



CONTENTS

1.	PURPOSE	2
2.	BACKGROUND TO THE CONTRACTING AUTHORITY	2
3.	BACKGROUND TO REQUIREMENT	3
4.	DEFINITIONS	4
5.	SCOPE OF REQUIREMENT	4
6.	THE REQUIREMENT	5
7.	KEY MILESTONES AND DELIVERABLES	8
8.	MANAGEMENT INFORMATION/REPORTING	11
9.	CONTINUOUS IMPROVEMENT	11
10.	QUALITY	11
11.	PRICE	11
12.	STAFF AND CUSTOMER SERVICE	11
13.	SERVICE LEVELS AND PERFORMANCE	12
14.	SECURITY AND CONFIDENTIALITY REQUIREMENTS	12
15.	PAYMENT AND INVOICING	12
16.	CONTRACT MANAGEMENT	13
17.	ADDITIONAL INFORMATION	13
18.	LOCATION	13



1. PURPOSE

- 1.1 The Ministry of Housing, Communities and Local Government (MHCLG), herein referred to as “The Authority”, is undertaking a procurement exercise to award a Contract to a Supplier to undertake research, as part of the technical review of Approved Document B (ADB), into the current system used to classify external wall constructions.
- 1.2 The research will address key research questions regarding the test methodology of BS 8414-1 and BS 8414-2 for external wall constructions and the classification criteria set out in BR 135. The overall aim of the project is to ensure this testing regime is fit for purpose and based on robust evidence to ensure buildings are safe and people are confident in the regulatory standards.
- 1.3 The proposal should include establishing an expert Technical Steering Group to support MHCLG officials at a strategic decision-making level of the project and assist where necessary, steering the research programme and providing feedback on the research methodology, as well as key deliverables and milestones throughout the duration of the project.

2. BACKGROUND TO THE CONTRACTING AUTHORITY

- 2.1 The Authority's aim is to help create great places to live and work right across the country and to back communities to come together and thrive. The Authority's responsibilities include:
 - 2.1.1 Ensuring people throughout the country have access to affordable and high-quality housing
 - 2.1.2 Providing opportunities for all parts of the country to thrive economically
 - 2.1.3 Building integrated communities
 - 2.1.4 Supporting effective local government
- 2.2 Amongst its other interests, the Authority has also established the Building Safety Programme which is responsible for delivering the changes where needed to make the building safety system fit for purpose.
- 2.3 The Building Regulations control certain building work – principally to protect the health, safety and welfare of people in and around buildings. Part B of Schedule 1 of the regulations relates to fire safety aspects of building design and construction and ADB, the statutory guidance to the regulations which demonstrates how the provisions can be complied with.
- 2.4 In response to Dame Judith Hackitt's review following the Grenfell tragedy in 2017 the Government has committed to a full-scale [review](#) of ADB.
- 2.5 The technical review started with a [Call for Evidence](#) which invited views on technical issues and further improvements that could be made to ADB. A [summary](#) of the findings from the Call for Evidence was published on the 05 September 2019.



- 2.6 The findings were used to set a proposed agenda, terms of reference and programme for the review and to identify what research is needed to inform the review.
- 2.7 Through these findings, stakeholder workshops, and advice from the Building Regulation Advisory Committee (BRAC), the department has identified a need for research and review of the testing regime for external wall constructions.

3. BACKGROUND TO REQUIREMENT

- 3.1 The Building Regulations 2010 (as amended) require that the external walls of buildings adequately resist the spread of fire over the external walls and from one building to another (Paragraph B4 of Schedule 1).
- 3.2 Following the Grenfell Tower fire tragedy in 2017, the Government introduced changes to the Building Regulations in December 2018 setting strict performance requirements for external wall materials in certain buildings, resulting in an in-effect ban of the use of combustible materials. These requirements only apply to a limited set of building types that have a top storey over 18 metres from ground level.
- 3.3 Changes were also made to the statutory guidance in Approved Document B (Fire Safety) to make clear that Assessments in Lieu of Tests (AILETs) cannot be used in any circumstances to demonstrate compliance with this in-effect ban. For buildings outside of the scope of the in-effect ban, the guidance was amended to ensure that AILETs are not used as a way to avoid undertaking a test and are only used where necessary.
- 3.4 As such, for buildings outside of the scope of the in-effect ban, there are in accordance with ADB two ways in which designers may satisfy themselves they have met the functional requirements of the Building Regulations:
- Following the prescriptive guidance in Approved Document B
 - Using data from a full-scale fire test in accordance with BS 8414-1 or BS 8414-2 to meet the performance criteria provided in BRE report BR 135.
- 3.5 BS 8414-1 and BS 8414-2 provide a test method for determining the fire performance characteristics of non-loadbearing external cladding systems when fixed to, and supported by a masonry substrate or structural steel frame respectively, and exposed to an external fire under controlled conditions.
- 3.6 The BS 8414 standards and methodologies are still recognised as robust by the Building Safety Independent Expert Advisory Panel and parts of the industry. However, they have, along with the classification criteria in BR 135, come under criticism from industry and academics. The British Standards Institution have subsequently convened an expert committee to review this critique and the Standards where necessary.
- 3.7 Several amendments were made to BS 8414-1 and BS 8414-2, published in April 2020, but there are several issues that require further data and evidence. This project is intended to address this gap in knowledge and ensure the standards and classification criteria in BR 135 are fit for purpose.



3.8 Issues raised by industry, academia and the BSI expert committee which have been determined to require further research include:

- Appropriateness of the fire load considering modern domestic fires and variation between tests;
- The need to incorporate windows, vents and other common wall features into the tests;
- The use and placement of cavity barriers (particularly in relation to the location of thermocouples);
- The effects of ventilation and wind;
- Standardisation of test construction and data capture/recording;
- Classification criteria – e.g. evaluation period, failure temperature and lack of consideration of fire stop penetrations, detachment of wall elements and burning droplet formation;
- Application of the test data during design and construction.

4. DEFINITIONS

Expression or Acronym	Definition
ADB	Approved Document B (Fire Safety) volumes 1 and 2
BS 8414-1	BS 8414-1:2020 Fire performance of external cladding systems. Test method for non-loadbearing external cladding systems fixed to, and supported by, a masonry substrate
BS 8414-2	BS 8414-2:2020 Fire performance of external cladding systems. Test method for non-loadbearing external cladding systems fixed to, and supported by, a structural steel frame
BR 135	Fire performance of external thermal insulation for walls of multi-storey buildings – third edition
MHCLG	Ministry of Housing, Communities and Local Government

5. SCOPE OF REQUIREMENT

5.1 The overall scope of the project is to provide a review of the current assessment methodology of the fire performance of external wall systems including a review of the BS 8414 methodology and BR 135 classification. This is expected to include:

- A review of relevant literature, test methodologies, and international approaches to determining the fire performance of external wall systems;



- Identification and prioritisation of areas for potential changes to the testing methodologies and classification criteria;
 - Objective and robust assessment of proposed alterations;
 - Development of guidance for designers on the application of data from testing and classifications
- 5.2 At the completion of each milestone a suitable review will be carried out to ensure the suitability of research and allow for variations (improvements, expansion, and/or reduction). Such variations will be subject to formal change control where they include cost implications.
- 5.3 The supplier will establish facilities for face to face or video conference call meetings with MHCLG and other stakeholder groups to discuss any further research goals of the project required to deliver updates and agree elements with the Authority, and as required to deliver the project objectives.
- 5.4 The supplier will work with the contract manager and other MHCLG suppliers where required to deliver project objectives, update meetings, and reports.
- 5.5 The Technical review programme comprises several workstreams covering different policy areas. It is recognised that each area is not mutually exclusive and there may be evidence and considerations relevant across workstreams. As such the supplier is expected to work collaboratively across workstreams to share and consider knowledge.
- 5.6 The supplier is also expected to work collaboratively with industry, academia and government bodies and interest groups to collect and research knowledge related to the workstream.
- 5.7 The research will also be used to inform impact assessments for future consultation proposals where evidence suggests changes may be necessary to current statutory guidance.
- 5.8 The main output from the research will be an objective presentation of the results in the form of technical reports.
- 5.9 Each objective, as laid out in section 6, is mandatory.

6. THE REQUIREMENT

- 6.1 The supplier will be expected to have, and demonstrate in their response:
- Expertise in the policy area and a good working understanding of the BS 8414 testing regime, BR 135, fire behaviour, and current relevant design and construction practices;
 - Thorough understanding of the principles of fire safety guidance in building design and application of this in practice;
 - Expertise in carrying out multi-faceted research projects in the area of fire safety (or related);
 - A clear understanding of the research objectives and context of the work;



- Capacity to complete the work to the proposed timeframe with appropriate staff and resource allocation;
 - A clear and appropriate choice of methodology that addresses the full scope of the project and each objective laid out in the tender.
- 6.2 The overall scope of the project is to provide a review of the current assessment methodology of the fire performance of external wall systems including a review of the BS 8414 methodology and BR 135 classification.
- 6.3 **Objective 1 – Evidence collection**
- 6.4 An initial scoping and literature review exercise to compile historic and modern evidence and information on the development and performance of the methodology set out in BS 8414-1 and BS 8414-2, and the classification criteria in BR 135. This is expected to include:
- Identifying and reviewing any information relevant to the development of BS 8414;
 - Reviewing and identifying the basis for the assumptions made in *Fire Note 9: Assessing the fire performance of external cladding systems: a test method (1999)*.
 - Establishing the test evidence used to develop BR 135;
 - Compilation and review of published appraisal and critique of the testing methodologies in BS 8414 and classification criteria in BR 135;
 - Compilation and review of information and evidence regarding alternative test methodologies and approaches to determining the fire performance of external wall systems, including those used internationally;
 - Identification and review of ongoing projects internationally regarding approaches to assessing and regulating the fire performance of external wall systems;
- 6.5 **Objective 2 – Prioritisation of areas for experimental review**
- 6.6 An exercise to establish a prioritised programme of work for reviewing the testing methodology and classification in BS 8414 and BR 135. This is expected to include:
- Gathering and assessment of expert stakeholder views in a systematic manner covering key sectors to identify areas where further research is required or areas where improvement is desired for the testing methodologies and classification criteria. The Supplier is expected to justify a methodology to prioritise any identified issues/areas for further testing as part of objective 2.
 - Collection and review of available literature regarding the areas of research identified in paragraph 3.8 and other relevant areas as identified by the literature, technical steering group, and on agreement with The Authority.



6.7 Objective 3 – Review the performance of the current test methods and classification criteria

6.8 Develop and carry out an objective and holistic review of the BS 8414-1 and BS 8414-2 test methodologies and classification criteria in BR 135. This is expected to include specific tasks to address the following key areas of interest, as well as those identified in objective 2, where further evidence is required to develop improvements for the testing and classification regime:

- Appropriateness of the fire load and source considering modern domestic fires and reducing variation between tests;
- The need to incorporate windows, vents and other common wall features into the tests;
- The use and placement of cavity barriers (particularly in relation to the location of thermocouples) – this is expected to include consideration of the influence of location, number, and type of cavity barriers (e.g. open and closed state), the need for vertical cavity barriers, and the actual use of cavity barriers in the design and construction of buildings;
- The effects of ventilation and wind;
- Standardisation of test construction and data capture/recording; and
- Classification criteria – e.g. evaluation period, failure temperature and lack of consideration of fire stop penetrations, detachment of wall elements and burning droplet formation.

6.9 As part of this objective the supplier will be expected to deliver an objective assessment of the testing methodologies and classification criteria. This is expected to include development and proposal of alterations to the test methodologies and classification criteria.

6.10 Objective 4 – Evaluate improvements to the current test methods and classification criteria

6.11 This objective is expected to include:

- Development and delivery of a methodology and programme of experimental testing to provide robust evidence and data to evaluate the proposed alterations and improvements to the testing methodology and classification criteria developed as part of objective 3;
- Analysis of the experimental testing data and other relevant evidence to assess the impact of change for each proposed alteration and detailing any cost implications, advantages, disadvantages, and any limitations or risks associated with the change.

6.12 Objective 5 – Develop guidance for industry on the application of BS 8414 test results and BR 135 classifications to the design of buildings

6.13 There remains a gap in industry understanding of how to apply and translate key test characteristics and data into the process of designing a building to ensure appropriate performance of buildings once built. We envisage that this is likely to include guidance on how to better take into consideration test results



when incorporating windows, vents and other common wall features to the external wall systems and ensure that the external wall systems performs as expected when installed on a building.

- 6.14 This objective is expected to involve proposal, development and drafting of a guidance document to assist in the use of test data during the design of buildings. This will be expected to consider:
- The current limitations of current construction approaches and technologies;
 - The limitations of the testing and classification system in BS 8414 and BR 135; and
 - The critical parameters designers must take into consideration when using test results to design buildings.
- 6.15 The Supplier will be expected to establish and provide secretariat services for a technical steering group who will meet at the onset of the project and periodically review progress and monitor the research activities and outcomes. The contract manager of this project will represent MHCLG at these meetings.
- 6.16 The Supplier will be expected to be able to liaise and present findings with the Building Regulation Advisory committee and its working group as necessary.
- 6.17 The supplier will be expected to produce:
- Proposed methodology reports;
 - Interim reports for each objective and as appropriate;
 - Final report summarising findings across each interim report in a publicly publishable format.

7. KEY MILESTONES AND DELIVERABLES

- 7.1 The supplier will provide and present to MHCLG the following specific deliverables:
- A proposed research methodology consisting of a report (electronic and hard copy where appropriate) detailing the scope of the project, methodology, key deliverables and all risks.
 - Draft interim and interim reports (electronic and hard copy where appropriate) for each phase of the research including methodology, results/findings to date, detailed assumptions intended to underpin analysis along with any other issues identified and how these will be dealt with. Draft interim and interim reports should also include indications of next steps the supplier will be taking, and any proposed further research not previously agreed with the contract manager. Provision of draft interim reports should be preceded either via a face to face or a video call meeting



to update the Authority and any relevant groups of stakeholders (e.g. steering group established as part of the research project).

- Final report (electronic and hard copy where appropriate) including all results/findings throughout the project, detailed assumptions intended to underpin analysis along with any other issues identified. The final report should be in an accessible and readily publishable format. The final report should be preceded either via a face to face or a video call meeting to update the Authority and any relevant groups of stakeholders (e.g. steering group established as part of the research project).
- 7.2 All reports (draft and final) should include a front cover and QA sheet including: the report title, the MHCLG and supplier reference numbers, the milestone identifier, the version number, the date, and checking/approving signatures. The front should be marked as a draft until an approved final version is requested by the Authority. The front cover may be removed and replaced when reports are prepared for publication by MHCLG.
- 7.3 Final reports will be published on the GOV.UK website after review and quality assurance.
- 7.4 Research results/findings should be made available to any established Technical Steering Groups during the project.
- 7.5 The supplier will also be expected to provide a secretariat service for project meetings and meetings of any Technical Steering Groups established, with a record of the minutes being provided to The Authority within three (3) working days of each meeting. Minutes should be provided to The Authority's Contract Manager in an electronic format.
- 7.6 The supplier will be expected to update the Authority on progress at least monthly verbally and in writing, through a brief report, to the Contract Manager.
- 7.7 All outputs must be clearly written and thoroughly proof-read prior to submission.
- 7.8 Performance measures;
- Methodology agreed
 - Technical Steering Group established
 - Draft reports provided to agreed timeframe
 - Final report provided to agreed timeframe
 - Satisfactory research output
- 7.9 The following Contract milestones/deliverables shall apply:

Milestone/Deliverable	Description	Timeframe or Delivery Date
1	Commencement date: Start Date	Within 1 week of Contract Award



2	Objective 1-2 methodology agreed	Within 4 weeks of Commencement Date
3	Technical Steering Group established.	Within 4 weeks of Commencement Date
4	Objective 1 Draft Report provided	Within 5 months of Commencement Date
5	Objective 2 Draft Report provided	Within 6 months of Commencement Date
6	Objective 3 Methodology Agreed	Within 9 months of Commencement Date
7	Objective 3 Draft Report provided	Within 27 months of Commencement Date
Contract Break		
8	Objective 4 Methodology Agreed	Within 28 months of Commencement Date
9	Objective 4 Draft Report provided	Within 40 months of Commencement Date
Contract Break		
10	Objective 5 Methodology Agreed	Within 40 months of Commencement Date
11	Objective 5 Draft Report provided	Within 44 months of Commencement Date
12	Draft Final Report provided	Within 45 months of Commencement Date
13	Final Report provided	Within 46 months of Commencement Date
14	Contract completion	Within 46 months of Commencement Date



8. MANAGEMENT INFORMATION/REPORTING

- 8.1 The Authority requires a dedicated account management structure including a single point of contact for day to day enquiries, with a nominated deputy to act in their absence.
- 8.2 A detailed escalation procedure must be outlined, with named individuals outlined on an organogram provided by the supplier.

9. CONTINUOUS IMPROVEMENT

- 9.1 The Supplier will be expected to continually improve the way in which the required Services are to be delivered throughout the Contract duration.
- 9.2 Changes to the way in which the Services are to be delivered must be brought to the Authority's attention and agreed prior to any changes being implemented.
- 9.3 The supplier should present any proposed changes to the project methodology to the Authority during monthly update meetings with the Contract Manager or at regular interval as agreed with the Contract Manager.

10. DATA PROTECTION

- 10.1 The provider will be required to handle sensitive information and must comply with the requirements of the Data Protection Act 2018 and the General Data Protection Regulation.
- 10.2 Supplier will be expected to have a secure email address to receive information (or must set up a secure email address if they do not have one already).

11. QUALITY

- 11.1 The supplier should operate under an appropriate quality management system, such as ISO (9000 series) or equivalent.

12. PRICE

- 12.1 Attachment 4 – Price Schedule must be completed. The supplier is expected to provide sufficient detail for evaluation.
- 12.2 The total price for this Contract is expected to be a maximum of **£650,000** (excl. VAT) and be completed within 46 months of commencement.
- 12.3 Prices are to be submitted via the e-Sourcing Suite (Attachment 4 – Price Schedule) excluding VAT and including all other expenses relating to Contract delivery.

13. STAFF AND CUSTOMER SERVICE

- 13.1 The Supplier should provide a sufficient level of resource throughout the duration of the Contract in order to consistently deliver a quality service.
- 13.2 The Supplier's staff assigned to the Contract should have the relevant qualifications and experience (i.e. detailed knowledge of the construction industry, construction techniques, technology and design, relating to means of



escape and in particular to means of escape for disabled people) to deliver the Contract to the required standard.

- 13.3 The Supplier shall ensure that staff understand the Authority's objectives and will provide excellent customer service to the Authority throughout the duration of the Contract.

14. SERVICE LEVELS AND PERFORMANCE

- 14.1 The Authority will measure the quality of the Supplier's delivery by assessing each task, including meeting target dates, appropriateness of methodology, completeness of information and readability of reports. The Authority will take account of the views of any Technical Steering Groups and will provide feedback to the supplier.

KPI/SLA	Service Area	KPI/SLA description	Target
1	Delivery timescales	Completion of milestones to agreed timeframe	100%
2	Research output	Completion of research to agreed standard set out in contract	To be agreed with the Authority
3	Methodology	Proposal and agreement of appropriate methodology	To be agreed with the Authority

- 14.2 The supplier will be required to report regularly on progress toward achievement of objectives. Applicants will need to explain how they will collect and record this information to maintain a fully evidenced audit trail. It should be noted that if a supplier fails to deliver contracted outputs, a performance review may apply which could lead to an early termination of the contract

15. SECURITY AND CONFIDENTIALITY REQUIREMENTS

- 15.1 There are no requirements for employees of the supplier to have any level of security clearance.
- 15.2 The Authority's office is part of the Home Office building, which has enhanced security arrangements, including baggage searches and photo-ID being needed for entry. The supplier must make allowances for delays caused by security if attending meetings or where the supplier's staff is working at the Authority's office.

16. PAYMENT AND INVOICING

- 16.1 Payment can only be made following satisfactory delivery of pre-agreed certified deliverables and Milestones.
- 16.2 Before payment can be considered, each invoice must include a detailed elemental breakdown of work completed and the associated costs.



- 16.3 The Purchase Order (PO) number must be included when the Invoice is submitted.
- 16.4 Payment of Invoices follow a process of checking and approval; timeframe is subject to agreement with Contract Manager.

17. CONTRACT MANAGEMENT

- 17.1 Feedback of performance will be provided to the contractor at progress meetings and at the end of the project, to ensure the quality of research is maintained.
- 17.2 The contract manager for this project will act as the formal point of contact between MHCLG and the supplier.
- 17.3 The following will be agreed with the Contract Manager;
- The outputs from the research (presentation, reports etc) and the proposed approach being taken by the suppliers to complete the research.
 - How progress will be fed back to MHCLG (including the frequency of face to face (or video conference) progress meetings with the suppliers).
- 17.4 Where outputs will be required and cleared by MHCLG, it will be important that the supplier is able to take into consideration the time for MHCLG to clear these outputs.
- 17.5 All data and supporting information used in draft or any interim reports and the final report will be provided to MHCLG in an electronic format at the end of the contract.

18. ADDITIONAL INFORMATION

- 18.1 This requirement can be undertaken by a single firm or a consortium.
- 18.2 In the case of a consortium, the Authority will only enter into a contract with the lead contractor and all formal contacts between the Authority and members of the consortium should be made through the lead contractor. The lead contractor will be expected to enter into Service Level Agreements (SLA) with consortium members and these members will form part of the Steering Group when it is established.
- 18.3 The supplier agrees to take out a policy of 'Professional Indemnity Insurance' with a capped liability level of 125% of the contract value.

19. LOCATION

- 19.1 The location of the Services will be carried out generally at the supplier's offices, although there may be a need for some tasks to be undertaken at the Authority's office (currently 2 Marsham Street, London SW1P 4DF).

