**Invitation to Tender for Hybrid Heat Pumps**

Tender Reference Number: TRN1282/02/2017

Deadline for Tender Responses: 17 March 2017, 15:00hrs

**Department for Business, Energy & Industrial Strategy**

Date: 15 February 2017

The Department for Business, Energy & Industrial Strategy (“BEIS”) wishes to commission a Hybrid Heat Pumps project.

Enclosed are the following sections:

* Section 1 (page 3) Instructions on tendering procedures
* Section 2 (page 7) Specification of requirements
* Section 3 (page 18) Further information on tendering procedure
* Section 4 (page 21) Declarations and information to be provided;

Statement of Non-Collusion

Form of Tender

Conflict of Interest

Questions for tenderers

Code of Practice for Research

* Annex A: Pricing schedule
* Annex B: Code of practice for research

Please register your interest in submitting a tender for this project by emailing [joanna.ciesielska@beis.gov.uk](mailto:joanna.ciesielska@beis.gov.uk). This will ensure you receive immediate notification of updates to the ITT process or answers to questions raised by potential bidders.

Please read the instructions on the tendering procedures carefully since failure to comply with them may invalidate your tender. Your tender must be returned by 15:00hrs on 17 March 2017 clearly marked as “TENDER”.

I look forward to receiving your response.

Yours sincerely,

Joanna Ciesielska

E-mail: [joanna.ciesielska@beis.gov.uk](mailto:joanna.ciesielska@beis.gov.uk)

**Section 1**

**Instructions and Information on Tendering Procedures**

Invitation to Tender for **Hybrid Heat Pumps**

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# Indicative Timetable

The anticipated timetable for this tender exercise is as follows. BEIS reserves the right to vary this timetable. Any variations will be published on contracts finder or circulated to all organisations who have registered an interest in notifications.

|  |  |
| --- | --- |
| **Tender Timeline** | **Date** |
| Advert and full invitation to tender issued | 16 February 2017 |
| Deadline for questions relating to the tender | 3 March 2017 |
| Responses to questions published | 8 March 2017 |
| Deadline for receipt of tender | 17 March 2017 |
| Invite suppliers for bid clarification (if needed) | Between 3-6 April 2017 |
| All suppliers alerted of outcome | By 7 April 2017 |
| Contract award on signature by both parties | 10 April 2017 |
|  |  |
| Contract start date | 10 April 2017 |

The contract is to be for a period of 16 weeks unless terminated or extended by the Department in accordance with the terms of the contract.

# Procedure for Submitting Tenders

The maximum page limit for tenders is 30 pages (excluding declarations, pricing schedule and CVs).

Please send two hard copies of your tender (one of which must be signed) to Joanna Ciesielska, level 6, Abbey 2/Victoria 1, 1 Victoria Street, London SW1H 0ET by 15:00hrs on 17 March 2017 and email your proposal after the deadline and by 17:00hrs to ([joanna.ciesielska@beis.gov.uk](mailto:joanna.ciesielska@beis.gov.uk)).

For questions regarding the procurement process please contact Joanna Ciesielska ([joanna.ciesielska@beis.gov.uk](mailto:joanna.ciesielska@beis.gov.uk))

Tenders will be received up to the time and date stated. Please ensure that your tender is delivered not later than the appointed time on the appointed date. The Department does not undertake to consider tenders received after that time. The Department requires tenders to remain valid for a period indicated in the specification of requirements.

BEIS shall have the right to disqualify you from the procurement if you fail to fully complete your response, or do not return all of the fully completed documentation and declarations requested in this ITT. BEIS shall also have the right to disqualify you if it later becomes aware of any omission or misrepresentation in your response to any question within this invitation to tender. If you require further information concerning the tender process, or the nature of the proposed contract, email [joanna.ciesielska@beis.gov.uk](mailto:joanna.ciesielska@beis.gov.uk). All questions should be submitted by 15:00hrs on 3 March 2017 via email; questions submitted after this date may not be answered. Should questions arise during the tendering period, which in our judgement are of material significance, we will publish these questions with our formal reply by the end of 8 March 2017 and circulate – unnamed - to all organisations that have expressed an interest in bidding. All contractors should then take that reply into consideration when preparing their own bids, and we will evaluate bids on the assumption that they have done so.

You will not be entitled to claim from the Department any costs or expenses that you may incur in preparing your tender whether or not your tender is successful.

# Conflict of Interest

The Department’s standard terms and conditions of contract include reference to conflict of interest and require contractors to declare any potential conflict of interest to the Secretary of State.

For research and analysis, conflict of interest is defined the presence of an interest or involvement of the contractor, subcontractor (or consortium member) which could affect the actual or perceived impartiality of the research or analysis.

Where there may be a potential conflict of interest, it is suggested that the consortia or organisation designs a working arrangements such that the findings cannot be influenced (or perceived to be influenced) by the organisation which is the owner of a potential conflict of interest. For example, consideration should be given to the different roles which organisations play in the research or analysis, and how these can be structured to ensue maintain an impartial approach to the project is maintained.

The process by which this is managed in the procurement process is as follows:

1. **During the bidding process, organisations may contact BEIS to discuss whether or not their proposed arrangement is likely to yield a conflict of interest.** Any responses given to individual organisations or consortia will be published on contract finder (in a form which does not reveal the questioner’s identity). Any organisation thinking of submitting a bid, should share their contact details with the staff member responsible for this procurement, to ensure they receive an update when any responses to questions are published.
2. **Contractors are asked to sign and return Declaration 3 (page 27) to indicate whether or not any conflict of interest may be, or be perceived to be, an issue.** If this is the case, the contractor or consortium should give a full account of the actions or processes that it will use to ensure that conflict of interest is avoided. In any statement of mitigating actions, contractors are expected to outline how they propose to achieve a robust, impartial and credible approach to the research.
3. **When tenders are scored, this declaration will be subject to a pass/fail score**, according to whether, on the basis of the information in the proposal and declaration, there remains a conflict of interest which may affect the impartiality of the research.

Failure to declare or avoid conflict of interest at this or a later stage may result in exclusion from the procurement competition, or in the Department exercising its right to terminate any contract awarded.

# Evaluation of Responses

The tender process will be conducted to ensure that bids are evaluated fairly and transparently, in accordance with agreed assessment criteria. Further details are provided in the specification.

# Terms and conditions applying to this Invitation to Tender

The Department’s Standard Terms and Conditions of Contract will apply to this contract. These can be downloaded from Contracts Finder.

# Further Instructions to Contractors

The Department reserves the right to amend the enclosed tender documents at any time prior to the deadline for receipt of tenders. Any such amendment will be numbered, dated and issued by 8 March 2017. Where amendments are significant, the Department may at its discretion extend the deadline for receipt of tenders.

The Department reserves the right to withdraw this contract opportunity without notice and will not be liable for any costs incurred by contractors during any stage of the process. Contractors should also note that, in the event a tender is considered to be fundamentally unacceptable on a key issue, regardless of its other merits, that tender may be rejected. By issuing this invitation the Department is not bound in any way and does not have to accept the lowest or any tender and reserves the right to accept a portion of any tender unless the tenderer expressly stipulates otherwise in their tender.

# Checklist of Documents to be Returned

* Proposal (maximum 30 pages)
* Annex A – pricing schedule
* Declaration 1: Statement of non-collusion
* Declaration 2: Form of Tender
* Declaration 3: Conflict of Interest
* Declaration 5: Code of Practice

**Section 2**

**Specification of Requirements**

Invitation to Tender for **Hybrid Heat Pumps**

Tender Reference Number: TRN1282/02/2017

Deadline for Tender Responses: 15:00hrs on 17 March 2017

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# Introduction and summary of requirements

The Department for Business, Energy & Industrial Strategy wishes to commission a project to advance our understanding of the potential role of hybrid heat pump (HHP) systems (as defined below) in long-term heat decarbonisation.

**Technology**

For the purpose of this study hybrid technologies are defined as: systems combining an electric driven air, or ground source heat pump with a gas boiler (including dedicated controls). Specific appliances under review should include split and integrated packaged systems as well as add-on solutions. All domestic properties are in scope of this project – both retrofit and new build.

# Background

Heat refers to any energy that is used, or might be used, for the purposes of heating or cooling in buildings, including cooking, providing hot water and in industrial processes. The Climate Change Act places a statutory obligation on the UK Government to make an 80% reduction in 1990 greenhouse gas emissions by 2050. Achieving nearly zero carbon heating continues to be identified by government analysis as an important feature of any lowest cost pathway to 2050. Heat currently accounts for ~48% of UK energy consumption and approximately one third of our greenhouse gas emissions.

On the 14th December 2016, Baroness Neville Rolfe gave a speech at the Policy Exchange’s Heat Summit on heat decarbonisation. For more information see Baroness Neville Rolfe’s keynote speech from the Policy Exchange event “The Heat Summit: How Can We Decarbonise Heating?”

<https://www.gov.uk/government/speeches/baroness-neville-rolfes-speech-at-the-policy-exchanges-heat-summit>

1. **Aims and Objectives**

To provide insight and new evidence on the extent to which Hybrid Heat Pumps could play a key role in long-term decarbonisation of heat.

The objectives of the project are:

To understand the current in-situ performance of hybrid heat pumps;

To develop robust assumptions of performance and cost (capital and running) changes to 2050 in light of various scales of potential deployment and product innovation;

To assess potential for innovation to drive changes to hybrid heat pump technology through to 2050 and make HHPs an increasingly attractive consumer proposition (in particular when compared to standard electric heat pumps).

This project will build on previously gathered evidence, such as that published in the *Domestic Hybrid Heat Pump* report available on [gov.uk](https://www.gov.uk/government/publications/evidence-gathering-high-temperature-heat-pumps-hybrid-heat-pumps-and-gas-driven-heat-pumps).

Outlined below are the questions that BEIS would like the contractor to address. The questions are not intended to be an exhaustive list, and others may come out of the work during the contracting period. Where numerical answers are to be provided in response to these questions, ranges must be provided to illustrate the estimated level of uncertainty and the basis for that range clearly articulated.

*Understanding the current in-situ performance of hybrid heat pumps*

1. What is the in-use performance of air-source and ground-source hybrid heat pump systems? How does they compare to a gas boiler, an air-source and ground source heat pumps?
2. What are the likely proportions in which the heat pump and gas boiler are used in a single household?
3. How does this proportion vary with the different control strategies currently available?
4. How does this proportion vary at different times of the year and at different external temperatures?
5. How does this proportion vary with different house types and levels of insulation?
6. In currently available/ under-development HHP controllers:

* what are the triggers of switching between fuels?
* how much end-user involvement is there in the switching?

1. What is the range of potential functionality available in HHP smart-controllers? For example minimising costs, maximising automation, etc.?
2. What would be the barriers (including their scale) to deploying each of this functions?

A set of data from an independent field trial of air-source HHPs may become available for analysis as part of this project. Should this be the case the following should also be answered:

1. How good is the quality of the independent dataset?
2. What are the strengths and weaknesses of the independent dataset?
3. How representative the data is likely to be to other HPPs systems and products, installed now and in the future?
4. How does the data from this field trial help to validate or otherwise, the assumptions otherwise generated as part of this research?

When answering the above questions, appliances under review should include split and integrated packaged systems as well as add-on solutions (with a variety of currently available boilers), in particular when performance profiles are considered. Systems running in different modes (switch or parallel) should also be considered.

*Assumptions of current and potential performance and cost*

1. What are the recommended assumptions for the costs (capital and running) of air-source and ground-source hybrid heat pumps (in retrofit and new build properties, now and in the future - a suite of assumptions should be provided when appropriate)?
2. What are the recommended assumptions for the in-use performance of air-source and ground-source hybrid heat pumps (in retrofit and new build properties, now and in the future - a suite of assumptions should be provided when appropriate)?
3. What is the potential for cost reductions (capital and running) of air-source and ground-source hybrid heat pump systems in light of:

* increased rates of market penetration and scale of deployment in UK;
* increased rates of market penetration and scale of deployment outside the UK;
* innovation in product design, installation or use;
* increasingly mature supply-chains;
* Other drivers (please explain).

1. At what rate could this cost reduction occur under a number of different scenarios (as a minimum 3 scenarios should be included, varying significantly in the degree of penetration of hybrid heat pump technology - low, medium and high)? What conditions would enable it?
2. How could installation (taking into consideration the installation of split and integrated packaged systems as well as add-on solutions, running in different modes) and maintenance costs change in light of wide deployment of hybrid heat pump systems? How could maintenance costs change over a lifetime of the product?
3. What is the potential for air-source and ground-source hybrid heat pump systems to increase performance and efficiency (of the heat pump in particular but its impact on the overall HHP system efficiency)?
4. What is the potential for air-source and ground-source hybrid heat pump systems to reduce in physical size (of the packaged systems in particular)?
5. What is the potential for air-source hybrid heat pump systems to reduce the noise levels associated with their operation?
6. What would a suitable categorisation of different types/sizes or installation scenario be that would adequately reflect the variation in costs per unit of capacity and heat supplied for BEIS modelling purposes. What would the associated modelling assumptions for these categories be?

*Innovation*

1. What legal and technical developments are likely to impact hybrid technology (in terms of cost reduction and performance improvements):

* High-likelihood – those currently on the horizon and likely to come to market?
* Medium-likelihood – those that are possible but need further testing and support before commercialisation?
* Low-likelihood – those that are feasible but improbable without new drivers of change (e.g. introduction/changes to time of use tariffs results in controllers being adapted to respond to them)?

1. What technical developments could positively impact the consumer (or other) barriers as identified in chapter 9 of the [*Domestic Hybrid Heat Pumps*](https://www.gov.uk/government/publications/evidence-gathering-high-temperature-heat-pumps-hybrid-heat-pumps-and-gas-driven-heat-pumps) report and other relevant publications?
2. What innovation support or market developments are live, emerging or possible outside UK that could impact hybrid heat pump technology (including smart controllers)?
3. What is the potential impact on HHP load profiles of innovation in other products, systems and changes in behaviour?
4. How could other technologies (for example smart learning thermostats) improve our understanding of the potential of hybrid heat pumps smart controllers – both when it comes to their operation and consumer engagement?
5. What is the scope for innovation in the HHP smart-controller technology? Areas such as user experience, performance/responsiveness and added functionality should be considered.

Bidders are invited to suggest additional lines of enquiry or approaches which would help to achieve the project aims and objectives.

# Methodology

The contractors will be invited to propose a methodology which would best meet the overall aim and objectives above for approval by BEIS.

The work is expected to include, but may not be limited to, the following methods:

* Collation, analysis and comparison of relevant product and performance data;
* Literature and previous studies review (likely to take form of a Rapid Evidence Assessment (REA) - the contractor should set out some initial proposals in their tender to inform this approach);
* Industry consultation/expert interviews and opinion (expected to include *product designers, manufacturers, installers, technical experts, trade bodies, researchers and academia).*
* Analysis, synthesis and modelling.

The contractor will draw on expert opinion and data from a wide range of sources and apply its own expert judgement to draw conclusions and make robust recommendations.

Tenderers should set out details of their preferred method/s for all of the data collection conducted as part of this research, as well as any analysis of data as appropriate. The contractor should provide a confidence assessment to ensure robustness of data and to illustrate a credible and impartial approach. In particular tenderers are expected to specify methodology for obtaining credible costs projections.

**Key Tasks**

Outlined below are tasks we require the contractor to complete. The tasks indicated here are not intended to be an exhaustive list, and others may come out of the work during the contracting period.

1. Research and analysis on innovation potential. Building on existing literature, industry and market insights and expert opinion, report on the potential for a range of innovations to improve the appeal, performance and/or costs of hybrid heating technologies in the UK setting. This should include an assessment of the likelihood of innovation materialising, barriers and key drivers and a confidence assessment.
2. Develop cost assumptions.Using current costs as specified in BEIS' [*Domestic Hybrid Heat Pumps*](https://www.gov.uk/government/publications/evidence-gathering-high-temperature-heat-pumps-hybrid-heat-pumps-and-gas-driven-heat-pumps) report as a baseline where possible, contractors are asked to develop a series of costs assumptions (per kW of installed capacity and total) of HHP systems up to 2050 to be used in future BEIS analysis and modelling work. As a minimum 'costs' under consideration should include product costs - air- and ground-source heat pumps, integrated packaged systems (heat pump packaged with a gas boiler as a single product with dedicated intelligent control system) and dedicated controllers as well as maintenance and installation costs. These cost assumptions will need to be developed with BEIS as the project progresses to ensure compatibility with Department’s existing and future work. Cost assumptions should be considered under a number of different scenarios (as a minimum 3 scenarios should be included, varying significantly in the degree of market penetration of hybrid heat pump technology - low, medium and high).
3. Develop technical assumptions on performance of HHPs. A suite of assumptions should be provided to cover a range of applications (e.g. retrofit and new build properties) now and out to 2050. When considering both cost and performance assumptions **a set should be developed using multiple sources where they exist and an assessment of their availability.** The contractor should record the information assessed using the following assumptions log template: <https://www.gov.uk/government/publications/assumptions-log-template>

Any assumptions will need to be presented in a number of predetermined metrics to ensure that they can be incorporated into the Department’s existing and future work - the metrics will be agreed during the project initiation stage.

As part of appraising available performance data you may be asked to analyse and evaluate the quality of a dataset from an independent in-situ trial of 185 HHPs (all packaged units). The precise format of the data received from this project is yet to be confirmed but will as a minimum include electricity consumption values aggregated to half hourly data. Bidders are asked to separately cost this activity – provisioning for the availability of the independent dataset and lack thereof.

# Outputs Required

|  |  |  |
| --- | --- | --- |
| **Output required** | **Description of output** | **Delivery date** |
| Project plan | Project plan, signed-off by BEIS, detailing how the contractor will deliver against the project’s milestones. To include key phases of work, weekly activity plan, delivery dates. | w/c 10 April 2017 |
| Quality assurance plan | Plan, signed off by BEIS, detailing how the contractor will ensure quality and robustness of the model and analysis outputs. |
| Risk log | Description of key delivery risks identified at the outset of the project as well as plans for managing these risk, in a format that can be updated as part of ongoing project monitoring and review, signed off by BEIS. |
| Stakeholder plan | Description of stakeholders to be engaged in completion of project, the input expected, meeting schedule and eventual outturn. |
| Progress update | Written updates on the progress of the project, with reference to the project plan, QA plan and risk log – each of which to be updated as necessary in order to capture the state of progress. | Weekly from w/c 17 April 2017 and throughout the duration of the project |
| Written report | The main output of the project. It is to address the aims of the project by completing tasks and answering questions specified in section 3 above. Quality assured. | w/c 24 July 2017 |
| Excel workbook of assumptions for BEIS modelling | To ensure the evidence can be used effectively in future BEIS modelling a set of assumptions will be required for distinct categories of hybrid heat pump/installation type. The contractor must provide between 3 and 12 categories and provide suitable assumption. The precise metrics can be agreed at the contract initiation stage but will include:  Description of the category  Suitability criteria i.e. any restrictions on types of home in which the hybrid pump could be installed  Capital costs per unit of capacity  Fuel inputs per unit of heat supplied  Non-fuel operating costs per unit of capacity or heat supplied.  Ratio of heat supplied by heat pump to heat supplied by gas boiler over a typical year  The above to be specified separately for space heating and hot water. | w/c 24 July 2017 |
| Cleaned dataset  (if needed) | A copy of the cleaned dataset used for analysis. | w/c 24 July 2017 |
| Set of transcripts | A set of transcripts obtained during industry consultations. | w/c 24 July 2017 |

# Ownership and Publication

BEIS is committed to openness and transparency. All outputs listed in section 5 (with the exception of project updates) should be accessible, non-disclosive and suitable for publication and further use. The exceptions to this are where:

1) The intellectual property rights to an output (or part of an output) are owned by someone other than the contractor. Contractors should state in their tender if this is the case and indicate whether the third party copy righted materials can be redacted.

2) Data is commercial in confidence.

3) A non-anonymised dataset is required for the project.

If these exceptions apply to any part of the outputs, contractors should indicate this in their proposal alongside any approaches to resolving these. Where applicable, contractors can provide optional costs for obtaining rights to data or outputs. These will be agreed before BEIS lets the contract.

Unless the above exceptions have been stated in a proposal, all outputs from a research project will assumed to be owned by BEIS. The outputs, raw data and tools developed in the research cannot therefore be used for contractors for purposes other than our work

BEIS standard terms and conditions require that BEIS retain the Intellectual Property (IP) from all models and software paid for by BEIS:

• Where the contractor is using or building on top of existing IP, such as modules that interface with the model, or proprietary datasets, this must be explicitly stated in the tender response.

• Where open source code or models are to be used within this model, please make clear under which license this open source software is released.

• The Open Government Licence should be used wherever possible:

http://www.nationalarchives.gov.uk/doc/open-government-licence/version/2/

**Non-disclosure**

All outputs must be provided to BEIS in a format that is non-disclosive (i.e. no individuals or individual organisations are identifiable from the data or analysis, directly or indirectly), unless the specification states otherwise. The contractor is responsible for ensuring that the data is supplied in this form alongside a report on the checks made. A minimum standard for checking includes cell counts within sub-groups for all outputs and analysis. The contractor will be asked to agree their approach to checking for disclosure with BEIS during the course of the contract, before the checks are carried out. Where data or analysis is found to be disclosive during checking, the contractor will be required to suggest an approach or approaches to aggregate the analysis and to agree this with BEIS.

**Storage and Transfer**

The contractor will need to ensure that all appropriate regulations are adhered to regarding safe storage and transfer, compliant with BEIS requirements for the data processing of restricted data.

# Quality Assurance

Tenderers should clearly outline their proposed approach to quality assure all information collected through this study and its outputs.

All project outputs will be quality assured by the (BEIS) Analytical Working Group to ensure the findings are robust and in line with BEIS’s QA guidance. The contractors will be required to provide their own quality assurance in line with BEIS’s QA policy for evidence and analysis.

# Timetable

Table 1: Indicative timeline and requirements for the stages of the project

|  |  |  |
| --- | --- | --- |
| **Reporting points/ deliverables** | **Due date** | **Milestone Payment** |
| Inception steering group meeting for project | w/c 10 April 2017 |  |
| Introductory meeting with the contractors/managers | w/c 10 April 2017 |  |
| Regular progress check-in (via email/telephone) | Weekly throughout the project |  |
| Draft report and workbook assumptions approved by BEIS | By 30 June | 40% |
| QA Complete | By 14 July |  |
| Final Report and Presentation | By 28 July | 60% |

# Challenges

* This project feeds into a number of time critical dependent projects and the contractor must be able to convince BEIS of prompt delivery of the project to agreed quality standards.
* Data availability – aspects of this project rely on timely delivery of data from an independent in-situ trial (Manchester Heat Pump Trial). This is a key dependency.
* Output quality – this project calls for review of the innovation potential of hybrid heat pumps, a relatively immature technology with limited uptake in the UK. Contractors must propose a robust quality assurance mechanism.

# 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 BEIS project manager will be assigned to the project and will be the central point of contact. BEIS be conducting peer review of the project outputs at key stages.

# Skills and experience

BEIS would like you to demonstrate that you have the experience and capabilities to undertake the project. These include, but are not limited to, in-depth knowledge of the hybrid heat pump systems and their operation (in particular when smart controllers and product design are considered) as well as skills in analysing metering data and forecasting system performance. We expect contractors that can add engineering value and provide sound analysis of the product innovation potential. Additionally, well-developed links with the industry will be necessary to complete the expert interview/industry consultation portion of 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 in the Annex. However, please note the Department 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.

The Department 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 the Department 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 £60,000 to £80,000 excluding 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 as outlined in Table 1 Section 8 - Timetable. This can be adjusted and agreed with the contractor.

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 BEIS staff.

BEIS will select the bidder that scores highest against the criteria and weighting listed below:

* **Conflict of interest:** pass/fail. See page 5 of the ITT for further information

**EVALUATION CRITERIA AND SCORING METHODOLOGY**

|  |  |  |
| --- | --- | --- |
| Criterion | Description | Weighting |
| 1 | **1. Understanding requirements and adding value** | 15% |
| 2 | **2. Methodology** | 25% |
|  | Clearly demonstrate the methodology to be used for delivery of requirements. |  |
| 3 | **3. Experience of project team** | 20% |
| 3A | Technical capability – to include ability and experience of assimilating uncertain data and drawing conclusions (10%) |  |
| 3B | Contacts and links with industry (10%) |  |
| 4 | **4. Management and delivery** | 20% |
| 4A | Delivery plan (10%) |  |
| 4B | Quality assurance and risk management approach (10%) |  |
| 5 | **5. Cost effectiveness** | 20% |
| Total | | 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 |

**Scoring for Pricing Evaluation/ Costs Effectiveness**

Price will be scored as set out below.

There will be a maximum of e.g. 20 marks

The lowest priced bid will receive the full 20 marks, all other bids will then be marked as set out below.

Proportionate Pricing scoring example

If 20% = 20 marks

|  |  |  |
| --- | --- | --- |
| Supplier | Price | Marks |
| 1 (lowest bid) | £50,000 | 20 |
| 2 | £60,000 | 50/60 \* 20 = 16.7 |
| 3 | £75,000 | 50/75 \* 20 = 13.3 |

**Structure of Tenders**

Contractors are strongly advised to structure their tender submissions to cover each of the criteria above. Complete the price schedule attached at Annex A, specifying the daily rates (ex-VAT) you will charge for each level of your staff.

**Bid Clarification**

The Department 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.

BEIS may invite all suppliers for bid clarification if they feel bid clarification should be carried out.

**Feedback**

Feedback will be given in the unsuccessful letters or emails.

**Section 3**

**Further Information on Tender Procedure**

Invitation to Tender for **Hybrid Heat Pumps**

Tender Reference Number: TRN1282/02/2017

Deadline for Tender Responses: 15:00hrs on 17 March 2017

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A. [Definitions](#_Definitions) 14

B. [Data security](#_Data_security) 14

C. [Non-Collusion](#_Non-Collusion) 15

# Definitions

Please note that references to the "Department" throughout these documents mean The Secretary of State for Business Energy & Industrial Strategy.

The Freedom of Information Act 2000 (“FOIA”) and the Environmental Information Regulations 2004 (“EIR”) apply to the Department. You should be aware of the Department’s obligations and responsibilities under FOIA or EIR to disclose, on written request, recorded information held by the Department. Information provided in connection with this procurement exercise, or with any contract that may be awarded as a result of this exercise, may therefore have to be disclosed by the Department in response to such a request, unless the Department decides that one of the statutory exemptions under the FOIA or the exceptions in the EIR applies. If you wish to designate information supplied as part of this response as confidential, of if you believe that its disclosure would be prejudicial to any person’s commercial interests, you must provide clear and specific detail as to the precise information involved and explain (in broad terms) what harm may result from disclosure if a request is received, and the time period applicable to that sensitivity. Such designation alone may not prevent disclosure if in the Department’s reasonable opinion publication is required by applicable legislation or Government policy or where disclosure is required by the Information Commissioner or the First-tier Tribunal (Information Rights).

Additionally, the Government’s transparency agenda requires that tender documents (including ITTs such as this) are published on a designated, publicly searchable web site. The same applies to other tender documents issued by the Department (including the original advertisement and the pre-qualification questionnaire (if used)), and any contract entered into by the Department with its preferred supplier once the procurement is complete. By submitting a tender you agree that your participation in this procurement may be made public. The answers you give in this response will not be published on the transparency web site (but may fall to be disclosed under FOIA or EIR (see above)). Where tender documents issued by the Department or contracts with its suppliers fall to be disclosed the Department will redact them as it thinks necessary, having regard (inter alia) to the exemptions/exceptions in the FOIA or EIR.

# Data security

The successful tenderer must comply with the Data Protection Act (DPA) 1998 and any information collected, processed and transferred on behalf of *The Department*, and in particular personal information, must be held and transferred securely**. Contractors must provide assurances of compliance with the DPA and set out in their proposals details of the practices and systems they have in place for handling data securely including transmission between the field and head office and then to *BEIS***. Contractors will have responsibility for ensuring that they and any subcontractor who processes or handles information on behalf of *The Department* are conducted securely. The sorts of issues which must be addressed satisfactorily and described in contractors’ submissions include:

* procedures for storing both physical and system data;
* data back-up procedures;
* procedures for the destruction of physical and system data;
* how data is protected;
* data encryption software used;
* use of laptops and electronic removable media;
* details of person/s responsible for data security;
* policies for unauthorised staff access or misuse of confidential/personal data;
* policies for staff awareness and training of DPA;
* physical security of premises.
* How research respondents will be made aware of all potential uses of their data.

# Non-Collusion

No tender will be considered for acceptance if the contractor has indulged or attempted to indulge in any corrupt practice or canvassed the tender with an officer of BEIS. Section 4 contains a "Statement of non-collusion" (declaration 1); any breach of the undertakings covered under items 1 - 3 inclusive will invalidate your tender. If a contractor has indulged or attempted to indulge in such practices and the tender is accepted, then grounds shall exist for the termination of the contract and the claiming damages from the successful contractors. You must not:

* Tell anyone else what your tender price is or will be, before the time limit for delivery of tenders.
* Try to obtain any information about anyone else's tender or proposed tender before the time limit for delivery of tenders.
* Make any arrangements with another organisation about whether or not they should tender, or about their or your tender price.

Offering an inducement of any kind in relation to obtaining this or any other contract with the Department will disqualify your tender from being considered and may constitute a criminal offence.

**Section 4**

**Declarations to be submitted by the Tenderer**

Invitation to Tender for

Tender Reference Number:

Deadline for Tender Responses:

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# Declaration 1: Statement of non-collusion

To: The Department for Business, Energy & Industrial Strategy

1. We recognise that the essence of competitive tendering is that the Department will receive a bona fide competitive tender from all persons tendering. We therefore certify that this is a bona fide tender and that we have not fixed or adjusted the amount of the tender or our rates and prices included therein by or in accordance with any agreement or arrangement with any other person.

2. We also certify that we have not done and undertake not to do at any time before the hour and date specified for the return of this tender any of the following acts:

1. communicate to any person other than the Department the amount or approximate amount of our proposed tender, except where the disclosure, in confidence, of the approximate amount is necessary to obtain any insurance premium quotation required for the preparation of the tender;
2. enter into any agreement or arrangement with any other person that he shall refrain for submitting a tender or as to the amount included in the tender;
3. offer or pay or give or agree to pay or give any sum of money, inducement or valuable consideration directly or indirectly to any person doing or having done or causing or having caused to be done, in relation to any other actual or proposed tender for the contract any act, omission or thing of the kind described above.

3. In this certificate, the word “person” shall include any person, body or association, corporate or unincorporated; and “any agreement or arrangement” includes any such information, formal or informal, whether legally binding or not.

……………………………………………………………………………….….

Signature (duly authorised on behalf of the tenderer)

……….………………………………………………………………………….

Print name

…………………………………………………………….…………………….

On behalf of (organisation name)

…………………………………………………………………….…………….

Date

# Declaration 2: Form of Tender

To: The Department for Business, Energy & Industrial Strategy

1. Having considered the invitation to tender and all accompanying documents

(including without limitation, the terms and conditions of contract and the Specification) we confirm that we are fully satisfied as to our experience and ability to deliver the goods/services in all respects in accordance with the requirements of this invitation to tender.

2. We hereby tender and undertake to provide and complete all the services required to be performed in accordance with the terms and conditions of contract and the Specification for the amount set out in the Pricing Schedule.

3. We agree that any insertion by us of any conditions qualifying this tender or any unauthorised alteration to any of the terms and conditions of contract made by us may result in the rejection of this tender.

4. We agree that this tender shall remain open to be accepted by the Department for 8 weeks from the date below.

5. We understand that if we are a subsidiary (within the meaning of section 1159 of (and schedule 6 to) the Companies Act 2006) if requested by the Department we may be required to secure a Deed of Guarantee in favour of the Department from our holding company or ultimate holding company, as determined by the Department in their discretion.

6. We understand that the Department is not bound to accept the lowest or any tender it may receive.

7. We certify that this is a bona fide tender.

…………………………………………………………………………........

Signature (duly authorised on behalf of the tenderer)

…………………………………………………………………………………

Print name

………………………………………………………………………….

On behalf of (organisation name)

………………………………………………………………………….

Date

# Declaration 3: Conflict of Interest

I have nothing to declare with respect to any current or potential interest or conflict in relation to this research (or any potential providers who may be subcontracted to deliver this work, their advisers or other related parties). By conflict of interest, I mean, anything which could be reasonably perceived to affect the impartiality of this research, or to indicate a professional or personal interest in the outcomes from this research.

Signed …………………………………….

Name …………………………………….

Position …………………………………….

***OR***

I wish to declare the following with respect to personal or professional interests related to relevant organisations\*;

* X
* X

*Where a potential conflict of interest has been declared for an individual or organisation within a consortia, please clearly outline the role which this individual or organisation will play in the proposed project and how any conflict of interest has or will be mitigated.*

* X
* X

Signed …………………………………….

Name …………………………………….

Position …………………………………….

Please complete this form and return this with your ITT documentation - Nil returns **are** required.

**\*** These may include (but are not restricted to);

* A professional or personal interest in the outcome of this research
* For evaluation projects, a close working, governance, or commercial involvement in the project under evaluation
* Current or past employment with relevant organisations
* Payment (cash or other) received or likely to be received from relevant organisations for goods or services provided (Including consulting or advisory fees)
* Gifts or entertainment received from relevant organisations
* Shareholdings (excluding those within unit trusts, pension funds etc.) in relevant organisations
* Close personal relationship or friendships with individuals employed by or otherwise closely associated with relevant organisations

***All of the above apply both to the individual signing this form and their close family / friends / partners etc.***

If your situation changes during the project in terms of interests or conflicts, you must notify the Department straight away.

A DECLARATION OF INTEREST WILL NOT NECESSARILY MEAN THE INDIVIDUAL OR ORGANISATION CANNOT WORK ON THE PROJECT; BUT IT IS VITAL THAT ANY INTEREST OR CONFLICT IS DECLARED SO IT CAN BE CONSIDERED OPENLY.

# Declaration 4: Questions for tenderers

In some circumstances the Department is required by law to exclude you from participating further in procurement. If you cannot answer ‘no’ to every question in this section it is very unlikely that your application will be accepted, and you should contact us for advice before completing this form.

Please state ‘Yes’ or ‘No’ to each question.

|  |  |
| --- | --- |
| **Has your organisation or any directors or partner or any other person who has powers of representation, decision or control been convicted of any of the following offences?** | **Answer** |
| 1. conspiracy within the meaning of [section 1](http://www.lexisnexis.com:80/uk/legal/search/runRemoteLink.do?langcountry=GB&linkInfo=F%23GB%23UK_ACTS%23section%251%25sect%251%25num%251977_45a%25&risb=21_T12077301839&bct=A&service=citation&A=0.2630909849289865) or 1A of the Criminal Law Act 1977 or article 9 or 9A of the Criminal Attempts and Conspiracy (Northern Ireland) Order 1983 where that conspiracy relates to participation in a criminal organisation as defined in Article 2 of Council Framework Decision 2008/841/JHA; |  |
| 1. corruption within the meaning of [section 1](http://www.lexisnexis.com:80/uk/legal/search/runRemoteLink.do?langcountry=GB&linkInfo=F%23GB%23UK_ACTS%23section%251%25sect%251%25num%251889_69a%25&risb=21_T12077301839&bct=A&service=citation&A=0.774070316337072)(2) of the Public Bodies Corrupt Practices Act 1889 or [section 1](http://www.lexisnexis.com:80/uk/legal/search/runRemoteLink.do?langcountry=GB&linkInfo=F%23GB%23UK_ACTS%23section%251%25sect%251%25num%251906_34a%25&risb=21_T12077301839&bct=A&service=citation&A=0.24433813672949012) of the Prevention of Corruption Act 1906; where the offence relates to active corruption; |  |
| 1. the offence of bribery, where the offence relates to active corruption; |  |
| 1. bribery within the meaning of section 1 or 6 of the Bribery Act 2010; |  |
| 1. fraud, where the offence relates to fraud affecting the European Communities’ financial interests as defined by Article 1 of the Convention on the protection of the financial interests of the European Communities, within the meaning of: |  |
| 1. the offence of cheating the Revenue; |  |
| 1. the offence of conspiracy to defraud; |  |
| 1. fraud or theft within the meaning of the [Theft Act 1968](http://www.lexisnexis.com:80/uk/legal/search/runRemoteLink.do?langcountry=GB&linkInfo=F%23GB%23UK_ACTS%23num%251968_60a_Title%25&risb=21_T12077301839&bct=A&service=citation&A=0.35766330215827113), the Theft Act (Northern Ireland) 1969, the Theft Act 1978 or the Theft (Northern Ireland) Order 1978; |  |
| 1. fraudulent trading within the meaning of [section 458](http://www.lexisnexis.com:80/uk/legal/search/runRemoteLink.do?langcountry=GB&linkInfo=F%23GB%23UK_ACTS%23section%25458%25sect%25458%25num%251985_6a%25&risb=21_T12077301839&bct=A&service=citation&A=0.5972529271560607) of the Companies Act 1985, article 451 of the Companies (Northern Ireland) Order 1986 or section 993 of the Companies Act 2006; |  |
| 1. fraudulent evasion within the meaning of section 170 of the [Customs and Excise Management Act 1979](http://www.lexisnexis.com:80/uk/legal/search/runRemoteLink.do?langcountry=GB&linkInfo=F%23GB%23UK_ACTS%23num%251979_2a_Title%25&risb=21_T12077301839&bct=A&service=citation&A=0.22540552446837803)  [or section 72 of the Value Added Tax Act 1994](http://www.lexisnexis.com:80/uk/legal/search/runRemoteLink.do?langcountry=GB&linkInfo=F%23GB%23UK_ACTS%23num%251994_23a_Title%25&risb=21_T12077301839&bct=A&service=citation&A=0.9838628229561671); |  |
| 1. an offence in connection with taxation in the European Union within the meaning of section 71 of the Criminal Justice Act 1993; |  |
| 1. destroying, defacing or concealing of documents or procuring the execution of a valuable security within the meaning of [section 20](http://www.lexisnexis.com:80/uk/legal/search/runRemoteLink.do?langcountry=GB&linkInfo=F%23GB%23UK_ACTS%23section%2520%25sect%2520%25num%251968_60a%25&risb=21_T12077301839&bct=A&service=citation&A=0.5036676212568264) of the Theft Act 1968 or section 19 of the Theft Act (Northern Ireland) 1969; |  |
| 1. fraud within the meaning of section 2, 3 or 4 of the Fraud Act 2006; or |  |
| 1. making, adapting, supplying or offering to supply articles for use in frauds within the meaning of section 7 of the Fraud Act 2006; |  |
| 1. money laundering within the meaning of section 340(11) of the Proceeds of Crime Act 2002; |  |
| 1. an offence in connection with the proceeds of criminal conduct within the meaning of section 93A, 93B or 93C of the Criminal Justice Act 1988 or article 45, 46 or 47 of the Proceeds of Crime (Northern Ireland) Order 1996; or |  |
| 1. an offence in connection with the proceeds of drug trafficking within the meaning of section 49, 50 or 51 of the Drug Trafficking Act 1994; or |  |
| 1. any other offence within the meaning of Article 45(1) of Directive 2004/18/EC as defined by the national law of any relevant State. |  |

# Declaration 5: Code of Practice[[1]](#footnote-1)

I confirm that I am aware of the requirements of the BEIS Code of Practice[[2]](#footnote-2) for Research and, in the proposed project, I will use my best efforts to ensure that the procedures used conform to those requirements under the following headings[[3]](#footnote-3):

Responsibilities

Competence

Project planning

Quality Control

Handling of samples and materials

Facilities and equipment

Documentation of procedures and methods

Research/work records

I understand that BEIS has the right to inspect our procedures and practices against the requirements of the Code of Practice, and that I may be asked to provide documentary evidence of our working practices or provide access and assistance to auditors appointed by BEIS.

(There is some flexibility in the application of the Code of Practice to specific research projects. Contractors are encouraged to discuss with BEIS any aspects that cause them concern, in order to reach agreement on the interpretation of each requirement.)

**Annex A: Pricing Schedule**

**Part A – Staff/project team charges**

|  |  |
| --- | --- |
| Set up Costs – please specify |  |
|  |
| Expenses |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **\*Grade/level of staff** | **Daily rate**  **(ex VAT)** | **No. days offered over course of contract** | **Tasks to be undertaken on this project** | **Total price offered per staff member** |
|  | £ |  |  | £ |
|  | £ |  |  | £ |
|  | £ |  |  | £ |
|  | £ |  |  | £ |
|  | £ |  |  | £ |
| **Sub-total** | | |  | **£** |

[\*Suppliers should also include sub-contractors]

**Part B – Non-staff/project team charges**

|  |  |  |  |
| --- | --- | --- | --- |
| **Item** | **No. of items** | **Price per item**  **(ex VAT)** | **Total price per offered** |
|  |  | £ | £ |
|  |  | £ | £ |
|  |  | £ | £ |
|  |  | £ | £ |
|  |  | £ | £ |
| **Sub-total** | | | **£** |

**Part C – Full price offered**

|  |  |
| --- | --- |
| **Sub-total (Part A + Part B)** | **£** |
| **VAT** | **£** |
| **TOTAL (Sub-total + VAT)** | **£** |

**Annex B: Code of Practice for Research**

**CODE OF PRACTICE FOR RESEARCH**

***Issued by the Department for Business, Energy & Industrial Strategy***

The Department has developed this Code of Practice from the Joint Code of Practice issued by BBSRC; the Department for Environment, Food and Rural Affairs (Defra); the Food Standards Agency; and the Natural Environment Research Council (NERC) which lays out a framework for the proper conduct of research. It sets out the key aspects of the research process and the importance of making judgements on the appropriate precautions needed in every research activity.

The Code applies to all research funded by BEIS. It is intended to apply to all types of research, but the overriding principle is fitness of purpose and that all research must be conducted diligently by competent researchers and therefore the individual provisions must be interpreted with that in mind.

***PRINCIPLES BEHIND THE CODE OF PRACTICE***

Contractors and consortia funded by BEIS are expected to be committed to the quality of the research process in addition to quality of the evidence outputs

The Code of Practice has been created in order to assist contractors to conduct research of the highest quality and to encourage good conduct in research and help prevent misconduct,.

Set out over 8 responsibilities the code of practice provides general principles and standards for good practice in research.

Most contractors will already have in place many of the measures set out in the

Code and its adoption should not require great effort.

***COMPLIANCE WITH THE CODE OF PRACTICE***

All organisations contracting to the Department (including those sub-contracting as part of a consortium) will be expected to commit to upholding these responsibilities and will be expected to indicate acceptance of the Code when submitting proposals to the Department.

Contractors are encouraged to discuss with BEIS any clauses in the Code that they consider inappropriate or unnecessary in the context of the proposed research project. The Code, and records of the discussions if held, will become part of the Terms and Conditions under which the research is funded.

Additionally, BEIS may conduct (or request from the Contractor as appropriate) a formal risk assessment on the project to identify where additional controls may be needed.

***MONITORING OF COMPLIANCE WITH THE CODE OF PRACTICE***

Monitoring of compliance with the Code is necessary to ensure:

* Policies and managed processes exist to support compliance with the Code
* That these are being applied in practice.

In the short term, BEIS can require contractors to conduct planned internal audits although BEIS reserve the right to obtain evidence that a funded project is carried out to the required standard. BEIS may also conduct an audit of a Contractor’s research system if deemed necessary.

In the longer term it is expected that most research organisations will assure the quality of their research processes by means of a formal system that is audited by an impartial and competent third party against an appropriate internationally recognised standard that is fit for purpose.

A recommended checklist for researchers can be found on the UK Research Integrity Office (UKRIO) website at http://www.ukrio.org/what-we-do/code-of-practice-for-research

***SPECIFIC REQUIREMENTS IN THE CODE OF PRACTICE***

***1. Responsibilities***

All organisations contracting to the Department (including those sub-contracting as part of a consortium will be responsible for the overall quality of research they conducted. Managers, group leaders and supervisors have a responsibility to ensure a climate of good practice in the research teams, including a commitment to the development of scientific and technical skills.

The Principal Investigator or Project Leader is responsible for all the work conducted in the project including that of any subcontractors. All staff and students must have defined responsibilities in relation to the project and be aware of these responsibilities.

***2. Competence***

All personnel associated with the project must be competent to perform the technical, scientific and support tasks required of them. Personnel undergoing training must be supervised at a level such that the quality of the results is not compromised by the inexperience of the researcher.

***3. Project planning***

An appropriate level of risk assessment must be conducted to demonstrate awareness of the key factors that will influence the success of the project and the ability to meet its objectives. There must be a written project plan showing that these factors (including research design, statistical methods and others) have been addressed. Projects must be ethical and project plans must be agreed in collaboration with BEIS, taking account of the requirements of ethical committees[[4]](#footnote-4) or the terms of project licences, if relevant.

Significant amendments to the plan or milestones must be recorded and approved by BEIS if applicable.

***4. Quality Control***

The organisation must have planned processes in place to assure the quality of the research undertaken by its staff Projects must be subjected to formal reviews of an appropriate frequency. Final and interim outputs must always be accompanied by a statement of what quality control has been undertaken.

The authorisation of outputs and publications shall be as agreed by BEIS, and subject to senior approval in BEIS, where appropriate. Errors identified after publication must be notified to BEIS and agreed corrective action initiated.

***5. Handling of samples and materials***

All samples and other experimental materials must be labelled (clearly, accurately, uniquely and durably), and retained for a period to be agreed by BEIS. The storage and handling of the samples, materials and data must be as specified in the project plan (or proposal), and must be appropriate to their nature. If the storage conditions are critical, they must be monitored and recorded.

***6. Documentation of procedures and methods***

All the procedures and methods used in a research project must be documented, at least in the personal records of the researcher. This includes analytical and statistical procedures and the generation of a clear audit trial linking secondary processed information to primary data.

There must be a procedure for validation of research methods as fit for purpose, and modifications must be trackable through each stage of development of the method.

***7. Research/work records***

All records must be of sufficient quality to present a complete picture of the work performed, enabling it to be repeated if necessary.

The project leader is accountable for the validity of the wok and responsible for ensuring that regular reviews of the records of each researcher are conducted[[5]](#footnote-5)

The location of all project records, including critical data, must be recorded. They must be retained in a form that ensures their integrity and security, and prevents unauthorised modification, for a period to be agreed by BEIS

A recommended checklist for researchers can be found on the UK Research Integrity Office (UKRIO) website at http://www.ukrio.org/what-we-do/code-of-practice-for-research

1. Please note that this declaration applies to individuals, single organisations and consortia. [↑](#footnote-ref-1)
2. The Code of Practice is attached to this ITT as Annex C [↑](#footnote-ref-2)
3. Please delete as appropriate [↑](#footnote-ref-3)
4. Please note ethical approval does not remove the responsibility of the individual for ethical behaviour. [↑](#footnote-ref-4)
5. Please note that this also applies to projects being undertaken by consortia. [↑](#footnote-ref-5)