Schedule 7B

FORM OF AGREEMENT – SHORT FORM

THIS AGREEMENT is made the 27 day of February 2020

CONTRACT NUMBER: TfL 91312 / Task 75 – Guidance for schools on adapting to climate change

OUTLINE AGREEMENT: [redacted]

SUB CATEGORY/LOT: G1. Climate Change Adaptation

BETWEEN:

(1) **Greater London Authority** (**"the *Employer*"** which expression shall include its successors in title and assigns); and

(2) **Ove Arup & Partners Limited** a company registered in England and Wales (Company Registration Number 01312453) whose registered office is at 13 Fitzroy Street, London, W1T 4BQ ("the *Consultant*").

WHEREAS:
This Agreement is made pursuant to a framework agreement between the Parties relating to the provision of TfL 91312 - Health & Safety and Environmental Services dated 13 July 2015 **("the Framework Agreement")**. The Employer wishes to have provided Consultancy Services as contained in Table 3. The Employer has accepted a proposal (Table 4) by the Consultant for the Services in accordance with the Short Form Conditions of Contract.

NOW IT IS AGREED THAT:
Terms and expressions defined in (or definitions referred to in) the short form conditions of contract have the same meanings herein. The Consultant Provides the Services in accordance with the Short Form Conditions of Contract, Tables and Schedules. The Employer pays the Consultant the amount due in accordance with the short form conditions of contract. The documents forming the contract are:

This Form of Agreement duly executed by the Parties;
Short Form Conditions of Contract;
Table 3, Table 4 and Table 5;
The Schedules

Where there is any discrepancy or conflict within or between the documents forming the contract the order of priority shall be as follows:

First	:	This Form of Agreement;
Second	:	Table 5;
Third	:	Table 3;
Fourth	:	The Schedules;
Fifth	:	Short Form Conditions of Contract;
Sixth	:	Table 4.

1. Notwithstanding the manner of execution of this Agreement it is agreed that:

1.1 the limitation period within which any claim may be brought by the Employer for breach of this Agreement by the Consultant is 6 years from the date of breach; and

1.2 the Consultant agrees not to raise in defence of any such claim a shorter limitation period whether pursuant to the Limitation Act 1980 (as the same may be amended or re-enacted from time to time) or otherwise.

This Agreement has been signed for and on behalf of the Employer and the Consultant the day and year written above.

Signed by

for and on behalf of

The Consultant

[redacted]

[redacted]

Print name and position

Date: 26/2/2020

Signed by

for and on behalf of

The Employer

[redacted]

[redacted]

Print name and position

Date: 27/2/20

Table 3, Employer's Requirement:

See Attachment 1 Project deliverables / milestones to be agreed between Employer and the Consultant at the contract inception meeting

Table 4, Consultant's Proposal:

See Attachment 2

Table 5, Contract Particulars:

The total cost of the services is fixed at £29,670.00 and shall not exceed this amount. The rates shall remain fixed for the life of the Contract. TfL will not reimburse any additional costs for time, input, resource or other without prior written consent from TfL's Employing manager.
Contract Number: TfL 91312 / Task 75 – Guidance for schools on adapting to climate change
The Contract Commencement Date is: 02 March 2020 The Service Commencement Date is: 02 March 2020 The Contract Term is: The Contract shall terminate 31 July 2020
In accordance with Clause 7.1 of the Short Form Conditions of Contract, the Employer's Contract Manager is: [redacted]
In accordance with Clause 7.1 of the Short Form Conditions of Contract, the Employer's Procurement Manager is: [redacted]

In accordance with Clause 8.5 of the short form Conditions of Contract, the Consultant's Key Persons are: [redacted]
Notice period in accordance with Clause 25.4 of the Short Form Conditions of Contract (termination without cause): 7 days
Special Conditions of Contract: N/A
Invoice/Payment Period: (see Clauses 5.1 and 5.4 of Short Form Conditions of Contract): Clause 5.1 - The invoice period shall be 4-weekly in arrears. Clause 5.4 - Payment will be made within 30 days of receipt of invoices.
Consultant must send invoices via email, in pdf format, to: Invoices@tfl.gov.uk All invoices must have GLA Contract Reference Number, SAP Purchase Order number, GLA Contact name, a separate calculation of VAT and a brief description of the Services provided. Invoices shall be addressed to: Greater London Authority Accounts Payable 14 Pier Walk, North Greenwich, London, SE1 0ES

Attachment 1
The Employer's Requirement

GREATERLONDONAUTHORITY

The Specification

Guidance for Schools on Adapting to Climate Change

Project No : PSF 91312 HSE Task 75

Transport for London
5 Endeavour Square
Stratford
E20 1JN

TABLE OF CONTENTS

1. ORGANISATIONAL OVERVIEW

1.1 Transport for London (TfL)

TfL was created in 2000 as the integrated body responsible for London's transport system. TfL is a functional body of the Greater London Authority. Its primary role is to implement the Mayor of London's Transport Strategy and manage transport services to, from and within London.

TfL manages London's buses, the Tube network, Docklands Light Railway, Overground and Trams. TfL also runs Santander Cycles, London River Services, Victoria Coach Station, the Emirates Air Line and London Transport Museum. As well as controlling a 580km network of main roads and the city's 6,000 traffic lights, TfL also regulates London's taxis and private hire vehicles and the Congestion Charge scheme.

Further background on what TfL does can be found on the TfL website here:

https://tfl.gov.uk/corporate/about-tfl/what-we-do

1.2 Greater London Authority

The GLA is a unique form of strategic city-wide government for London. It was created by the Greater London Authority Act 1999 and came into being in the summer of 2000. It is made up of a directly elected mayor – the Mayor of London, and a separately elected Assembly – the London Assembly.

The mayor is the executive of London's government. He works closely with and sets budgets for:

- The GLA
- Transport for London (TfL)
- The Metropolitan Police Authority (MPA)
- The London Fire & Emergency Planning Authority (LFEPA).

The mayor also works closely with London's borough councils, who are responsible for providing many local services, to ensure that local and London-wide policies work together for maximum effect.

The Assembly scrutinises the mayor's activities, questioning the mayor about his decisions. The Assembly can investigate other issues of importance to Londoners and make proposals to the mayor. The London Assembly is made up of twenty-five members.

As a regional authority the GLA has many of the usual Local Government powers and constraints, and must comply with its own, under the 1999 Act.

1.3 Business Unit

The Mayor's London Environment Strategy (LES) was published in May 2018. The strategy takes an integrated approach focusing on creating a city that is healthy, resilient, fair and green as well as resource efficient (Greater London Authority, 2018).

The GLA's climate change adaptation team, sits within the GLA's Environment team, and is responsible, amongst other tasks, for the procurement of suppliers to deliver key programmes and associated project delivery tasks.

As a growing city, London faces increasing pressure on housing, infrastructure, services, environment; and challenges to ensure Londoners' positive wellbeing and prosperity. Climate change will increase these existing pressures and challenges to adapt. It will make flooding more frequent and severe, threaten water resources, and increase the risk of overheating for occupants of buildings, infrastructure. It will also likely intensify the urban heat island (UHI) effect which results in urban areas being warmer than surrounding rural areas.

The Intergovernmental Panel on Climate Change (IPCC) Special Report on Global Warming of 1.5°C released in October 2018 (IPCC, 2018) , stated that there may be as little as 12 years remaining to keep global temperature rise below 1.5°C. Beyond this the Earth would begin to see dangerous climate change - increasing risk and severity of floods, droughts, extreme heat and other extreme weather conditions by the 2030's. Climate change will disproportionately affect those least able to respond and recover. Londoners who don't have adaptive capacity such as older/younger people, those with pre-existing health conditions and/or those that are socially isolated are likely to suffer more from the impacts of extreme weather events. These impacts can negatively impact the health, wellbeing and productivity of children in schools (and nurseries) as well as teachers and can also, in extreme cases, lead to schools (and nurseries) having to close for one or more days. Children are amongst the most vulnerable because of their limited adaptive capacity ((Greater London Authority, 2018).

The challenge is how to manage these complex, and often interactive, pressures to ensure London and Londoners can adapt to climate change and stay resilient to any severe weather events that occur. Adaptation requires managing risks for the longer term. There are of course benefits of adaptation. For example, adaptation provides an opportunity to consider climate change alongside wider social, demographic, economic, environmental, and political priorities. This will help create a fairer, more prosperous, healthier, and more resilient city. But, in terms of managing risks for the longer term, for London to adapt to climate change and be more resilient to increased heat events, London's people, infrastructure social infrastructure such as schools, (hospitals, care homes, and public services), must be better prepared for

extreme weather events such as flooding, higher temperatures and water scarcity.

2. INTRODUCTION

2.1 Background

The mayor is particularly concerned about the impacts of extreme weather events on schools. Children at schools are particularly vulnerable to the impacts of extreme weather and climate change because of their limited capacity to adapt to severe weather events and dependency on teachers to guide them. Schools are often unprepared to be able to respond to extreme weather events because of competing priorities, lack of knowledge about how to prepare, respond and recover; and/or because of a lack of resources.

In addition, it may not always be the case that a school setting has enough adaptive facilities. For example, there may be an absence of and/or a limited number of 'cool rooms' to vacate to during a heatwave and/or a room above ground level during a flooding event. Some schools operate in porta cabins which are particularly vulnerable to extreme temperatures because of poor design, position of the porta cabin and/ or materials used that absorb heat and/or water.

London's climate is changing. We are already seeing the impacts of climate change in London with more frequent heatwaves and intense rainfall events. These are expected to increase in frequency and intensity, as will drier conditions and sea level rise. The 2003 heatwave resulted in over 600 excess deaths across London. In 2018, there were 420 deaths in the UK during four heat events. 643 of London's 2,895 schools (22 per cent) are either wholly or partially at risk of fluvial/tidal and/or surface water flooding.

Protecting health during extreme weather events is a public health priority. The mayor recognises that co-ordinated action is required to reduce risk to extreme weather events especially for those most 'at risk' such as children at school (and nurseries).

The mayor is committed to understand and manage the risks and impacts of severe weather and future climate change in London on critical infrastructure, public services, buildings and people. The London Environment Strategy (Greater London Authority, 2018) sets out the mayor's objectives and policy for protecting critical infrastructure and occupants as set out in the following objective and policies:

- Objective 8.2: Reduce risk and impacts of flooding in London on people and property, and improve water quality in London's river's and waterways.
- Policy 8.2.1a: Reduce the risk and manage the impacts of surface water, sewer, fluvial, reservoir and groundwater flooding in London.
- Policy 8.2.2: Ensure London maintains its standard of protection from increasing risk of tidal flooding.

- Objective 8.4: The mayor wants to ensure that London's people, infrastructure and public services are better prepared for and more resilient to extreme heat events.
- 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 UHI effect, to protect health and reduce health inequalities.

The term 'School' applies to:

English state-funded school provision education to pupils between the ages of 3 and 18 without charge. There are a number of categories of English state-funded schools including academy, schools, community schools, faith schools, foundation schools, free schools, 'studio schools', university technical colleges and a small number of state boarding schools and City Technology Colleges.

2.2 The GLA's guidance for school on adapting to climate change

The Greater London Authority would like to procure the services of a consultant to produce guidance for schools on how they can adapt to London's changing climate including flooding, higher temperatures/ heatwaves and water scarcity.

(When referencing schools in this specification, the GLA would like 'nurseries' to be considered as far as practicable. Therefore, the references to 'schools' throughout the scope also includes the reference to 'nurseries').

It is understood that currently there is no guidance that encompasses all three climate risks and recommended actions for schools in London. The project will reference existing tools and guidance that may be useful in helping schools adapt to specific impacts of climate change, for example:- the GLA's newly published SuDS for schools guidance on delivering sustainable drainage schemes in the school setting; Transport for London's Healthy Street approach; the emerging British Research Establishment Property Flood Resilience Guidance; and UNICEF's Climate Change Adaptation and Disaster Risk Reduction in the Education Sector.

2.3 Why children at schools?

According to two publications, Save the Children's (2008) 'Legacy of Disasters' and UNICEF UK's (2008) 'Our Climate, Our Children, Our Responsibility', it is children who will be hardest hit by the effects of climate change. These impacts will be seen, for instance, in the direct effects on educational provision associated with increasing incidence of severe weather events (for example, drought, flooding, cyclones, heat waves). Over the longer term, incremental environmental changes (for example, sea level change, salination, changes in season patterns, desertification, soil erosion, species

loss, etc.) are also likely to result in deteriorating livelihoods, which impact upon both household expenditure on schooling and the nutritional status of children (UNESCO Office Bangkok and Regional Bureau for Education in Asia and the Pacific, 2012)

Emergency responses to extreme weather events and their aftermath thus have the potential to undermine investment in improving the quality of education. Interrupted and/or impeded access to education has a detrimental impact on learning outcomes, reducing the likelihood that children and young people.

Education is recognised as an important first step in increasing resilience Bonifacio, A., Takeuchi, Y. and Shaw, R. (2010)

The United Nations Framework Convention on Climate Change (UNFCCC) Article 6: Education, Training and Public Awareness (also known as the New Delhi work program) recognises that education must play a key role in a holistic response to climate change at local, national and global levels (UNFCCC, 1992).

The Hyogo Framework for Actions (HFA; 2005-2015) priority 3 focuses on increasing resilience and building a culture of safety and resilience at all levels using knowledge, innovation and education, and Goal 2 of the Millennium Development Goals (MDG) discusses the importance of primary education in reducing poverty (UNESCO Office Bangkok and Regional Bureau for Education in Asia and the Pacific, 2012).

A UNICEF Report, Climate Change Adaptation and Disaster Risk Reduction in the Education Sector, November 2012, states: There is growing consensus that the twenty-first century will be characterised by greater uncertainty and complexity. This is particularly evident in climate change, the increasingly frequent and intense natural hazards it brings and their human and environmental fall out. It states, we must strengthen our commitment to the environment and there are implications for all sectors, but education is especially crucial because it can offer children the opportunity to acquire the new skills, attitudes and knowledge they need to survive, develop and thrive. UNICEF has developed this resource manual to assist governments and education practitioners in scaling up and mainstreaming climate change adaptation and disaster risk reduction in the education sector (UNICEF, 2012).

It includes a module (9), focusing on Climate change Adaptation. Amongst the key messages are ensuring that, school buildings, facilities and grounds are safe.

A recent London Assembly Report, Climate Risks for London, a review of evidence under a 1.5^0 C and different warming scenarios, identifies that London schools are at serious risk as global temperatures continue to rise (JSCS, 2019).

Finally, at a GLA School Air Quality Forum meeting in September 2019, members, (school teachers, ancillary staff and borough officers), expressed that guidance for schools on adapting to climate change would be welcomed and should include a description of funding channels and opportunities for schools to access.

2.4 Objectives

The objective of this project is to provide guidance and actions for schools on how to prepare for and respond to extreme weather events such as flooding, higher temperatures and water scarcity.

The expected outcomes are:

- Increased awareness of how schools can adapt to climate change.
- Increased adaptive capacity at schools so that they can respond better to events and plan for them.
- Reduced disruption for the school community and parents.
- Co-benefits i.e. health, amenity (through green infrastructure).
- How productivity can be increased by pupils and staff.
- Climate resilient schools in London.
- Education and awareness raising through the school curriculum, referencing the publication by UNICEF, Climate Change Adaptation and Disaster Risk Reduction, designed to assist governments and education practitioners in scaling up and mainstreaming climate change adaptation and disaster risk reduction in the education sector.
- Awareness of how extreme climate impacts on services the schools rely on which are outside the school premises and largely beyond their control, but for which may be able to prepare if the risk/impacts, are better understood, for example, utilities and suppliers.
- Identified opportunities for greater connection between programmes targeted at schools with a focus on responding to climate change.

3. SCOPE

3.1 Approval process

The Supplier is required to document and agree with the GLA a detailed specification and project plan, including a risk assessment that meets the 'General Requirements' listed below.

After the contract has been awarded, the approved Supplier will be expected to formalise the delivery plan with the GLA.

3.2 General Requirement

- Undertake a desk-based literature review of what literature/mapping is currently available to schools on adapting to extreme weather events in London and associated impacts such as utilities outages.
- Collect and collate best practice case examples in London, the UK and internationally of how schools are responding to extreme weather events.
- Ask formal questions with at least three London schools on their level of awareness of risks, preparing for, responding to and recovering from impacts of extreme weather events in London.
- Produce a map using the GLA's Green Infrastructure Focus Map showing where state schools are in relation to the Urban Heat Island and identifiable flooding and heat hot spots such as schools located in built up areas with little shading, SuDs etc.
- Produce guidance including research findings, case examples, approach, learning materials and recommendations on how schools can adapt to London's changing climate including flooding, higher temperatures/ heatwaves and water scarcity. This guidance should:

  1) Set out the immediate actions schools can take during extreme weather events as well as the short- and long-term actions to adapt to the impacts of climate change.

  2) Include recommendations supported by a description of funding channels and opportunities and an indication where recommendations don't require funding

  3) Provide teachers, pupils, facilities managers, governors and those that have responsibility for school buildings and investments, with short- and long-term actions that schools can take to increase their climate resilience.

4) Include opportunities to link into other community responses and/or networks on climate change adaptation.

- Produce a best practice checklist on how to assess risk, prepare for, respond to and recover from extreme weather events such as flooding, higher temperatures and water scarcity in the context of the latest climate change projections.

The three stages for, producing the guidance and checklist as outlined under 'General Requirements' above and associated steps to be taken under each stage by the Supplier, are detailed below:

3.3 Project Stages

Stage 1 - Planning

Gather information about the assignment and assess risks within the context of the objectives by gaining an understanding of the following:

- Nature of the initiative, background, approach and direction.
- Internal controls in relation to the objectives and scope of the assignment.
- Information systems control for assessing risk and planning the assignment.
- GLA's Legal and regulatory requirements.
- In addition:
  - Establish the project criteria, that is, what is the Supplier intending to evaluate the guidance against. This task should take account of the project's objectives as set out above.
  - Seek approval for the project criteria from the GLA.
  - Produce a risk assessment - undertake a risk assessment for the project including mitigation and controls.
  - Determine and confirm the methodology - ensure that the methodology is linked to each risk identified. Examples of a methodology :
    - research
    - sampling
    - interviews
    - workshops
    - assemblies
    - observations
    - walk-through.

- Confirm the resource methodology - determine the length of time it will take to undertake the project.
- Formalise the project delivery plan and agree this with the GLA.
- Identify the lessons learned through this project.

Stage 2 – Fieldwork

- Meet with at least three schools to establish the schools' understanding of how they can adapt to London's changing climate including flooding, higher temperatures & heatwaves and water scarcity.
- Involve relevant stakeholders such as the boroughs, schools, nurseries, teachers, governors, children and parents.
- Collate case examples and quotes.
- Agree what learning materials would be beneficial to teachers on adapting to climate change.

Stage 3 – Reporting

Two outputs are required:

- Produce guidance including research findings, case examples, approach, learning materials and recommendations on how schools can adapt to London's changing climate including flooding, higher temperatures/ heatwaves and water scarcity. This guidance should:
    1) Set out the immediate actions schools can take during extreme weather events as well as the short- and long-term actions to adapt to the impacts of climate change.
    2) The learning materials should be 'pupil centred' with opportunities for pupil engagement so that they can contribute their ideas with a focus on climate emergency.
    3) Include recommendations supported by a description of funding channels and opportunities and an indication where recommendations don't require funding.
    4) Provide teachers, pupils, facilities managers, governors and those that have responsibility for school buildings and investments, with short- and long-term actions that schools can take to increase their climate resilience.
    5) Include opportunities to link into other community responses and/or networks on climate change adaptation.
    6) The recommendations should sign post to non-specialist staff how they can equip themselves with the skills and

knowledge to adapt their adaptation plans to individual circumstances such as flood risk.

- Produce a best practice 'user' friendly checklist on how to assess risk, prepare for, respond to and recover from extreme weather events such as flooding, higher temperatures and water scarcity in the context of the latest climate change projections.

4. SKILLS, KNOWLEDGE AND EXPERIENCE REQUIRED

The Supplier will be expected to have an understanding, expertise and resources as detailed below and must provide details and examples of this within its tender response.

- Demonstrated knowledge of the role and function of the GLA.
- Climate change adaptation expertise and track record of translating the need for adapting to climate change into clear guidance and actions.
- Track record of programme management, keeping to timescales, and budget management.
- Demonstrated skills in stakeholder management and engagement.
- Knowledge of a London borough's responsibility, in general, for improving resilience planning, including specifically their approach to resilience planning and/or emergency response
- Experience and/or understanding of working with schools and the different audiences within the school community
- Examples of 'similar works', for example, project management, producing recommendation-based guidance, presentation of data in a similar/transferable area of expertise, demonstrating innovative approaches/ solutions.

5. RESPONSES

Responses to this specification should detail the following:

Price

- Total fixed cost for the contract (excluding VAT) including a breakdown of the costs by activity.
- Breakdown of all staff and other costs associated with the contract.
- A payment profile to be provided. This will be subject to GLA's approval and shall have the right to adjust if necessary.

Approach

- An indication of whether the Supplier will be working independently on the project or by adopting a partnership/consortium approach (in which case details of the partnership/consortium composition should be included).
- Details of any methodology.
- Detailed description of how the specification will be delivered.
- Proposed detailed programme plan of the work including a budget proposal and risk assessment.
- Examples of previous works that can show a track record of the requirements listed above.

Personnel

- Qualifications and experience of the proposed personnel in the form of individual CVs. The amount of time each member will spend on the Programme must also be included.
- Relevant experience of the Supplier's programme team, relating to contracts of a similar nature where applicable.
- The Supplier's Safeguarding Policy.

6. DELIVERABLES / MILESTONES

Deliverable: Agree the project plan with the GLA. **Milestones:** • Nature of the initiative, background, approach and direction established.	 20th February 2020 28th February 2020
Deliverable: Fieldwork **Milestone:** • Engaged with at least three schools to establish the schools' understanding of how they can adapt to London's changing climate including flooding, higher temperatures/ heatwaves and water scarcity.	 Mid March 2020 Mid March 2020
Deliverable: Reporting. **Milestone:** First drafts of:- • Guidance for schools. • Best practice checklist.	 Mid - April 2020 Mid- April 2020
Deliverable: Completion of outputs. **Milestone:** • Comments collated from key stakeholders: the GLA, the London Climate Change Partnership and the Mayor's Office.	 End of April 2020 End of April 2020

Deliverables: Wider Dissemination. **Milestone:** • Agree comms messaging and wider dissemination.	May 2020 May 2020

7. KEY PERFORMANCE INDICATORS (KPIS)

The performance of the Supplier will be reviewed against the key indicators below. The rating scale will determine the overall performance. The assessment will be based on a rating index. If the rating is less than 3, then the GLA has the right to terminate the Supplier's contract.

Key indicators:

- Excellent quality and range of deliverables.
- Timely delivery of specified tasks within agreed timescales.
- Collaboration; building a good relationship within the GLA, the three participating schools (potentially nurseries) and the school community.
- Communication (both verbal and written communication); being proactive and communicating clearly and effectively to a wide variety of audiences
- Time keeping.
- Programme risk management.

Rating scale:

5 - Consistently exceeded the performance required.

4 - Fully matched the performance required in some areas and exceeded it in others.

3 – Fully matched the performance required.

2 – Fully matched the performance required in some areas and fell short in others.

1 – Did not match the performance required.

The Employer (i.e. GLA) may terminate the Consultant's obligation to provide the services by notifying the Consultant if:-

- The Consultant is in breach of clause 106 (Conflict of Interest) and/or clause 110 (Corrupt Gifts, Fraud, Payment of Commission and Safety Breaches) and/or clause 133 (Supplier Diversity)
- The Employer no longer requires the services or otherwise wishes to terminate the Consultant's obligation to Provide the Services for any reason or

  The Consultant has substantially failed to comply with his/her obligations and has not put the default right within four weeks of a notification by the Employer.

8. PROJECT PLAN/TIMESCALES

The Supplier will be expected to provide the GLA with a plan for carrying out the project including timescales as part of the tender submission.

References

Bonifacio, A., Takeuchi, Y. and Shaw, R. (2010). Mainstreaming climate change adaptation and disaster risk reduction through school education: Perspectives and challenges. In: R. Shaw, J. Pulhin and J. Pereira, ed., *Climate Change Adaptation and Disaster Risk Reduction: An Asian Perspective*, 1st ed. Emerald Books.

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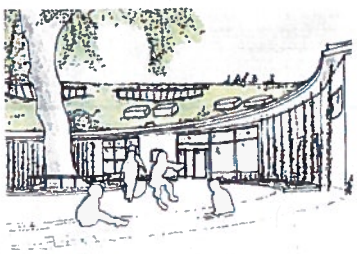
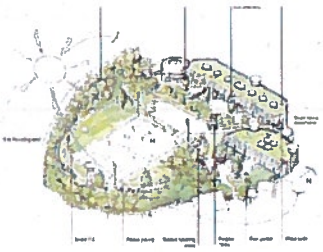
Attachment 2
The Consultant's Technical Proposal






Guidance for Schools on Adapting to Climate Change | Greater London Authority

Arup Proposal

7th February 2020

Our understanding of the brief

As significant contributors to London's first ever City Resilience Strategy we understand that London, as a growing city, faces increasing pressure on housing, infrastructure, services and the natural environment, and that climate change will exacerbate many of these pressures. It will make flooding more frequent and severe, will threaten water resources, and increase the risk of overheating.

Our shared challenge now is how to manage these complex, and often interactive, pressures to ensure London and Londoners can adapt to climate change and stay resilient to any severe weather events that occur. As we conceive of climate adaptation options and actions it is also important that we consider in parallel wider social, demographic, economic, environmental, and political priorities such that we can help to create a fairer, more prosperous, healthier, and more resilient city.

Children in schools are particularly vulnerable to the impacts of extreme weather and climate change because of their limited capacity to adapt to severe weather events and dependency on teachers to guide them. Academic and medical literature show that increased temperatures impact on how people learn and behave, with research also showing that children are more sensitive to temperature variations than adults.

Schools are often unprepared to be able to respond to extreme weather events because of competing priorities, lack of knowledge about how to prepare, respond and recover; and/or because of a lack of funding or resources.

London's schools must be better prepared for extreme weather events and, although often challenged by funding constraints, schools have a number of levers to improve school and wider community preparedness. They can:

- Increase awareness of climate risks for school staff and establish basic school resilience plans
- Design and fundraise for new adaptive facilities (e.g. cool rooms, outdoor learning spaces, shade structures)
- Raise awareness of climate risks for the broader community through curriculum / learning activities and school outreach (e.g. linking resilience planning to school councils and parent teachers associations).

It is our understanding that the GLA team through this commission - which will comprise desk-based research and stakeholder consultation - want to develop two outputs. These are:

- A guidance document for schools in London presenting research findings, case studies and learning materials outlining how schools can adapt to London's changing climate. This guidance document is expected to set out the immediate actions schools can take during extreme weather events as well as the short- and long-term actions to adapt to the impacts of climate change. Recommendations should be simply articulated and supported with practical guidance and signposting to further support, networks, resources and funding channels.
- A best practice checklist for London schools on how to assess risk, prepare for, respond to and recover from extreme weather events such as flooding, higher temperatures and water scarcity in the context of the latest climate change projections.

The guidance and checklist need to be aimed at the full 'schools community' including local authorities, school managers, head teacher / teachers, pupils, facilities managers, governors and parents. Schools in the context of this commission means all state-funded schools in London, and where practicable nurseries. (i.e. state funded educational establishments providing education for young people between the ages of 3 – 18).

The research, consultation and the two outputs listed above are expected to deliver the following outcomes:

- Increased awareness of how London schools can adapt to climate change
- Increased adaptive capacity in schools so that they can respond better to events and plan for them
- Reduced disruption for the school community and parents
- Possible wider benefits as a result of championing climate adaptation (i.e. health, amenity through e.g. increasing green infrastructure
- Increased productivity and learning outcomes for staff and pupils

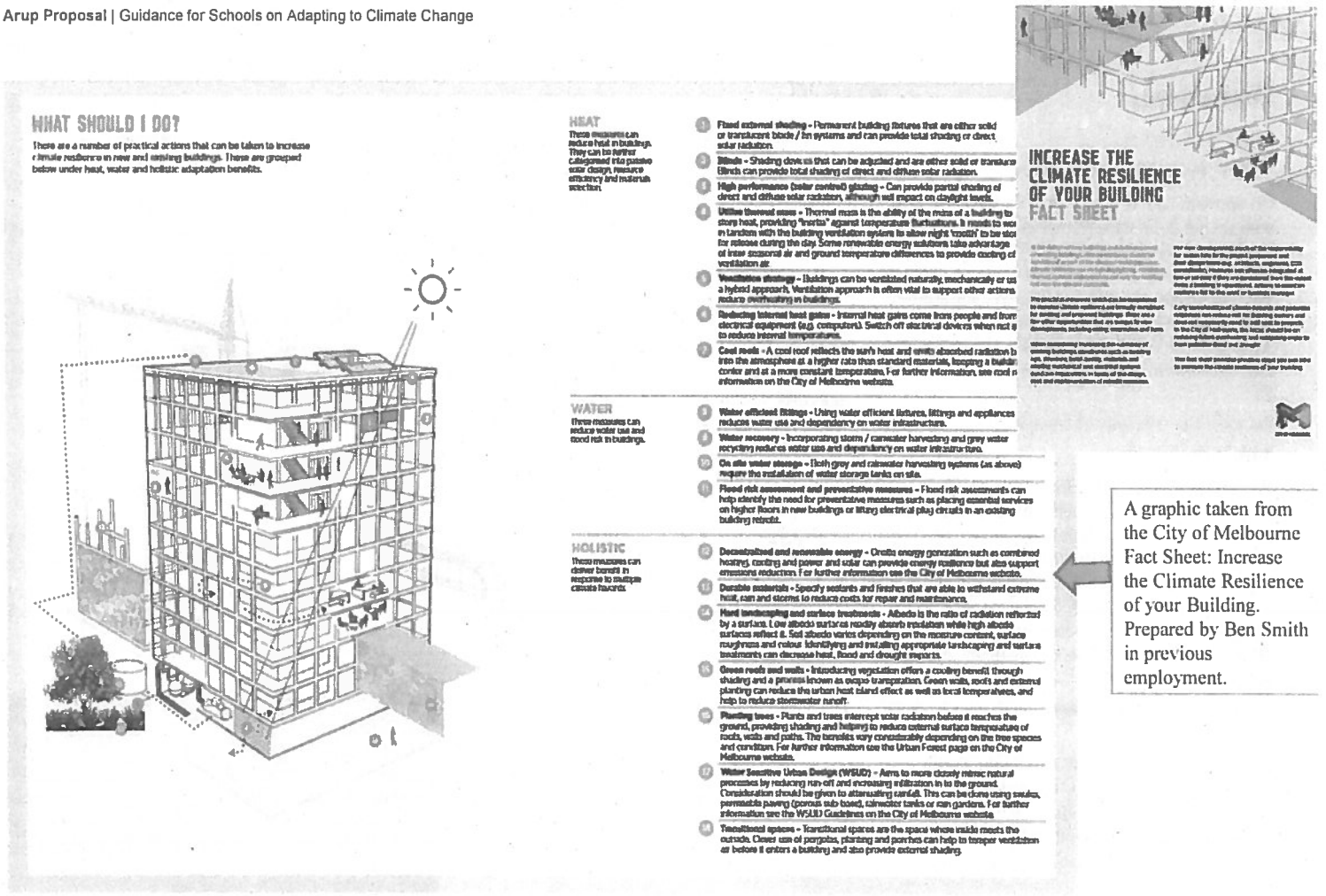
Why Arup?

Arup is an independent multi-disciplinary professional services firm headquartered in London. We have a mission to "Shape a Better World". In 2017 we made an internal commitment to align our business with the United Nations' Sustainable Development Goals, having agreed that the goals, targets and indicators help to define what a "Better World" looks like for 2030. We recently committed to be a Net Zero carbon firm by 2030. We consult on a wide range of projects across the built and natural environment, and regularly support clients with specialist advice on climate change, across both mitigation and adaptation.

We feel confident that we can deliver this commission to the GLA's satisfaction because:

- We have an extensive track record of delivering successful projects for the GLA, and specifically for the GLA's Environment and Energy team. Over the last few years we have supported the development of Mayoral strategies on Environment and on City Resilience. The GLA is also familiar with the relevant work we have led for C40 Cities, not least the development of the CRAFT toolkit and the climate resilience guidance that is embedded into C40's Climate Action Planning guidance
- Our proposed project director for this commission, Ben Smith, was the project leader and main author for the 2010 Department of Education report "Adapting English Schools to the expected impacts of Climate Change". He has also led projects on integrating renewable energy into schools and separately a major study to "Reduce the carbon impacts of UK schools stock". When living in Australia Ben also produced guidance for the City of Melbourne on adapting buildings for climate change. In a voluntary capacity, Ben is now Chair of the PTA Trust for Pelham Primary School in South Wimbledon as well as being a Trustee for the London National Park City Foundation. Ben also leads Arup's relationships with C40 Cities and (former) 100 Resilient Cities. He has been actively involved in shaping Resilient Cities strategies in cities including London, Paris, Rotterdam, The Hague etc. If appropriate, our team will be able to draw on best practice from schools in other European cities (e.g. Paris school yards)
- Through Dominic Cropper, our team can tap into a wider network of Arup engineers with experience of designing school buildings across the UK. They will provide support in respect of some of the engineering approaches to climate adaptation (e.g. improved ventilation, fabric improvements and structural considerations). Dominic has been involved in school design projects for schools right across the Midlands (Warwick, Hertfordshire, Birmingham, Shropshire). We can also access landscape designers with practical experience of designing and installing green roofs and walls, and building physicists and specialists in Computational Fluid Dynamics (CFD) with prior experience of modelling the impacts and benefits of climate adaptation options. Jake Hacker, one of Arup's leading climate change specialists, will also support this project. He was part of the vanguard considering overheating in London as far back as 2005, with his report "Beating the Heat". In addition, we can draw on specialists in flood risk, GIS, cost and project management.

Arup, and specifically this project team, would be excited to secure this commission to continue our long track record of supporting the GLA. We enjoy leading stakeholder consultation in London, and see the opportunity through schools to connect with broader communities championing climate action. If successful we would ensure that all of our proposed team are actively involved in project delivery and we would work with the GLA design and communications team to ensure our outputs are clear, understandable and well presented. If appropriate, we would also be keen to support the GLA in disseminating the guidance through events, blogs and social media.



A graphic taken from the City of Melbourne Fact Sheet: Increase the Climate Resilience of your Building. Prepared by Ben Smith in previous employment.

Methodology

Phase 1: Planning

Task 1: Project Inception Meeting

On appointment, the Arup project team will meet with the GLA for an informal discussion to gain feedback on our bid, and to clarify and confirm the GLA's objectives and aspirations for this project. We will discuss the programme, communication protocols and present a draft project risk register. Arup will use this meeting to gain further insights that will inform the detailed project plan (See task 2).

Deliverable: Minutes of inception meeting

Task 2: Project Plan

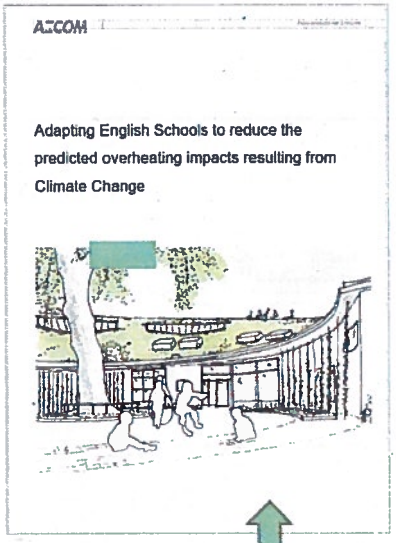
We note the requirement from the brief for a proper project establishment phase. This task will include ensuring the whole project team and GLA share the same understanding of the project objectives and understand the criteria the GLA will use to assess the project (i.e. what success looks like). We will work to document, together with the GLA, the following points to ensure the project gets off to the best start:

- The project context, background, approach and direction
- Internal project controls in relation to the objectives and scope of the assignment (including understanding project accountabilities within the GLA team and requirements for signs offs and approvals)
- Systems for communication and document version control
- Approaches for agreeing and maintaining the project risk register and programme
- GLA's Legal and regulatory requirements in relation to schools, and how this should be presented through the emerging guidance (i.e. Powers).

Our detailed project plan will be developed to include a more detailed methodology covering our approach to research, literature review, surveying, interviews and running workshops etc. In addition to the fuller method statement, the plan will also set out:

- An agreed set of project evaluation criteria
- A project risk register with suggested mitigation actions
- An agreed project programme
- A draft plan for capturing "lessons learnt" and clarity on Arup's role in supporting the GLA with project dissemination

Deliverable: Full project plan



Relevant guidance produced for the Department of Education (2010) by members of our proposed project team

Note: Typically, we would work to develop a fuller (or more rigid) method as part of a proposal to the GLA. Given the emphasis in this brief on project planning we have intentionally kept our methodology high level at this stage, so that – if appointed - we would have an opportunity to refine the approach jointly with the GLA during the project planning phase.

Methodology (cont.)

Phase 2: Research and Fieldwork

Task 3: Literature Review

Irrespective of how we develop and refine the project plan (See task 2) we know that there will be a significant task to review existing literature focussed on adapting schools to the impacts of climate change. We are aware of and have worked on several relevant studies that were not listed in the GLA's project brief. We would anticipate needing to review around 15-20 documents. Key reference documents (aside from those listed in the project brief) will include:

- CABE (2010) Creating Excellent Primary Schools. Commission for Architecture and the Built Environment, London
- Committee for Climate Change (2018), Adaptation actions in cities, what works?
- Department for Children Schools & Families (2009) Evidence paper on the impacts of overheating and flooding on children's services
- Department for Education & Employment (1997) Building Bulletin 85: School grounds – A guide to good practice. The Stationery Office, London
- Department for Education & Employment (1999) Building Bulletin 90: Lighting design for Schools. The Stationery Office, London.
- Department for Education & Employment (1999) Building Bulletin 71: The Outdoor Classroom. The Stationery Office. London
- Department for Education & Skills (2006). Building Bulletin 101 Ventilation of School Buildings. DfES, London. Available at teachernet.gov.uk
- Government Office for London (2007) Creating sustainable schools in London: A case study guide. Government Office for London. London.
- Hacker, J.N., Belcher, S.E. & Connell, R.K. (2005). Beating the Heat: keeping UK buildings cool in a warming climate. UKCIP briefing report. UKCIP, Oxford.
- Learning through Landscapes (1996) The challenge of the urban school site. Learning through Landscapes, Winchester
- Smith B, Marsden K, Burton S, Ren M, Orme (2010) Adapting English Schools to reduce the predicted overheating impacts resulting from Climate Change, AECOM for Department of Education

As part of the literature review task we will work to get an informal meeting with Richard Daniels at the Department for Education. He has been a client and collaborator to Ben Smith and Dominic Cropper in the past and has been involved over many years in developing all major guidance and environmental design standards for schools in England. It will be helpful to check our suggested reference list and to check for any more recent, perhaps unpublished, relevant reference material.

In parallel to undertaking the literature review we will consult with the GLA, London Councils and other relevant groups to draw together a list of potential funding sources that would support schools in funding climate adaption actions. We recognise that there might be some relevant and accessible funds that might not be badged as "climate fund" (e.g. supporting green infrastructure, Good Growth).

Deliverables:

- Literature review summary note
- List of relevant and accessible funds that could support climate adaptation in London schools

Methodology (cont.)

Task 4: Stakeholder consultation

We imagine the stakeholder consultation for this project breaking down into a few different exercises. We would work with the GLA and others to agree three schools that we could use to test the "whole of school understanding" of how they can adapt to the impacts of climate change. We would propose to spend at least a day in each of the schools and would conduct multiple interviews covering borough's (education authorities), head teachers, teachers, school managers, governors, parents and children.

To provide some immediate benefit back to the schools that agree to engage with us we will, with agreement from the GLA, offer back to the schools a climate change presentation that we will happily deliver as part of a school assembly or school council meeting. We delivered one of these recently for a school in Maidenhead that was well received (see our Guide –Climate Emergency, what next? There are opportunities to develop our existing content to make it more interactive. We have several people in Arup who have been trained in this, (e.g. Climate Reality Leadership training, UK-GBC Future Leaders) and are comfortable presenting on climate change to community groups.

In addition to the "deep dives" into three selected schools we would undertake another ten interviews with selected stakeholders from other London schools or related organisations. This might include, for example, local authorities, climate emergency officers, London climate change partnership, teachers, parents or people in the school supply chains.

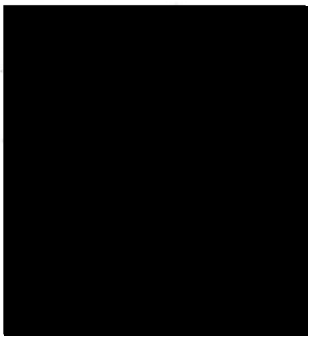
Deliverable: Rough notes of stakeholder interviews (provided in raw form, anonymised if necessary). Our notes will highlight ideas for case studies and interesting / insightful quotes that could be incorporated in to the final guidance.

Task 5: Collating case study examples and quotes

Following a period of stakeholder consultation, we will take some time to agree case study templates with the GLA and to prepare ten relevant case studies for inclusion in the final guidance document. We will then develop the case study text ensuring they are presented in a consistent fashion with supporting imagery. Case studies will cover a range of school types and a range of climate adaptation interventions. In parallel, as an additional part of this task, we will collate the best quotes from the stakeholder consultation notes ensuring we strive for a balance of voices, and that the quotes link to different elements of the guidance.

Deliverables:

- **10 x half page case studies for inclusion in the final guidance document**
- **10 x quotes for inclusion in the final guidance document**



The impacts of climate change will hit future generations hardest. Recently, I was invited to speak to 300 Primary School children about climate change, focussing on how they could make a difference. It was national non-fiction day and they responded by writing about their climate concerns to their local MP. It left me challenged! We need to encourage this kind of enthusiasm, empowering all ages to speak up and act for a climate-safe future.

Methodology (cont.)

Task 6: Developing appropriate learning materials.

As part of the project planning stage and, again through stakeholder consultation, we will test and agree the learning resources that would provide the most value for schools / school teachers. At this stage the types of resource we can foresee would include, for example:

- AMS Powerpoint format presentation providing general climate context and specific climate risks and adaptation options for London schools. We will ensure this is pupil centred and that the presentation (or parts of it) could be used in school assemblies or with school councils
- Simple lesson plans linking research findings and guidance to the existing science curriculum for Years 4, 12 etc). Following stakeholder consultation and discussion with the GLA team we will consider if it makes sense to connect the lesson plans on climate adaptation to learning linked to other GLA priorities (e.g. energy efficiency, waste management)

The project brief also calls for the development of a map based on the GLA's Green Infrastructure Focus Map, showing where state schools are in relation to the Urban Heat Island and identifiable flooding and heat hot spots such as schools located in built up areas with little shading, SuDs etc. We will develop this map as part of Task 6 and have assumed all relevant GIS layers are either accessible through the London Data Store or will be made available to us by the GLA. Arup is supporting relevant GLA work to identify "cool spots" across London. We can also easily access (through our relationships with UrbanGood CIC) the base layers for the London National Park City map. The Mayor's office funded the production and distribution of this map to London schools in 2018, and there might be an opportunity to follow up highlighting the location of schools, spatial climate hazards and "cool spots". We are happy to explore options with the GLA through the project planning phase.

Deliverables:

- Agreed learning materials. We will agree more specifically the deliverables from this task as part of the project planning phase – at this stage we have assumed three outputs (i.e. 1 x presentation and 2 x lesson plans)
- A single large format map. Map to highlight schools, green spaces, spatial climate risks (as possible using existing data) and identified cool spots.

Links to the school curriculum?

- Key Stage 2 (years 3-6) English (speaking and listening/ reading e.g. First News/ writing for purpose
- Key Stage 2 Science e.g. habitats / adapting to environment etc KS 3 (years 7-9)
- Key Stage 2 Geography - human and physical processes
- Key Stage 3 Chemistry (limited resources)
- Key Stage 3 Biology (dependence on photosynthetic organisms)

Methodology (cont.)

Phase 3: Reporting

Task 7: Developing Guidance

During the project planning stage, we will engage with the GLA to create a shared vision for this document. This will detail expected audience, preferred length, format, style and contents. We will also (see Task 5) have pre-agreed the style and format of the case studies.

Our working assumption is that this should be a short (10-15 page) desktop designed document written in plain English and accessible to the whole school's community. We assume it will provide background climate context, highlight specific climate risks for London and provide ideas for the types of climate adaptation action that schools can take. Adaptation options could be grouped according to either climate risk (e.g. flood, overheating), type of school (e.g. Victorian, 1960's, New Build), type of actor (e.g. school managers, teachers) or type of intervention (e.g. building improvement, landscaping, operational). The document will also provide guidance to schools on how they can further tailor their school specific risks and responses to create a robust climate adaptation plan, including both short and long-term actions (this guidance will link to the checklist developed in Task 8 below). Case studies, quotes and potential funding sources will be integrated into the guidance and maps, checklists and learning resources will be prepared and either embedded or developed as Appendices. Where possible, we will also use the guidance document to signpost opportunities to link into other community responses and/or networks on climate change adaptation as well as further learning resources for non-specialist school staff and stakeholders.

What can I do to reduce overheating in my school?

- better insulate the opaque and glazed external building fabric
- provide solar shading for glazing, including through planting
- temper ventilation air using inter-seasonal 'coolth' storage
- improve daytime ventilation, or night-time cooling using thermal mass
- insulate between internal spaces
- limit casual gains from electric lighting and equipment,
- introduce external landscaping and planting
- introduce water fountains
- incorporate shade structures (potentially as part of outdoor classrooms
- create designated cool spots

Task 8: Developing Checklist

Connecting the guidance on process embedded within the Schools Climate Adaptation Guidance, (See Task 7) we will develop a simple checklist for schools to support them in assessing risk, preparing for and responding / recovering from extreme weather events such as flooding, higher temperatures and water scarcity in the context of the latest climate change projections. We envisage this as a very simple list of questions and prompts. Example questions might include;

1. Do you know how many days of extreme heat you will experience in school in 2022 / 2025 / 2030?
2. How are you defining an "extreme heat day"?
3. Do you have plans in place to ensure learning is not disrupted in extreme heat events?
4. Do you have cool spots on the school site?
5. What percentage (%) of your pupils can be accommodated in onsite cool spots?
6. Do you know where the closest offsite cool spot is?

The checklist questions would be developed to align with all climate risks and all aspects of a best practice climate adaptation plan such that the questions and checklist naturally drive improved school climate resilience.

Deliverable: Short / simple Climate Adaption Checklist for London Schools.

Our Team

Commercial arrangements

Price

No information on cost or fee breakdown is included in this document which is our technical proposal. The pricing has been uploaded using the template provided.

Contract

We understand that this work will be commissioned under the FORM OF AGREEMENT – Short Form. This should not raise any problems for Arup. We will look to execute the contract immediately on appointment.

Invoicing

We propose to agree the invoicing / payment schedule during the project inception meeting. Typically we invoice monthly in arrears, but if preferable we are happy to agree milestone payments.

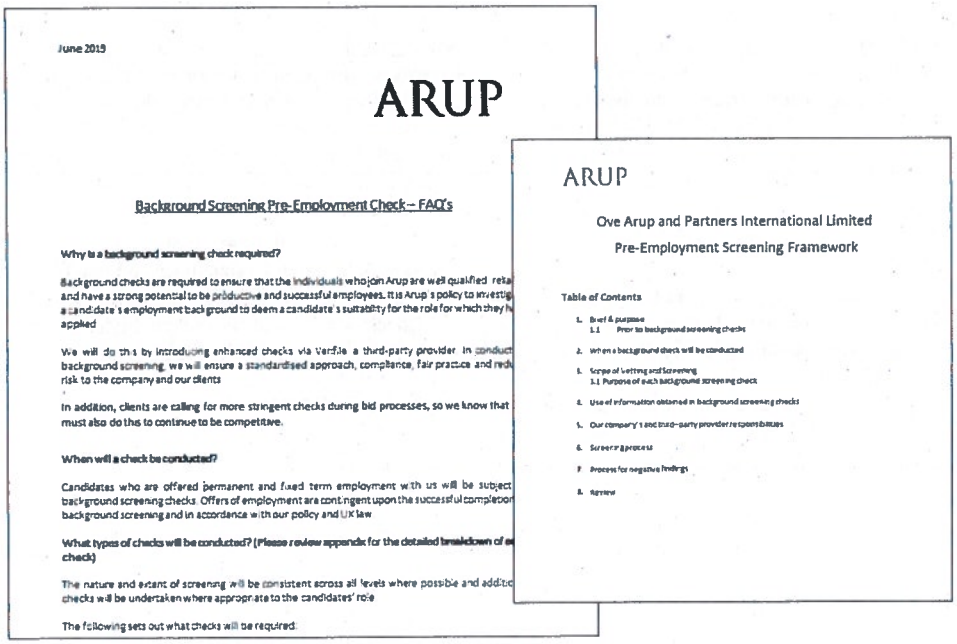
Safeguarding policy

Arup introduced enhanced pre-employment screening on the 3rd February 2020.

The purpose of introducing enhanced screening was to ensure that Arup employ the right people. Pre-employment screening allows Arup to reduce the risk to both clients and our company.

From the 3rd February 2020 all candidates offered permanent and fixed-term employment will be subject to pre-employment background screening, with all offers of employment contingent on successful completion of the checks and in accordance with our policy and the law.

Arup's intranet provides further Supporting Information and FAQ's (see screen shots below)



June 2019

ARUP

Background Screening Pre-Employment Check – FAQ's

Why is a background screening check required?

Background checks are required to ensure that the individuals who join Arup are well qualified rela
and have a strong potential to be productive and successful employees. It is Arup's policy to investig
a candidate's employment background to deem a candidate's suitability for the role for which they h
applied

We will do this by introducing enhanced checks via Verifile a third-party provider. In conduct
background screening, we will ensure a standardised approach, compliance, fair practice and red
risk to the company and our clients

In addition, clients are calling for more stringent checks during bid processes, so we know that
must also do this to continue to be competitive.

When will a check be conducted?

Candidates who are offered permanent and fixed term employment with us will be subject
background screening checks. Offers of employment are contingent upon the successful completion
background screening and in accordance with our policy and UK law

What types of checks will be conducted? (Please review appendix for the detailed breakdown of e
check)

The nature and extent of screening will be consistent across all levels where possible and additio
checks will be undertaken where appropriate to the candidates' role

The following sets out what checks will be required:

ARUP

Ove Arup and Partners International Limited

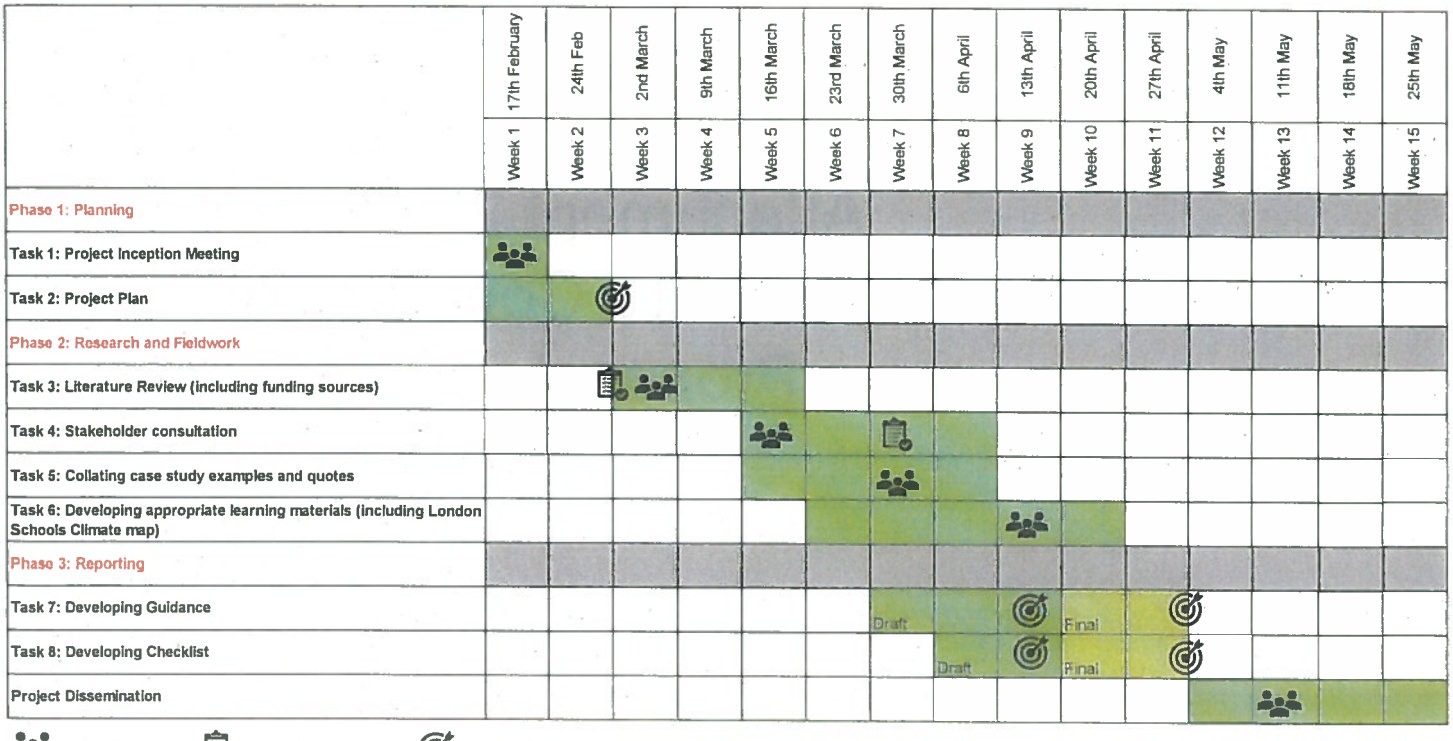
Pre-Employment Screening Framework

Table of Contents

1. Brief & purpose
   1.1 Prior to background screening checks
2. When a background check will be conducted
3. Scope of Vetting and Screening
   3.1 Purpose of each background screening check
4. Use of information obtained in background screening checks
5. Our company's and third-party provider responsibilities
6. Screening process
7. Process for negative findings
8. Review

Programme

The chart below sets out our proposed timeline for delivering the tasks stated above, to be refined in the project planning stage. Delays in starting will result in our programme shifting back accordingly. We have assumed fortnightly progress meetings for the project duration.



Attachment 2
The Consultant's Commercial Proposal

Bidder	Ove Arup and Partners Ltd (Arup)
Grand Total	**£29,670.00**

[redacted]

	17th February	24th Feb	2nd March	9th March	16th March	23rd March	30th March	6th April	13th April	20th April	27th April	4th May	11th May	18th May	25th May
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15
Phase 1: Planning															
Task 1: Project inception Meeting															
Task 2: Project Plan															
Phase 2: Research and Fieldwork															
Task 3: Literature Review (including funding sources)															
Task 4: Stakeholder consultation															
Task 5: Collating case study examples and quotes															
Task 6: Developing appropriate learning materials (including London Schools Climate map)															
Phase 3: Reporting															
Task 7: Developing Guidance							Draft			Final					
Task 8: Developing Checklist								Draft		Final					
Project Dissemination															