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<p><b>Committees:</b>          Projects and Procurement Sub (for information)          Streets and Walkways Sub (for decision)          Natural Environment Board (for information)</p>	<p><b>Dates:</b>          04 December 2023          07 November 2023          04 December 2023</p>
<p><b>Subject:</b>          Climate Action Strategy, Cool Streets and Greening Programme – Phase 4           SuDS (Sustainable Urban Drainage) for Climate Resilience   <b>Unique Project Identifier:</b>  <i>PV Project ID 12267</i></p>	<p><b>Gateway 4:          Detailed Design          (Regular)</b></p>
<p><b>Report of:</b>          Interim Executive Director, Environment   <b>Report Author:</b>          Melanie Charalambous</p>	<p><b>For Decision</b></p>
<p><b>PUBLIC</b></p>	

<p><b>1. Status update</b></p>	<p><b>Project Description:</b> Cool Streets and Greening is a £6.8m Climate Action Strategy programme to pilot climate resilient streets and open spaces in the Square Mile. Phases 1, 2 and 3 of this programme are underway. This report seeks approval to progress Phase 4 <i>SuDS (Sustainable Urban Drainage) for Climate Resilience</i> workstream.</p> <p><b>RAG Status:</b> Amber (Green at last report to Committee)</p> <p><b>Risk Status:</b> Amber (Low at last report to committee)</p> <p><b>Total Estimated Cost of Project (excluding risk):</b> £1.4m - £1.7m</p> <p><b>Change in Total Estimated Cost of Project (excluding risk):</b> Decrease of £700,000 since last report to Committee.</p> <p><b>Spend to Date:</b> £93,495.</p> <p><b>Costed Risk Provision Utilised:</b> None</p> <p><b>Slippage:</b> It was originally intended to identify up to ten suitable sites for SuDS interventions. However, it has only been possible to identify six so far, due to the extensive presence of underground utilities</p>
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	<p>across the City. Site surveys and investigations have also taken longer than expected which has delayed the project programme. The revised end date for this Phase is March 2025.</p>
<p><b>2. Next steps and requested decisions</b></p>	<p><b>Next Gateway:</b> Gateway 5: Authority to Start Work for four of the sites detailed in this report and Gateway 4: design reports for Lloyds Avenue and Ludgate Broadway</p> <p><b>Next Steps:</b></p> <ul style="list-style-type: none"> <li>• Ongoing engagement with local occupiers</li> <li>• Further detailed design development</li> <li>• Carry out trial holes and develop construction drawings</li> <li>• Traffic order process to relocate parking bays as required</li> <li>• Other approvals to be sought as required</li> </ul> <p><b>Requested Decisions:</b></p> <p>It is recommended that the Streets and Walkways Sub-Committee:</p> <ol style="list-style-type: none"> <li>1. Approve the additional budget of £95,000 to reach the next Gateway, funded from the Cool Streets and Greening Programme (OSPR);</li> <li>2. Approve the revised total estimated cost range for this Phase (excluding risk) of £1.4m - £1.7m;</li> <li>3. Delegate approval of the Costed Risk Provision to the Chief Officer if one is sought at Gateway 5;</li> <li>4. Approve the statutory consultation on the proposed relocation of parking bays as set out in this report;</li> <li>5. Authorise officers to enter into an agreement with the Church to enable the St Andrew Undershaft churchyard works to proceed.</li> <li>6. Note that two of the sites (Ludgate Broadway and St Andrew Undershaft) include additional repaving and public realm enhancements that are to be funded by ring-fenced S106 funds that have been allocated to the projects and this will be detailed in future Gateway reports.</li> <li>7. Note that the sites at Ludgate Broadway and Lloyds Avenue will require further design work and will be the subject of a future Gateway 4 report in early 2024.</li> <li>8. Note that the underspend from this Phase will be redirected to Phase 3 of the programme to further progress tree planting, relandscaping for climate resilience and climate resilient planting. This will be formalised in a forthcoming programme update report in early 2024.</li> </ol>

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<p><b>3. Resource requirement to reach next Gateway</b></p>	<table border="1"> <thead> <tr> <th>Item</th> <th>Reason</th> <th>Funds/ Source of Funding</th> <th>Cost (£)</th> </tr> </thead> <tbody> <tr> <td>Fees</td> <td>Surveys, design fees, traffic order fees and trial holes</td> <td>OSPR</td> <td>30,000</td> </tr> <tr> <td>Staff Costs (P+T)</td> <td>Project management and public engagement</td> <td>OSPR</td> <td>30,000</td> </tr> <tr> <td>Staff Costs (Highways)</td> <td>Design and utility investigations</td> <td>OSPR</td> <td>35,000</td> </tr> <tr> <td><b>Total</b></td> <td></td> <td><b>OSPR</b></td> <td><b>95,000</b></td> </tr> </tbody> </table> <p><b>Costed Risk Provision requested for this Gateway: None</b></p>				Item	Reason	Funds/ Source of Funding	Cost (£)	Fees	Surveys, design fees, traffic order fees and trial holes	OSPR	30,000	Staff Costs (P+T)	Project management and public engagement	OSPR	30,000	Staff Costs (Highways)	Design and utility investigations	OSPR	35,000	<b>Total</b>		<b>OSPR</b>	<b>95,000</b>
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<p><b>4. Design summary</b></p>	<p>4.1 The Climate Action Strategy Cool Streets &amp; Greening programme is introducing climate resilience measures into the City’s public realm to avoid future disruption from climate risks. Phases 1, 2 and 3 of this programme are underway and this report relates to Phase 4.</p> <p>4.2 This phase seeks to introduce SuDS for Climate Resilience, strategically across the Square Mile at several sites. This strategic approach will result in wider climate resilience benefits such as protection from surface water and sewer surcharge flood risk resulting from extreme rainfall events, across the City.</p> <p>4.3 Since the approval of the Gateway 2/3 report in November 2022, officers have carried out extensive site investigations and surveys in order to confirm locations where SuDS can be installed in the public realm. As expected, the main constraint has been the presence of underground utilities. This has meant that fewer sites have been identified than originally planned.</p> <p>4.4 The table below sets out the sites that have been confirmed as locations for SuDS installations where designs have been developed. Please see plans and sketch views in Appendix 3. Officers will continue to carry out site investigations and surveys at other potential</p>																							

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sites and these will be subject to a future Gateway 4 report in early 2024 if feasibility is confirmed.		
<b>Site</b>	<b>Proposal</b>	<b>Notes/Dependencies</b>
St Andrew Undershaft Churchyard	Rainwater harvesting from Church roof run-off to serve new planters and planting beds	Re-paving, new benches and reconfigured steps to be separately funded by S106 receipts that have been allocated to the delivery of the City Cluster Programme
St Andrews Hill	Rain garden and tree planting	Cycle racks to be relocated nearby. There is potential to extend this rain garden further north and relocate a parking bay to provide additional improvements. If this is feasible, Members will be updated in the new year.
Bread Street (south)	Rain garden and tree planting	Cycle racks to be relocated nearby
Knight rider Court	Extend pavement in front of café and add rain garden	Disabled parking bays are to be relocated nearby. Surveys indicate these 2 existing bays are not well used and more accessible locations have been identified nearby for their relocation. This is subject to further survey work ahead of Gateway 5.
Ludgate Broadway	Rain garden and tree planting with associated pavement and carriageway works. Replacing temporary 'parklet' with permanent design.	Further feasibility, design work and consultation is required ahead of a further Gateway 4 report in the new year.  Raised sections of carriageway, widened pavements and some carriageway re-surfacing in granite setts are to be separately funded by S106 receipts that have been allocated to the delivery of the Fleet Street Healthy Streets Plan

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	Lloyds Avenue	Rain gardens and tree planting	Further feasibility, design work and consultation is required ahead of a further Gateway 4 report in the new year. Parking bays and cycle/scooter bays will need to be relocated.
<p>4.4 The majority of the SuDS interventions are rain gardens which are shallow planting beds, designed to collect rainwater run-off from adjacent paved areas and thereby slow the movement of rainwater into the sewer system. The added benefits of these gardens are that they also soften the urban environment, enhance the public realm and support biodiversity. At some of the sites, areas of permeable paving will also be possible, as well as tree planting and associated public realm improvements.</p> <p>4.5 The St Andrews Undershaft Churchyard scheme aims to improve the space and introduce a series of climate resilience measures. A key component underpinning the redesign has been the incorporation of sustainable drainage measures. The system is designed not only to capture water to help irrigate the new planting beds but also to attenuate and cleanse any roof and surface water runoff before entering the already pressurised combined sewer system. A sustainable drainage strategy introduces downpipe diversions, rainwater planters, permeable paving and below-ground attenuation to improve the quality and quantity of the water attenuated whilst also providing benefits to both the amenity and biodiversity on offer. The scheme also includes additional seating, a more accessible space and increased greenery.</p> <p>4.6 A number of the interventions listed above have dependencies that will either enable them to be delivered or will lead to a more successful scheme. Several are kerbside locations that require the reclamation of carriageway space and the relocation of parking bays or street furniture. The proposal for Ludgate Broadway incorporates widened pavements, raised sections of carriageway and re-surfacing to improve accessibility and create an enhanced public realm, in keeping with the conservation area location. This project received a high degree of support from the recent consultation on the Fleet Street area healthy streets plan.</p> <p>4.7 These SuDS schemes will help to establish a new way of designing the City's public realm whereby environmental resilience measures including SuDS and planting are a high priority and therefore become more prevalent, enabling the City to better adapt to climate change.</p>			

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	<p>4.8 Initial engagement with local occupiers has been undertaken with positive responses received. The next steps include trial holes and further engagement on the detailed designs ahead of Gateway 5 reports to be submitted to the Chief Officer for approval. St Andrew Undershaft will have an individual Gateway 5 report due to its complex nature and different funding sources. The other smaller scale interventions will be covered by one Gateway 5 report. Lloyds Avenue and Ludgate Broadway require further design work and a Gateway 4 report for these sites will be submitted in the new year.</p> <p>4.9 The impacts of the SuDS schemes will be assessed as part of the Cool Streets and Greening programme's lessons learnt. The possibility of including a gully sensor in one of the schemes as part of the Climate Sensor's Network is currently being reviewed. This would provide data to quantify the impact of the schemes.</p> <p>4.10 The previous Gateway 2/3 report listed a number of sites which have been investigated but are not able to be progressed; typically due to utility congestion. These include sites at Lambeth Hill, St Martin-le-Grande, Godliman Street, Tooks Court, Houndsditch and Swan Lane. Some of the sites showed potential for tree planting which will be progressed as part of Phase 3 of the programme.</p>
<p><b>5. Confirmation that design solution will meet our SMART objectives</b></p>	<p>Climate Action Strategy Objectives:</p> <ul style="list-style-type: none"> <li>• The City of London Corporation and its assets are resilient to climate change</li> <li>• The Square Mile's buildings, public spaces and infrastructure are resilient to climate change</li> <li>• People in the Square Mile and beyond benefit from a clean, green and safe environment and job creation</li> </ul> <p>This project will reduce the risks of flooding from the increased and more intense rainfall which we are already experiencing as a result of climate change.</p> <p>The strategically located SuDS schemes will not only reduce surface water flood risk at individual sites but will reduce rainwater run-off into the drainage network and subsequent risk of sewer surcharge flooding elsewhere in the City.</p> <p>The design of raingardens and the planting palette used will efficiently use water, introducing greening whilst avoiding the need for irrigation. This will help to counter the Urban Heat Island and provide opportunities for biodiversity.</p>
<p><b>6. Risks</b></p>	<p>The main risks are as follows:</p> <ul style="list-style-type: none"> <li>• Utilities and underground structures restrict the ability to implement the schemes.</li> </ul>

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	<p>Response: Ground investigations including radar surveys have been carried out for all sites. Further trial holes are needed to confirm underground conditions.</p> <ul style="list-style-type: none"> <li>• Objections from local occupiers Response: Initial consultation has been undertaken with local occupiers with positive responses and further engagement is planned as the designs are developed.</li> <li>• Cost escalation as a result of inflation or other factors Response: initial cost estimates have been produced and the proposed cost range is sufficient to cover the project costs including maintenance of planting.</li> </ul> <p>Further information available in the Risk Register (Appendix 2).</p>
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**Appendices**

<b>Appendix 1</b>	Project Coversheet
<b>Appendix 2</b>	Risk Register
<b>Appendix 3</b>	Plans and Sketch designs

**Contact**

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