**Specification for research to consider the costs and benefits to designers and builders of measures to increase the resilience of new developments to high temperatures and localised flooding**

Tender Reference Number: KB/1016

**Specification of Requirements**

Invitation to Tender for: Research to consider the costs and benefits to designers and builders of measures to increase the resilience of new developments to high temperatures and localised flooding

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Deadline for Tender Responses: 09/11/16

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# Introduction and summary of requirements / preamble

The Adaptation Sub-Committee (ASC) of the Committee on Climate Change (CCC) has a statutory duty to report to Parliament with an independent assessment of the UK Government’s progress in implementing its National Adaptation Programme. This programme, published in July 2013, sets out the Government’s objectives and policies for adaptation primarily in England, addressing the risks and opportunities identified by the UK Climate Change Risk Assessment (CCRA), first published in January 2012.

In 2015, the ASC produced its [first statutory assessment](https://documents.theccc.org.uk/wp-content/uploads/2015/06/6.736_CCC_ASC_Adaptation-Progress-Report_2015_FINAL_WEB_070715_RFS.pdf) of the National Adaptation Programme. This report considered through a series of indicators what actions were taking place to adapt to the effects of climate change across a number of sectors, and how vulnerability to climate hazards is changing over time. It also assessed the extent to which policies and programmes were set up to promote or deliver adaptation actions. The ASC reported on progress through a series of adaptation priorities. Each priority was given a traffic light score to represent whether appropriate plans were in place, actions were occurring as set out, and trends in vulnerability were moving in the right direction. The ASC also provided a set of recommendations for further action as a result of this analysis, which the Government subsequently [responded to.](https://www.theccc.org.uk/publication/government-response-to-2015-progress-report/)

The ASC has to produce a second progress report on the National Adaptation Programme by the end of June 2017. This report will consider any changes in policy and action since the first report was produced, and include any updates in the evidence base. These updates will include findings from the second UK Climate Change Risk Assessment Evidence Report, published by the ASC in July 2016, and further research conducted by the ASC and others.

# Background

Previous analysis undertaken by the ASC has considered the social costs and benefits of a range of adaptation measures for buildings including property-level flood protection, permeable paving and passive cooling measures. The ASC is interested in collecting further evidence to support its analysis on the broader costs and benefits specifically for designers and builders to including resilience measures in new developments (homes and public/commercial buildings) to manage overheating, internal flood damage, and surface water drainage issues.

Risks to people through flooding and overheating in the built environment were two of the ASC’s top priorities in its first report to Parliament in 2015. The report found that even in the best case scenario, 45,000 more homes and other properties are expected to fall in to the highest flood risk category by mid-century (i.e. at a 1-in-30 annual chance of flooding or greater). Planning policy is ensuring that three-quarters of new development in the floodplain is located in low risk areas. However, each year 1,500 new homes are built in areas of high flood risk and 3,100 homes per year in areas of medium flood risk (at a 1-in-100 annual chance of flooding or greater). The uptake of property-level flood protection measures appears to be low, in both new and existing developments. In terms of heat, evidence from various sources suggests 20% of homes in England may already overheat, even in relatively cool summers. In addition, policies to increase air tightness and the insulation of homes could, if unmitigated, increase the risk of overheating in new and existing homes. In the absence of additional action, the number of heat-related deaths could increase from a UK annual average of around 2,000 currently to 7,000 by the 2050s, due to climate change and population growth.

The ASC’s 2015 report included the following recommendations for Government related to managing the risks to new buildings from flooding and overheating:

* **Recommendation 2:** Defra should take steps to address the increasing number of homes and other properties expected to be at high flood risk in the coming decades, publishing a strategy within a year of this report. Full use should be made of the opportunities presented by the Flood Re subsidised insurance scheme to encourage households in high flood risk areas to take steps to reduce the potential for flood damage.
* **Recommendation 3:** Defra should (a) amend in this Parliament the 1991 Water Industries Act in order to remove or make conditional the current automatic right to connect new development to public sewers and (b) work with local government representatives to improve local flood risk management arrangements. Both elements should be part of an action plan to tackle surface water flood risk, to be published by Defra within a year of this report.
* **Recommendation 4:** DCLG should by the time of the ASC’s next report in 2017 (a) make water companies statutory consultees on all planning applications that have implications for the public sewer network; (b) put in place a process for monitoring and evaluating the effectiveness of planning policy in (i) achieving a high uptake of SuDS in new development and (ii) limiting the paving-over of front gardens with impermeable surfaces.
* **Recommendation 15:** DCLG should, before the ASC’s next report in 2017, evaluate the latest evidence and subsequently introduce a new standard or regulation on reducing the risk of overheating in new homes.
* **Recommendation 16:** DCLG and the Department of Health should develop incentives for the uptake of passive cooling in existing homes, hospitals and care homes and include new measures in the next NAP.

To inform its second progress report, the ASC wishes to understand further how designers and builders assess the costs and benefits of measures to increase the resilience of new buildings to overheating and flooding; what these costs and benefits are; and how they influence decisions on the extent to which these measures are incorporated into new buildings. The results of this project will inform the ASC’s understanding of the incentives and barriers for adaptation measures to be incorporated into new builds.

# Aims and Objectives

The objective of this project is to collect evidence on the factors that influence decisions by designers and builders on whether to include adaptation measures into new buildings, including if relevant the real and perceived costs and benefits of incorporating those measures.

In the context of this study, ‘costs’ and ‘benefits’ should be interpreted broadly, and more widely than monetary measures. This project should focus on understanding what factors drive decision making and is not meant to be a full cost-benefit analysis.

The ‘costs’ to designers and builders can include, for example:

* Direct costs of materials and labour
* Indirect costs such as adaptation measures conflicting with other design aspects of the building (e.g. the desire to decrease solar gain conflicting with the aesthetic desire for large south-facing windows)
* Consumer perceptions or requirements for design features where these go against the incorporation of adaptation measures.
* Post-build costs associated with having to make alterations to buildings under warranty where performance issues arise, or costs associated with the risk of possible litigation.

The ‘benefits’ to designers and builders can include, for example:

* Achieving higher property values
* Complying with building regulations or other standards
* Achieving a level of design quality to meet a certain level of certification, for example EPC or BREEAM
* Reputational gains
* Consumer perceptions of design features where these value the incorporation of adaptation measures.

The specific aims of this project are to:

1. Through a series of targeted interviews and/or a survey, understand the costs and benefits that house designers and builders associate with including adaptation measures to protect against overheating, internal flooding, and surface water drainage issues in new homes and public/commercial buildings.
2. Assess the types of adaptation measures considered by house designers and builders, and whether assessment and perception of related costs and benefits varies by type of adaptation measure. A list of possible adaptation measures is attached an **annex A**.[[1]](#footnote-1)
3. Assess whether there are other, real or perceived, non-financial barriers to adaptation measures being adopted.
4. Assess the extent to which designers and builders would view the ASC’s recommendations from its 2015 report as an additional burden or incentive, and why.

# Methodology

Bids should include a suggested methodology to collect the information needed to address the four aims and meet the objective above, within the budget provided. We would expect the approach proposed to include piloting of survey methods, and a blend of qualitative and quantitative evidence collected via methods such as focus groups, telephone interviews and/or surveys. Tenders should include details on the proposed techniques for collecting information, sampling method, indicative questions, quality criteria (e.g. expected sample size, significance and reliability criteria), and how the results would be analysed and presented.

# Outputs Required

The ASC expects that the project will deliver the following outputs:

* A report outlining the analytical questions posed, methods to assess them, using survey and/or interview techniques, and key findings.
* A spreadsheet including the full data collected to allow further in-house analysis after the study is complete.

# Ownership and Publication

The datasets created and results of the analysis will be owned and published by the Adaptation Sub-Committee.

# Quality Assurance

Quality assurance methods must be more sophisticated than a simple internal check, and should include details of records of how the analysis has been checked and what changes were made as a result. The QA process to be followed should be outlined in the bid.

# Timetable

An indicative timeline for deliverables is presented below. The contractors can propose modifications to the timeline to better suit their analysis if appropriate, though the final submission date must remain the same. Any proposed modifications should be set out in their bid and will require approval from the ASC secretariat.

| **Phase** | **Deliverable** | **Date** |
| --- | --- | --- |
| Bidding | Bids received | 9th November 2016 |
|  | Interviews conducted | w/c 14th November 2016 |
|  | Contract awarded | 25th November 2016 |
| Project development | Kick off meeting with ASC to discuss method and sampling | w/c 28th November 2016 |
|  | Methods reviewed and signed off, interviews/surveys start | 9th December 2016 |
|  | Pilot interview/survey completed and analysed, any changes made to method | 23rd December 2016 |
|  | Interviews/ surveys completed | 3rd February 2017 |
|  | Results analysed and presented to ASC secretariat | 24th February 2017 |
| Reporting | Draft report to ASC | 10th March 2017 |
|  | Draft report reviewed | 24th March 2017 |
|  | Final amends to report made | 31st March 2017 |

# Challenges

The specific challenges that the ASC envisage with this project include:

* identifying a sufficient range and number of suitable respondents who are willing to take part in the study but who will still form a representative sample of a range of designers and builders;
* identifying appropriate questions to ask to gather robust and reliable information;
* judging if the responses received can be taken as representative of the industry as a whole;
* devising a series of questions to allow the potential impact of the ASC’s recommendations to be assessed, whilst avoiding only receiving very generalised or ‘don’t know’ answers.

# Ethics

All applicants will need to identify and propose arrangements for initial scrutiny and on-going monitoring of ethical issues. The appropriate handling of ethical issues is part of the tender assessment exercise and proposals will be evaluated on this as part of the ‘addressing challenges and risks’ criterion.

We expect contractors to adhere to the following GSR Principals:

1. Sound application and conduct of social research methods and appropriate dissemination and utilisation of findings
2. Participation based on valid consent
3. Enabling participation
4. Avoidance of personal harm
5. Non-disclosure of identity and personal information

# Working Arrangements

# The successful contractor will be expected to identify one named point of contract through whom all enquiries can be filtered. A CCC project manager will be assigned to the project and will be the central point of contact.

# Skills and experience

CCC would like you to demonstrate that you have the experience and capabilities to undertake the project. Your tender response should include a summary of each proposed team members experience and capabilities.

Contractors should propose named members of the project team, and include the tasks and responsibilities of each team member. This should be clearly linked to the work programme, indicating the grade/ seniority of staff and number of days allocated to specific tasks.

Contractors should identify the individual(s) who will be responsible for managing the project.

# Consortium Bids

In the case of a consortium tender, only one submission covering all of the partners is required but consortia are advised to make clear the proposed role that each partner will play in performing the contract as per the requirements of the technical specification. We expect the bidder to indicate who in the consortium will be the lead contact for this project, and the organisation and governance associated with the consortia.

Contractors must provide details as to how they will manage any sub-contractors and what percentage of the tendered activity (in terms of monetary value) will be sub-contracted.

If a consortium is not proposing to form a corporate entity, full details of alternative proposed arrangements should be provided. However, please note CCC reserves the right to require a successful consortium to form a single legal entity in accordance with Regulation 28 of the Public Contracts Regulations 2006.

CCC recognises that arrangements in relation to consortia may (within limits) be subject to future change. Potential Providers should therefore respond in the light of the arrangements as currently envisaged. Potential Providers are reminded that any future proposed change in relation to consortia must be notified to CCC so that it can make a further assessment by applying the selection criteria to the new information provided.

# Budget

The budget for this project is up to £30,000 including VAT.

Contractors should provide a full and detailed breakdown of costs (including options where appropriate). This should include staff (and day rate) allocated to specific tasks. Cost will be a criterion against which bids which will be assessed.

Payments will be linked to delivery of key milestones. The indicative milestones and phasing of payments can be adjusted and agreed with the contractor and Project Manager. Please advise in your tender response how this breakdown reflects your usual payment processes.

In submitting full tenders, contractors confirm in writing that the price offered will be held for a minimum of 60 calendar days from the date of submission. Any payment conditions applicable to the prime contractor must also be replicated with sub-contractors.

The Department aims to pay all correctly submitted invoices as soon as possible with a target of 10 days from the date of receipt and within 30 days at the latest in line with standard terms and conditions of contract.

# Evaluation of Tenders

Contractors are invited to submit full tenders of no more than 30 pages, excluding declarations. Tenders will be evaluated by at least three CCC staff.

CCC will select the bidder that scores highest against the criteria and weighting listed below, see the ITT for further information.

**EVALUATION CRITERIA AND SCORING METHODOLOGY**

|  |  |  |
| --- | --- | --- |
| Criterion | Description | Weighting |
| 1 | **RELEVANT EXPERIENCE / DEMONSTRATION OF CABABILITY** | 20% |
| 2 | **MANAGING YOUR RELATIONSHIP WITH THE CCC** | 5% |
| 3 | **QUALITY ASSURING THE SERVICES YOU PROVIDE** | 10% |
| 4 | **MANAGEMENT STRUCTURE** | 5% |
| 5 | **PROJECT TEAM – SKILLS AND KNOWLEDGE** | 20% |
| 6 | **METHOD, ABILITY AND TECHNICAL CAPACITY**  | 20% |
| 7 | **UNDERSTANDING OF REQUIREMENTS** | 10% |
| 8 | **RISK AND CHALLENGES** | 10% |
|  |  |  |
|  | 100% |

**Scoring Method**

Tenders will be scored against each of the criteria above, according to the extent to which they meet the requirements of the tender. The meaning of each score is outlined in the table below.

The total score will be calculated by applying the weighting set against each criterion, outlined above; the maximum number of marks possible will be 100. Should any contractor score 1 in any of the criteria, they will be excluded from the tender competition.

|  |  |
| --- | --- |
| **Score** | **Description** |
| 1 | Not Satisfactory: Proposal contains significant shortcomings and does not meet the required standard |
| 2 | Partially Satisfactory: Proposal partially meets the required standard, with one or more moderate weaknesses or gaps  |
| 3 | Satisfactory: Proposal mostly meets the required standard, with one or more minor weaknesses or gaps. |
| 4 | Good: Proposal meets the required standard, with moderate levels of assurance |
| 5 | Excellent: Proposal fully meets the required standard with high levels of assurance |

**Structure of Tenders**

Contractors are strongly advised to structure their tender submissions to cover each of the criteria above and supply a price schedule specifying the daily rates (ex-VAT) you will charge for each level of your staff.

**Evaluation for Interviews, if held**

CCC reserves the right to award the contract based on applicants’ written evaluation only if one candidate emerges from the evaluation stage as significantly stronger than the others.

Should interviews go ahead, CCC will shortlist the top three suppliers with the highest marks from the written proposals. Interviews are provisionally expected to be held on the week commencing 14th November. If this date changes, CCC will notify applicants.

The areas to be covered in the interview, and markings allocated to each topic area will be sent to the shortlisted supplier prior to interview.

Further details of interviews will be sent to successful applicants on selection.

**Feedback**

Feedback will be given in letters or emails.

ANNEX A: Examples of adaptation measures within the scope of the study

* Design/orientation of structure and windows to avoid excessive solar gain
* Appropriate lagging of internal heat sources, such as hot water pipes
* Design measures to allow adequate ventilation and through drafts
* Passive cooling measures, such as blinds and shutters, solar shading, tinted glass, light coloured external materials
* Green roofs (both for surface water management and cooling)
* Below ground SuDS, e.g. storm water retention
* Above ground SuDS, retention ponds, swales, soakaways, etc.
* Permeable surfacing for driveways, car parks, highways, etc.
* Non-return valves, to prevent sewer backfill
* Property-level flood protection – door guards, air brick covers,
* Property-level flood resilience – sacrificial ground floor, elevated electrics and appliances, flood-resilient wall and floor treatments, detachable kitchen units etc.
1. In terms of overheating, alongside passive cooling measures we are interested in what consideration is given to limiting overheating risk when implementing energy efficiency and low carbon heat measures in new designs. [↑](#footnote-ref-1)