



# Bid Pack

## Attachment 3 – Statement of Requirements

Contract Ref: CPD/004/120/115; MHCLG - Modern Methods of  
Construction (MMC) research

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## 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 a research study to investigate potential, primarily safety, risks from the adoption of modern methods of construction (MMC) in the housing sector.

## 2. BACKGROUND TO THE CONTRACTING AUTHORITY

- 2.1 MHCLG’s task is to create great places to live and work, and to give more power to local people to shape what happens in their area.
- 2.2 The Government has a manifesto commitment to support MMC in housebuilding. Industry estimates suggest that approximately 10% of new build homes are made using MMC. MHCLG is providing support to the sector to grow.

## 3. BACKGROUND TO REQUIREMENT / OVERVIEW OF REQUIREMENT

- 3.1 This research proposal responds to concerns raised by the Building Regulations Advisory Committee (BRAC) that the accelerated adoption of modular MMC could potentially lead to systemic safety failures. BRAC recommended that government-funded research be undertaken. The Authority accepted that recommendation and is launching this procurement so that the necessary research can be undertaken.
- 3.2 The research will be used to inform the development of building regulations and any other necessary action to ensure safe homes people can feel confident living in.

## 4. DEFINITIONS

Expression or Acronym	Definition
MMC	means Modern Methods of Construction
BRAC	means Building Regulations Advisory Committee
Modular	means category 1 of the MMC Definition Framework developed by MHCLG’s MMC Working Group <a href="https://www.gov.uk/government/publications/modern-methods-of-construction-working-group-developing-a-definition-framework">https://www.gov.uk/government/publications/modern-methods-of-construction-working-group-developing-a-definition-framework</a>
Approved Documents	means guidance on ways to meet the building regulations. <a href="https://www.gov.uk/government/collections/approved-documents">https://www.gov.uk/government/collections/approved-documents</a>



Approved Document B	means building regulations for fire safety in residential homes, including new and existing dwellings, flats, residential accommodation, schools, colleges and offices. <a href="https://www.gov.uk/government/publications/fire-safety-approved-document-b">https://www.gov.uk/government/publications/fire-safety-approved-document-b</a>
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## 5. SCOPE OF REQUIREMENT

- 5.1 The aim of the research is to investigate potential risks for systemic failure impacting life safety and performance of modern methods of construction. Such risks may stem from the technical design, execution (particularly on site) or the interface between factory and site; the latter issue being particularly relevant to building control bodies (local authority building control and approved inspectors).
- 5.2 The scope of the research will be limited to one type of MMC, offsite modular (volumetric) construction, where the greatest risk is perceived.
- 5.3 We expect the research will be conducted primarily by means of desk studies, informed by detailed investigation of current industry practices. The supplier may also use different and innovative approaches which deliver the requirement, for example, conducting experimental tests. Findings should be designed to inform options for any government action, including use of Building Regulations.

## 6. THE REQUIREMENT

- 6.1 The Authority will require a research report that will deliver options, with pros and cons of each, to improve and reduce risks stemming from one important form of MMC, namely volumetric off-site construction. The final report will cover, but not be limited to:
- The objectives, scope of the study and the research methods utilised by MHCLG's contractor.
  - An evidence-based assessment of the situation and the key issues therein, including addressing the BRAC concerns (see appendix, page 8).
  - Identification and evaluation options for how the building control system should be adapted to reduce safety risks with off-site MMC buildings, including issues of quality control of factory-based construction and the interface between factory and site, and verification of structural safety calculations and assumptions.
  - Any proposed changes which should be addressed through amendments to the Building Regulations 2010 or the Approved Documents (ADs) and identification of any need for additional technical guidance and testing outside, including a minimum product assembly standard and third-party certification.



- Proposal for how records and information regarding MMC buildings should be kept and disseminated to enable safe and efficient alteration or repair of MMC buildings, taking into account emerging regulatory requirements on building safety.
- Investigation and consideration of factors affecting the design life of volumetric off-site construction, including inspection of voids between units and repair and maintenance.
- Options for standard details and good practice.
- Where appropriate, an indication of any potential costs and benefits of solutions in relation to construction costs, alteration costs, and maintenance costs.
- Analysis of key issues and proposed options, with pros and cons of each as appropriate.

## 7. KEY MILESTONES AND DELIVERABLES

7.1 The supplier will provide and present to MHCLG the following specific deliverables:

- A proposed statement of intent consisting of a report (electronic and hard copy where appropriate) detailing the scope of the project, methodology, key deliverables and any preconceived risks.
- Draft interim report(s) (electronic and hard copy where appropriate) for the research, including results/findings, detailed assumptions intended to underpin analysis, and any other issues identified and how these will be dealt with. Draft 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. Draft reports should be preceded by a meeting to update MHCLG 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 preceded by a meeting to update MHCLG and any relevant groups of stakeholders.
- 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 MHCLG. The front cover may be removed and replaced when reports are prepared for publication by MHCLG.

7.2 Final reports may be published on the GOV.UK website after review and quality assurance.

7.3 The following Contract milestones/deliverables shall apply:



Milestone / Deliverable	Description	Timeframe or Delivery Date
1	Statement of intent	Within first 2 months of contract award
2	Draft Report	Within first 6 months of contract award
3	Final Report	Within 12 months of contract award, and before end of financial year 21/22

## 8. MANAGEMENT INFORMATION / REPORTING

- 8.1 MHCLG will require 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. VOLUMES

- 9.1 MHCLG expects the supplier to determine their own approach and methodology.
- 9.2 See para 12.1 for further context around volumes.

## 10. CONTINUOUS IMPROVEMENT

- 10.1 The Supplier will be expected to continually improve the way in which the required Services are to be delivered throughout the Contract duration.
- 10.2 The Supplier should present new ways of working to the Authority during regular Contract review meetings.
- 10.3 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.

## 11. SUSTAINABILITY

- 11.1 MHCLG encourages the supplier to adopt sustainable practices throughout
- 11.2 The customer expects the final report for this contract to be a high-quality piece of written work that is evidence based, well written, and neatly presented.

## 12. PRICE

- 12.1 Total price for this contract is a maximum of £175k, split into two years (excluding VAT). Costs in 2020/21 cannot exceed £100k, the remaining amount will be paid in 2021/22 or at completion.
- 12.2 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 shall 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 shall have the relevant qualifications and experience to deliver the Contract to the required standard.
- 13.3 The Supplier shall ensure that staff understand the Authority's vision and 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 as set out in the 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 targets. The supplier will need to explain how they will collect and record this information to maintain a fully evidenced audit trail.
- 14.3 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 REDACTED.

### 16. PAYMENT AND INVOICING

- 16.1 Costs will be monitored closely and total costs in 2020/21 cannot exceed £100k, the remaining amount will be paid in 2021/22 (excluding VAT).



16.2 Payment can only be made following satisfactory delivery of pre-agreed certified products and deliverables.

16.3 **REDACTED.**

## **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. The Contract will be managed by a member of the Investment and Diversification team.

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 supplier to complete the research.
- How progress will be fed back to MHCLG (including the frequency of face-to-face or video conference/telephone 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. This should take no longer than one week unless MHCLG state differently.

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.

17.6 Attendance at Contract Review meetings shall be at the Supplier's own expense. Initially, given Covid-19 restrictions, meetings will be held remotely via Microsoft Teams or other suitable video conference application.

## **18. LOCATION**

18.1 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). This will be done in accordance with Covid-19 safety guidelines at the time.





## 19. APPENDIX – BRAC’S CONCERNS

### 19.1 Design concerns

- Appropriateness of using off-site construction in all situations.
- **Design of interfaces between volumetric units, and between off-site and non-off-site elements** (including tolerances, thermal performance, fire-stopping, weather-tightness and service connections)
- **Structural design.** How do volumetric structures perform in terms of robustness in relevant scenarios envisaged in EN1991-1-7 and what are the implications stemming from the potential diversity and complexity of systems (including for building control bodies).
- **Quality assurance and the role of independent certification schemes** (such as BBA, BRE Global, Exova BM TRADA) for independently assessed superstructure systems (noting this may be part of another MHCLG area of research and as such is excluded from this study).
- **Compliance with Part B** – noting that fire protection approach in Approved Document B and historic fire tests assume ‘common building’ materials and assembly methods, and do not consider all potential fire hazards presented by MMCs.

### 19.2 Construction concerns:

- **Transportation** (including transportation induced stresses in the frame module and the effect of transport on the integrity of building services, airtightness and insulation), storage, effect of lifting and placement and protection of volumetric elements being assembled on site.
- **Inspection by building control bodies on site** – in particular: damage in transit, connection to the foundations, other structural connections, thermal performance of joints between units, fire-stopping, and the integrity of building services.
- **Inspection by building control bodies in factories** and factory production control – in particular the location of factories could be abroad – and the structure concealed behind sheathing or inside closed panels.

### 19.3 Durability and in-service concerns:

- **Design life and durability** (including corrosion protection to steel, compatibility of materials). Potential over-reliance on mastic joints, adhesives or details to shed water from the building, and the design life of such details)
- **Adaptability** – off-site volumetric modular homes may be harder to alter, extend or reconfigure and there may be risks in relation to fire safety or structural stability when alterations are made.
- **Record keeping** – if records are lost for complex off-site systems this may be more of an issue than for more traditional buildings.