



**Invitation to Tender (ITT)
For professional services to the
CIBSE Knowledge Management Committee**

Best Practice in the Design of Homes

February 2015

**Issued by:
CIBSE
222 Balham High Road
London
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ANNEX A – CIBSE Model Research Agreement

ANNEX B – CIBSE Standard Terms & Conditions

ANNEX C – CIBSE Contracts Procedure Note

1 INTRODUCTION

1.1 Background

CIBSE's 'Homes for the Future' special interest group has identified a need for guidance on good practice building services design and environmental design for the homes sector. This sector includes houses, apartments and care homes.

Work by the National House Building Council (NHBC) Trust and Zero Carbon Hub (ZCH) has highlighted serious performance gap issues in the housing sector. Many of the causes of the performance gap are due to lack of skills, lack of appropriate guidance and installation problems. In addition, in order to keep up with the pace of change in Building Regulations, new building technologies and techniques are being implemented to meet the needs for low carbon compliance homes. Increased awareness of the risk of overheating is also an emerging issue. The need for up-to-date and appropriate guidance for the industry has therefore never been greater.

CIBSE is seeking tenders to produce a Technical Memorandum on the best practice in the design of homes, offering guidance on preferred design practice relating to building engineering services and the approach to environmental design.

It is not intended to replace good practice specialist guidance that already exists and should refer to other established guidance where possible. The objective is to pull together a general guidance document that covers the building engineering design and construction lifecycle, and highlight key design aspects that affect maintainability and operation. The target readership will primarily be building services engineers working in the homes sector. The guide will also be of interest to other construction professionals such as architects and project managers, developers, house builders and installers.

1.2 Outline Requirements

The scope of the proposed work is described in Section 2 and tender instructions are provided in Section 5.

2 SPECIFICATION

The aim of this project is to produce a CIBSE publication in the form of a Technical Memorandum that provides guidance on the best practice for the design of homes. Topics which should be covered include:

- Project briefing, setting targets and consideration of occupant needs.
- Overview of an integrated approach to design, with consideration of fabric and building form; promotion of collaboration with engineers, architects and the supply chain; and high level planning issues.
- The zero carbon agenda and what this means to residential planning and design.
- Guidance on causes of overheating in homes and mitigation measures
- Consideration of future climate and measures to increase resilience of homes to its impacts.
- Residential building regulations compliance, energy modelling and daylight analysis (including the appropriate use for SAP and its limitations as a design tool).
- Connecting to infrastructure/ utilities.

- Effective procurement and how to take a Soft Landings approach for domestic properties.

i) Design

- Building engineering systems – overview and system selection; impacts on energy performance.
- Optimising system sizing e.g. condensing boilers and radiator sizing, fan systems, comfort cooling in luxury residential units.
- Controls for heating, lighting and ventilation; smart controls as a future area of activity.
- Guidance on where control equipment should be located e.g. thermostats.
- Guidance on assessing and integrating low and zero carbon technologies, including heat pumps, solar thermal panels and solar PVs.
- Design stage Part L assessment and preliminary EPC.

ii) Construction

- Contractor/builder selection
- References to good site practice
- Site co-ordination issues
- Importance of testing and commissioning
- Producing the as-built EPC
- Producing guidance at hand-over and user manuals

iii) Maintenance and Operation

- Key maintenance considerations
- Measuring energy and water use
- Performance gap issues: common causes and lessons from building performance evaluation.

iv) Specific considerations for retrofit and refurbishment work

- Assessing retrofit options
- Improving energy efficiency

v) References and further reading

- Provide details of guidance referred to in the text
- Included recommended further reading, where relevant
- Include web-links and details of relevant associations (CIBSE, RIBA, BRE, NHBC, Zero Carbon Hub)

Technical Memoranda should be prepared with expedition of production firmly in mind to ensure publication as soon as possible. Therefore style guidelines should be followed meticulously. The length the Technical Memorandum should be 30–40 printed pages including illustrations plus references and a list of further reading (approximately 1000 words per printed page). This corresponds to about 70–100 pages of typescript (single-spaced).

Presentation should be concise and a 'textbook' style must be avoided. Fundamental data and/or calculation procedures should only be presented if not available elsewhere (sources must be cited). If included, such data and procedures should be placed in an appendix. Material common to two or more locations in the text should not be repeated; cross-refer instead. Derivation of essential formulae and other mathematical working should be explained in principle only except where a fully developed argument is essential to understanding new technology. The use of drawings, diagrams and other line artwork should be kept to a minimum to expedite publication. Photographs may be included to illustrate particular points, e.g. case studies.

The inclusion of case studies to illustrate good practice is recommended (Support and examples for case studies can be provided by the Steering Group).

3 PROJECT MANAGEMENT

It is intended to let a contract for work to begin in March 2015. The successful contractor will be required to produce preliminary drafts for review by the Steering Group, along with the final technical memoranda ready for publication.

The project will be managed by a Steering Group appointed by the Homes for the Future Group on behalf of the CIBSE Knowledge Management Committee (KMC). The project will be overseen by the CIBSE Research Manager, Dr Anastasia Mylona.

4 TIMESCALES, COSTS & DELIVERABLES

Each submission should identify which package or packages it covers and give an outline of the proposed approach to the research and a synopsis of the expected work required, as well as an outline of the intended reporting at preliminary and final stages, proposed papers for journals and any proposed contribution to CIBSE guidance.

The proposal should set out the proposed approach, with a CV for each participant setting out relevant information regarding the experience of the proposer, including any previous experience of working on industry guidance, including for CIBSE.

Submissions should be costed and identify and quantify any in-kind contributions offered by the proposer. A proposed timetable and fee schedule for the work should be included, based on work starting in March 2015.

The work will be overseen by a Steering Group to ensure a consistent approach is taken and allowance should be made in the timetable and costs for an appropriate level of engagement with the Steering Group, which will be undertaken by correspondence as far as possible.

The successful proposal, subject to any modifications which may be agreed prior to the award of contract, will form the basis for the research agreement. The standard CIBSE Research Agreement, standard terms and conditions and contracts procedure note are included at Annex A – C.

5 TENDER INSTRUCTIONS TO CONTRACTORS

Interested parties should provide fully costed tenders addressed to Dr Anastasia Mylona (CIBSE Research Manager) by email to amylona@cibse.org by 12:00 noon on Thursday 9th March 2015. Should you have any questions regarding this ITT then please contact Dr Mylona.

The tender process will follow the timescales below:

Item	By when
ITT sent out	09/02/2015
Deadline for tender return	09/03/2015
Successful contractor appointed by	31/03/2015
Kick off meeting	April 2015 (exact date to be confirmed)

Requests for clarifications of the ITT documents must be made in writing by email, not later than midday on 28th February 2015. If CIBSE needs to issue any additions or clarification to these documents during the bidding period, we will do so in writing (usually by email) and send this to all those who have expressed an intention to submit proposals to all Contractors. Your organisation must bear all costs associated with the bidding process itself.

CIBSE shall be under no obligation to award a contract for all or any part of the requirement set out in this Invitation to Tender, to any supplier or at all. **We would be grateful if you could inform us as soon as possible whether or not you intend to submit a tender.** If you decide not to respond to this ITT, please let us know in writing as soon as possible, giving brief reasons.

6 FORMAT OF TENDER RETURN

Tender Response: Please submit **1 electronic copy and 2 hard copies** of your tender response, most business file types are acceptable. All information in this ITT document set shall be treated as confidential. Tenders should show firm lump sum prices (including expenses but exclusive of VAT) in sterling for the services offered.

Submissions shall be addressed to The Research Manager, CIBSE, 222, Balham High Rd. London, SW12 9BS

The supplier shall submit a detailed proposal describing:

- The scope of work offered, amplifying on the tasks identified above and including any others not specified which the Contractor considers necessary
- A project plan with milestone deliverables, including and delivery dates and costs
- A schedule of staff time and individual day rates used to determine the prices for each of the deliverables
- The experience of the organisation in this type of work
- The proposed project team and their individual experience
- Details of how the project would be managed and monitored and risks assessed and mitigated
- Description of previous case studies and names of referees from similar projects.

7 ASSESSMENT CRITERIA

The supplier will be selected on an evaluation of their submission, which will include price, quality and experience in undertaking this type of project.

The relative weightings for the evaluation of submissions are as follows:

- Understanding of the brief 20%
- Relevant experience & track record 20%
- Technical ability and suitability 50%
- Overall quality of bid 10%

Each aspect will be scored on a scale of 1-10. CIBSE reserve the right to invite candidates for interview if necessary.

8 TERMS AND CONDITIONS

The contract will be let under the draft agreement at Annex A. Terms and Conditions will be in accordance with the CIBSE standard terms at Annex B. Should any clauses be unacceptable to the supplier this must be noted in the tender submission and alterations proposed. Annex B sets out the procedures relevant to the conduct of the contract.