 2023
- Prepare Gateway 5 reports March Sept 2023
- Implementation 2023 2025
- Gateway 6 will be submitted in mid 2025

Are we on track for completing the project against the expected timeframe for project delivery? N

2-3 month programme delay as a result of the Capital project review and above milestones have been amended as a result.

Has this project generated public or media impact and response which the City of London has needed to manage or is managing?

Yes. Managed as part of Climate Action Strategy

[2] Finance and Costed Risk

Headline Financial, Scope and Design Changes:

'Project Briefing' G1 report (as approved by Chief Officer April 2022

- Total Estimated Cost (excluding risk): £1.5m £2.5m
- Costed Risk Against the Project: n/a
- Estimated Programme Dates: 2022-2025

Scope/Design Change and Impact: no change

'Project Proposal' G2 report (as approved by PSC May 2022)

- Total Estimated Cost (excluding risk): £1.5-2.5m
- Resources to reach next Gateway (excluding risk) £80,000
- Spend to date: N/A
- Costed Risk Against the Project: none
- CRP Requested: none
- CRP Drawn Down: none
- Estimated Programme Dates:2022-2025

Scope/Design Change and Impact: no change

'Options Appraisal and Design' G3-4 report (Dec 2022 and Jan 2023 the subject of this report) Note: the tree planting element of the project went straight to GW5 in order to not miss the opportunity to plant trees in the planting season (Nov –March)

- Total Estimated Cost (excluding risk): £2.5m
- Resources to reach next Gateway (excluding risk): 95k
- Spend to date: £49,804 (for the whole of Ph 3)
- Costed Risk Against the Project: None
- CRP Requested: None
- CRP Drawn Down: None
- Estimated Programme Dates: 2023 2025

Scope/Design Change and Impact: no change

'Authority to start Work' G5 report – Tree planting (approved by Chief Officer Nov 2022)

- Total Estimated Cost (excluding risk): £755,000
- Resources to reach next Gateway (excluding risk): £755,000
- Spend to date:
- Costed Risk Against the Project: £45,000
- CRP Requested: £45,000
- CRP Drawn Down:
- Estimated Programme Dates: 2022 2024

Scope/Design Change and Impact: none

Total anticipated on-going commitment post-delivery [£]:maintenance costs included within capital project costs Programme Affiliation [£]:Cool Streets and Greening (CAS)