GREATERLONDONAUTHORITY

REQUEST FOR DIRECTOR DECISION – DD2648

Title: Monitoring and Education Resources for Schools

Executive Summary:

The Climate Resilient Schools programme has supported over 70 schools by installing planters to capture rainwater. This reduces the risk of flooding, as well improving air quality and increasing biodiversity.

A total of £106,000 has already been spent on this project under MD2827. A further £44,000 is sought to continue monitoring the performance of the planters, and to engage with schools in producing educational resources for pupils and handing over equipment for long-term use.

The data collected over the year will help assess the impact of the school's programme.

Decision:

That the Executive Director of Good Growth approves:

1. expenditure of £44,000 on to continue to monitor the impact of the Climate Resilient Schools programme and to produce materials for schools to use (bringing the cumulative value of GLA's engagement with AmbioTek to £150,000)
2. an exemption from the GLA's Contracts and Funding Code to commission the above services without procuring competitively.

AUTHORISING DIRECTOR

I have reviewed the request and am satisfied it is correct and consistent with the Mayor's plans and priorities.

It has my approval.

Name: Philip Graham	**Position:** Executive Director, Good Growth
Signature: 	**Date:** 08/01/2024

PART I - NON-CONFIDENTIAL FACTS AND ADVICE

Decision required – supporting report

1. Introduction and background

1.1. The award-winning Climate Resilient Schools programme, delivered under MD2827, is a partnership between the Mayor of London, the Department for Education (DfE) and Thames Water, working with 95 schools to build their resilience to a changing climate. The programme targeted those schools most vulnerable to the impacts of climate change. The first phase of the programme ran until 31 March 2023 and delivered four workstreams:

- Rain planters: Installation of 564 sustainable drainage (SuDS) rain planters into 72 schools to reduce surface water flood risk by collecting rainwater from roofs in the soil, rather than going directly into the drains. The rain planters also increase biodiversity, reduce heat risk and air pollution.
- Climate adaptation plans: Development of bespoke plans for 60 of the 95 schools, drawing on GLA guidance, 'How Schools and Early Years Settings Can Adapt to Climate Change'. Plans have identified adaptation and resilience measures schools can implement to address overheating risk (e.g. playground shade structures), flood risk (e.g. SuDS) and water scarcity risk (e.g. water butts). The GLA is actively exploring how it can support measures identified in the climate adaptation plans, along with partners
- Smarter Business Visits: Thames Water's free Smarter Business Visits address leaks and install water efficient fitting in 28 schools on the programme. This included tap restrictors, urinal sensors and converting single-flush toilets to dual-flush ones. These measures saved 558,892 litres per day across the 28 schools. This equates to 1 Olympic swimming pool of water saved over a week
- Monitoring and education: Installation of soil-moisture loggers in 30 SuDS rain planters and weather stations on 23 school roofs across 15 boroughs. These allow a comprehensive assessment and evaluation of the SuDS rain planters performance for a range of roof and planter types and sizes and a range of surface water flooding conditions. It is also providing an unparalleled monitoring network across London, recording climate resilience-relevant weather data at high frequency, with applications to understanding surface water flooding, heat and wind extremes. The network also engages schools in climate resilience data collection for London, with educational co-benefits for all school years. This workstream has been delivered by AmbioTEK (a non-for-profit company) in partnership with King's College London (KCL).

1.2. This monitoring and education part of the programme has been successful in creating a new extensive network of weather stations across London. This is proving valuable for not just the schools, but for other organisations as the data is open source and accessible to all. Weather stations can provide useful data on urban climates by densifying the number of weather measurements across major cities. They do so at a lower cost than official weather stations by national meteorological services.

1.3. The weather station network will help build knowledge to inform policy and actions locally for heat and flooding. It will provide valuable data during high heat and extreme rainfall events and measure and record the extremes at a local level, helping understand the impact of those events. This work will also feed into project the GLA's climate change adaptation team is scoping with University College London (UCL) and other partners to pilot installing a small network of heat sensors at key locations in London with the aim of scaling up, should the pilot be successful.

1.4. The SuDS rain planter monitoring effort is necessary to provide the best possible assessment of the effectiveness of the planters in different school and rainfall situations so as to best guide future interventions.

1.5. A year's worth of measurements needs to be gathered from the loggers in the SuDS planters and weather stations to determine the performance and impact of the SuDS planters over the course of a year in reducing flood risk e.g. assessing summer storm events and longer winter rainfall events. They will also measure the effect of any potential drought events in the summer months and how the SuDS planters hold up to this e.g. do they require additional watering or is the stored water from rainfall enough.

1.6. This DD seeks approval to spend additional money on monitoring and education during 2023/24, as the monitoring element of the climate resilient schools programme started late in the year with loggers and weather stations installed in the schools between October 2022 and March 2023. The previous contract with AmbioTEK had no option to extend so the contract extension would need to be undertaken as a direct award. A single source justification will be required and completed. A fresh procurement is not appropriate as this is a continuation of existing work that cannot be separated and started anew.

1.7. So far, this part of the programme has cost £106,000. A further £44,000 is needed to maintain the SuDS rain planter monitoring until March 2024 and develop more education resources. This cost also incudes converting the weather stations into "live" stations so the data can be uploaded to the internet automatically with 36 months of data costs to keep the weather stations for 3 years. It is anticipated that the schools would take over the maintenance of the weather stations with support from AmbioTEK and Kings College London.

2. Objectives and expected outcomes

2.1. The objectives of the project are:

- the maintenance of SuDS rain planter loggers and weather stations for 1 year, including logger power monitoring and calibration during the winter months
- further develop educational resources in collaborative with teachers, including teacher training on in-classroom equipment demonstrations and data dashboard use in class
- install up to 5 more weather stations on schools to increase coverage of weather monitoring across London
- handover the weather stations towards the end of the project to schools, this will involve training school staff. The data will continue to be feed into the London-wide network post March 2024 via live links to the internet. In March 2024, decommissioning of the SuDS planter loggers, with parts recycled.

2.2. The outcomes of the project are to:

- evaluate the contribution of the SuDS rain planters to reducing surface water flooding on the school premises by measuring the volume of water stored by the planter in relation to the volume produced by the downpipe during different rainfall events
- improve the profile and understanding of climate change adaptation by providing local monitoring data and providing education resources to engage students

- support education outcomes for the schools involved including through weather station posters, in-classroom demonstrations, and data dashboards
- contribute to improving London's high resolution weather data, which can be invaluable in understanding the spatial extent and variability of major climate and weather events such as the surface water flooding across London in 2021. This will help build knowledge to inform policy and actions locally for heat and flooding.

3. Equality comments

3.1. Under Section 149 of the Equality Act 2010, as a public authority, the Mayor of London must have 'due regard' of the need to eliminate unlawful discrimination, harassment and victimisation as well as to advance equality of opportunity and foster good relations between people who have a protected characteristic and those who do not. This involves having due regard to the need to remove or minimise any disadvantage suffered by those who share a relevant protected characteristic; taking steps to meet the different needs of such people; and encouraging them to participate in public life or in any other activity where their participation is disproportionately low.

3.2. This project is supporting those children most at risk from a changing climate. The schools taking part in the project were chosen based on their climate risks. Schools chosen have a high ranking in the Department for Education surface water flooding risk and have a high score for heat risk on the GLA Climate Risk Map (this map includes a range of environmental and demographic metrics which give an indication of exposure and vulnerability to climate change impacts).

3.3. Climate change will disproportionately affect those least able to respond and recover from it. Children, especially very young children and those with special educational needs and pre-existing health conditions, are particularly vulnerable to the impacts of climate change. This is because they are less able to respond quickly to extreme weather events, have relatively limited experience of changing conditions, lack knowledge about how to adjust their behaviours and are dependent on teachers and other adults for guidance. Older children without special educational needs may be less vulnerable and less dependent on adults but are still affected by the disruption caused by extreme weather events. In addition, high indoor temperatures not only have adverse effects on health and wellbeing but also effect cognitive performance and the ability to learn[1].

3.4. Climate vulnerability relates to people's exposure to climate impacts such as flooding or heatwaves, but also to personal and social factors that affect their ability to cope with and respond to extreme events. High climate risk coincides with areas of income and health inequalities.

3.5. Equalities implications will be kept under ongoing review and taken into account as individual project applications are assessed and projects are delivered as part of the Inclusive Green Space and Climate Resilience Programme.

4. Other considerations

4.1. The key risks and issues are set out in Table 1 below.

[1] https://www.researchgate.net/publication/233004128_The_Effects_of_Moderately_Raised_Classroom_Temperatures_and_Classroom_Ventilation_Rate_on_the_Performance_of_Schoolwork_by_Children_RP-1257

Table 1 – Risks and issues

Risk	Likelihood	Impact	Mitigation	RAG rating
Vandalism or breakage of the SuDS planter monitors	Low	Low	Most monitors are in the school grounds and protected from outside tampering. Pupils could play with the monitors however there are signs with them to say what they are. Schools will be visited every half term to make sure all equipment is working and replace/fix equipment where necessary.	Green
Lack of engagement from schools on education resources	Medium	Low	A number of teachers have been responsive to the development of education resources and we hope to carry on those relationships to make sure the resources are made use of well.	Green

4.2. The project will contribute to the following Mayoral strategies:

- London Environment Strategy Policy 8.2.1: reduce the risk and manage the impacts of surface water, sewer, fluvial, reservoir and groundwater flooding in London
- London Environment Strategy Policy 8.2.3: increase the amount of sustainable drainage, prioritising greener systems across London in new development, and also retrofit solutions
- London Environment Strategy Policy 8.4.2: ensure critical infrastructure providers and occupants of homes, schools, hospitals, and care homes are aware of the impacts of increased temperatures and the Urban Heat Island, to protect health and reduce health inequalities
- London Environment Strategy Proposal 8.4.2.a Provide locally specific data and modelling to demonstrate and evidence the impacts of the Urban Heat Island

Conflicts of interest

4.3. GLA officers involved in the drafting or clearance of this form are not aware that they have any conflicts of interest with the proposed programme.

4.4. If any conflicts of interest arise during the delivery of the programme (ie, a GLA officer has links with an organisation which applies for a grant) they will declare that interest and not take any part in assessing that grant application or awarding funding to that organisation.

5. Financial comments

5.1. Approval is requested for expenditure of up to £44,000 in 2023-24 to monitor the impact of the Climate Resilient Schools programme and to produce materials for schools to use.

5.2. This expenditure will be funded from the Climate Change Adaption Delivery budget within the Environment unit's approved budget for 2023-24 financial year.

5.3. All expenditure will be incurred within the 2023-24 financial year.

6. Legal comments

6.1. The foregoing sections of this report indicate that the decisions requested of the Executive Director of Good Growth concern the exercise of the GLA's general powers, falling within the GLA's statutory powers to do such things considered to further or that are facilitative of, or conductive or incidental to, the promotion of economic development and wealth creation, social development or improvement of the environment, in Greater London.

6.2. In implementing the proposals in respect of which a decision is sought, officers should comply with the GLA's related statutory duties to:

- pay due regard to the principle that there should be equality of opportunity for all people;
- consider how the proposals will promote the improvement of health of persons, health inequalities between persons and to contribute towards the achievement of sustainable development in the United Kingdom; and
- consult with appropriate bodies.

6.3. In taking the decisions requested, as noted in section 3 above, the Executive Director of Good Growth must have due regard to the Public Sector Equality Duty under section 149 of the Equality Act 2010, namely the need to eliminate discrimination, harassment, victimisation and any other conduct prohibited by the Equality Act 2010; to advance equality of opportunity between persons who share a relevant protected characteristic (race, disability, gender, age, sex, sexual orientation, religion or belief, pregnancy and maternity, and gender reassignment) and persons who do not share it; and to foster good relations between persons who share a relevant protected characteristic and persons who do not share it. To this end, the Executive Director of Good Growth should have particular regard to section 3 (above) of this report.

6.4. Section 1 of this report indicates that part of the sought budget will amount to the provision of funding. Officers must ensure that the funding is distributed fairly; transparently; in accordance with the GLA's equality policy and subsidy control rules; and in a manner that affords value for money in accordance with the GLA Contracts and Funding Code. Officers must ensure that an appropriate funding agreement is put in place and executed by the GLA and the recipient before any commitment to funding is made.

6.5. The procurement to commission consultancy services from AmbioTek is valued at £44,000 (bringing the cumulative value of GLA's engagement with AmbioTek to £150,000), whereby the GLA's payment for services will be covered by the overall expenditure requested under this DD. Section 9 of the GLA's Contracts and Funding Code requires that the Authority undertake a formal tender process or make a call off from an accessible framework for procurements with a value between £10,000 and £150,000. However, section 10 of GLA's Contracts and Funding Code also provides that an exemption from this requirement may be justified on the basis that this is a continuation of existing work that cannot be separated and started anew The officers have set out at paragraphs 1.6 above the reasons why the procurement of the services from AmbioTek falls

within the said exemption. Accordingly, the Executive Director of Good Growth may approve the exemption, if she or he be so minded.

7. Planned delivery approach and next steps

Activity	Timeline
Procurement of the contract	January 2024
Delivery Start Date	January 2024
Final evaluation start and finish	March 2024
Delivery End Date	March 2024
Project Closure	April 2024

Appendices and supporting papers:
None.

Public access to information

Information in this form (Part 1) is subject to the Freedom of Information Act 2000 (FoIA) and will be made available on the GLA website within one working day of approval.

If immediate publication risks compromising the implementation of the decision (for example, to complete a procurement process), it can be deferred until a specific date. Deferral periods should be kept to the shortest length strictly necessary. **Note**: This form (Part 1) will either be published within one working day after it has been approved or on the defer date.

Part 1 - Deferral

Is the publication of Part 1 of this approval to be deferred? NO

Part 2 – Sensitive information

Only the facts or advice that would be exempt from disclosure under FoIA should be included in the separate Part 2 form, together with the legal rationale for non-publication.

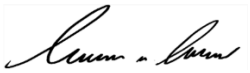
Is there a part 2 form – NO

ORIGINATING OFFICER DECLARATION:	Drafting officer to confirm the following (✓)
Drafting officer: Holly Smith has drafted this report in accordance with GLA procedures and confirms the following:	✓
Assistant Director/Head of Service: Catherine Barber has reviewed the documentation and is satisfied for it to be referred to the Sponsoring Director for approval.	✓
Financial and Legal advice: The Finance and Legal teams have commented on this proposal, and this decision reflects their comments.	✓
Corporate Investment Board A summary of this decision was reviewed by the Corporate Investment Board on 8 January 2024.	✓

INTERIM CHIEF FINANCE OFFICER:

I confirm that financial and legal implications have been appropriately considered in the preparation of this report.

Signature:



Date:

08/01/2024