

**Department for Communities and Local Government**

**and**

**National Centre for Social Research**

**Contract for the provision of the**

**English Housing Survey**

## ORDER FORM

THIS CONTRACT IS SUBJECT TO THE CALL-OFF TERMS AND CONDITIONS OF  
UK SHARED BUSINESS SERVICES LTD (UKSBS). S3 – PRECEDENT  
FRAMEWORK AGREEMENT FOR THE PROVISION OF MARKET RESEARCH  
SERVICES

### FROM

<b>Authority/Department</b>	Department for Communities and Local Government
<b>Service Address</b>	Department for Communities and Local Government Redacted
<b>Invoice Address</b>	Department for communities and Local Government Redacted
<b>Contact Ref:</b>	SO14956
<b>Order Number</b>	To Be Confirmed
<b>Order Date</b>	To Be Confirmed

### TO

<b>Provider:</b>	National Centre for Social Research
<b>For the attention of:</b> <b>E-mail</b> <b>Telephone number</b>	Redacted
<b>Address</b>	Redacted

### The Contract

The Contract consists of:

- This document and Annexes named within;
- The call-off Terms and Conditions of the UKSBS Ltd S3-Precedent Framework Agreement for the Provision of Market Research Services.

- Schedule 1 - The Provider's Proposal of 30th November clarified in a meeting of 18th December; and
- Schedule 2 - Pricing

## SERVICES REQUIREMENTS

The Service Requirements specified within this document will be delivered in line with the Provider's proposal of 30th November 2015, Schedule 1, which was clarified in a meeting between the Authority and the Provider on 18<sup>th</sup> December 2015.

The timetable submitted as part of the Provider's proposal is subject to change in agreement between the Authority and the Provider.

The Provider will also deliver the following optional elements of the contract;

- 13,300 achieved interviews with a median length of 37 minutes, excluding the recruitment to the physical survey and administration tasks;
- physical surveys using digital pens - 6,000 dwellings occupied by interview sample respondents plus 200 properties identified as vacant by interviewers;
- Analysis and drafting of reports of findings similar in complexity to the analyses described in paragraph 9.8 of the Service Requirements. DCLG will specify the analyses required each year. As an indication, those analyses are likely to be similar in complexity to analyses on hard-to-treat cavity and solid walls; HHSRS Category 2 hazards and further analysis of HHSRS data; potential energy efficiency of the dwelling, including solid walls insulation; emerging areas related to fuel poverty and climate change; and
- DVD on applying the HHSRS through the EHS.

### Commencement Date:

The Contract commenced on 7<sup>th</sup> March 2016

### Price Payable by Authority

As specified in Schedule 2.

- In addition to the prices in Schedule 2, the Surveyor Variability Study is priced at Redacted.
- The total value of the contract from 7 March 2016 to 6 March 2019, including optional elements selected by the Authority, is £11,496,673.85.
- All prices quoted are exclusive of VAT.

<b>Completion Date:</b> <p>The contract will end on 6 March 2019 with an option to extend for two further one year periods.</p>

<b>PERFORMANCE OF THE SERVICES [AND DELIVERABLES]</b>
<b>Key Personnel of the Provider to be involved in the Services [and deliverables]:</b> <p>As per the Provider's proposal at Schedule 1</p>
<b>Performance Standards</b> <p>In addition to performance standards specified throughout the Service Requirements, the following Key Performance indicators will apply:</p> <ul style="list-style-type: none"> <li>• Interview survey achieved sample of 13,300;</li> <li>• Physical survey achieved sample of 12,000 occupied properties and 400 vacant properties over each two year period; and</li> <li>• Delivery of the combined year datasets the following July after the close of each year's fieldwork.</li> </ul>
<b>Location(s) at which the Services are to be provided:</b> <p>Redacted</p>
<b>Quality Standards:</b> <p>As per the Authority's Service Requirements and the Provider's proposal (Schedule 1)</p>
<b>Contract Monitoring Arrangements:</b> <p>As per Section 3 of the Authority's Service Requirements and the Provider's proposal (Schedule 1)</p>

## SERVICE REQUIREMENTS

The Department for Communities and Local Government (DCLG - referred to as the Department or the Authority) has responsibility for housing policy in England. The English Housing Survey (EHS) has been running continuously since April 2008. The survey consists of two components: an interview survey with a random sample of households and a physical survey of the homes occupied by a subset of those households. It is a designated National Statistics series and is required to meet the standards set out in the Code of Practice for Official Statistics<sup>1</sup>.

## 1. GUIDANCE

- 1.1 This service description sets out the requirements of the Department for running the EHS for three successive fieldwork years (2016-17 to 2018-19) plus the additional fourth and fifth year if the Department decides to take up that option. It is for a single contract covering the survey data collection, validation and data modelling, and contribution to the analysis and reporting. It encompasses a number of separate but linked pieces of work, which will run concurrently to deliver a range of outputs to an agreed timetable. The timetable will be agreed between the Service Provider and the Authority. The service description has been structured to reflect this and is divided into 10 sections as listed below. Some sections have supporting annexes as indicated.

Section	Annexes
1 Guidance	1A to 1B
2 The requirement	2A
3 Project management	
4 Survey management information	4A to 4B
5 Sampling, response and weighting	5A
6 The interview survey	6A to 6C
7 The physical survey	7A to 7I
8 Creation of data base and derived variables	8A to 8G
9 Data analysis and reporting	
10 Price schedules, incentives and invoicing	

An index to the Annexes is provided as Annex 1A

- 1.2 Full details of the current survey can be found on Gov.uk:

<https://www.gov.uk/government/collections/english-housing-survey>

- 1.3 This includes background information about the use of the survey and EHS publications. There is also documentation on the current survey and a series of technical advice notes and reports:

<https://www.gov.uk/english-housing-survey-guidance-for-survey-users-and-participating-households>

<https://www.gov.uk/government/collections/english-housing-survey-technical-advice>

## **Annexes**

- 1A Index to annexes to this service description
- 1B Summary of questions to tenderers

## 2. THE REQUIREMENT

### Introduction

- 2.1 The EHS delivers core information to enable DCLG and other government departments to meet their strategic priorities. The survey informs the development, assessment and monitoring of a wide range of housing policies, including affordable housing, owner occupation, household attitudes and satisfaction, overcrowding, second homes and housing costs. It is the primary source of information the private rented sector as well as on fuel poverty. It also provides information on the changing condition and energy efficiency of the English housing stock. It informs the development of new policy related to the housing stock and monitor change, including the monitoring of fuel poverty levels.
- 2.2 The survey is a designated National Statistics series. Its results are widely disseminated through published reports and other material released on Gov.uk.
- 2.3 The Provider will be responsible for the management of the full survey process. The overall contract objectives for this work are as follows:
- To run the new survey for three fieldwork years (plus the fourth and fifth years if the Department decides to take up that option) to an agreed and budget, ensuring effective co-ordination and quality control between the survey components. Fieldwork is expected to start as soon as possible in 2016-2017.
  - To determine the detailed sampling strategy in agreement with the Department, set up the sampling frame, draw the sample for each of the component surveys and ensure that each sampled address is tracked through all survey stages in each year.
  - To record all necessary information required for the calculation of weighting variables; the carrying out of non-response/non-contact analysis; the calculation of appropriate weights for the accurate weighting of results to agree national and regional control totals for both dwellings and households.
  - To organise the survey to maximise survey response and minimise non-response bias and missing data in order to achieve sufficient household interviews and physical inspections of properties each year to match the level of statistical precision currently expected on the current EHS.
  - To validate the data using a series of consistency checks, including checks between separate components of the survey, to ensure that the data bases delivered to the Department are consistent, complete, contain accurate information within acceptable limits and in the format specified by the Department. To demonstrate the validation process through documentary evidence.
  - To set up and run a series of programs and models and generate derived measures post-fieldwork, including complex measures relating to income, energy efficiency and repair costs.
  - To design an efficient survey process which ensures the quality of the survey data but minimises costs of data collection.
  - To provide the Department with regular feedback on all stages of survey progress and work with them in optimising the survey process.
  - To contribute to the dissemination of the survey results through the drafting of reports and creation of supporting tables, covering both the household and stock related surveys (an optional component).
  - To deposit the data at the UK Data Archive.

- To provide ad hoc analytical support for the Department on a call-off basis.
  - To provide expert technical support to the Department in a flexible and collaborative way in the development, conduct and analysis of the EHS, including the physical survey. This will require a comprehensive understanding of the full range of technical and professional issues relating to the successful conduct of a national level household and stock condition survey.
- 2.4 Each of these requirements is outlined briefly below and developed in more detail in sections 3 to 10.
- 2.5 As a National Statistics series, the survey must continue to be run to high professional standards and be fully compliant with the Code of Practice for Official Statistics. The UK Statistics Authority reviews the survey methodology and dissemination processes periodically and it is essential that the Department, in collaboration with the contractor, can clearly demonstrate the survey's statistical integrity. It is essential that data confidentiality standards are maintained throughout both the survey process and during analysis and reporting.
- 2.6 There are strict protocols set out in the Code of Practice regarding the release of official statistics. The contractor will be required to ensure that no results are released prior to the formal publication of the findings.
- 2.7 The Provider and their sub-contractors will be required to work in a flexible way with the Department's project team to deliver a quality and timely end product. See Section 3 for details of proposed project management arrangements.
- 2.8 A key objective of the EHS is the monitoring of changes over time. That limits the scope for any changes to the methodology which might undermine consistency and continuity. In particular, the methodology used to monitor the changing physical condition of the housing stock has been developed over many years and it is the Department's intention to optimise this methodology rather than seek out wholly new approaches.
- 2.9 The Provider will review the current approach critically, to identify where costs efficiencies can be made across all areas of the project. While robustness of data is an important requirement it is essential that the potential for streamlining existing processes is fully explored so that cost efficiencies can be achieved.

#### Survey outline

- 2.10 The survey methodology will comprise a household interview followed by a separate physical inspection of the property for a subset of these cases, including a sample of properties found to be vacant at the interview. The length of the current interview and physical surveys are 37 and about 70 minutes respectively. The EHS is currently designed to deliver around 13,300 household interviews a year and 6,200 physical surveys using a sample design which is unclustered when any two years of survey data are combined. The survey is expected to continue to meet broadly the same set of information needs. It will need to provide sufficient interviews and inspections to support broadly the current range of analysis.
- 2.11 The contract is being let initially to cover a firm requirement for three years of fieldwork (April 2016 to March 2019) to enable the Provider to invest in the development of systems and staff resources to build up a body of expertise over the contract period. It is expected that this will bring benefits in terms of cost efficiencies, response rates and data quality.
- 2.12 The Department may run follow up surveys based on data collected during the interview survey. Examples include, but are not limited to, a private landlord survey, an energy follow-up survey (EFUS) and a market value survey designed



to obtain market valuation and other data on the housing market. Those follow up surveys are not part of this specification of requirements. The Provider will, however, be required to collect the information required to feed into the follow up surveys – see Section 6.

#### Survey content

- 2.13 Details of the content of both the household interview and physical surveys are available on Gov.uk. A copy of the interview program (written in Blaise) will be available to the Provider and also the digitised version of the physical survey form.

<https://www.gov.uk/guidance/english-housing-survey-guidance-for-survey-users-and-participating-households>

- 2.14 The household interview survey includes “core” topics and a system of rotating modules. The core topics generally remain in the survey from one year to the next while the rotating modules appear on the survey from time to time. A few changes to questions in the core topics each year should be expected.
- 2.15 In contrast, the contents of the physical survey are expected to remain largely unchanged for at least the first 3 years of the contract.

#### Sampling and weighting

- 2.16 A new sample design was developed was first used in 2012-13. In addition, a simplified weighting methodology was implemented on the 2013-14 survey. Full documentation on the sampling and weighting processes as well as the syntax will be available to the Provider. No significant changes to the sample design or weighting methodology are envisaged and maintaining a consistent approach will be an important consideration. Constraints on budgets may necessitate adopting a smaller sample.

#### Fieldwork operation

- 2.17 The specification is written on the assumption that the current survey methodology will be largely retained with the interview survey preceding the physical survey. This approach was developed on the working assumption that interviewers are better placed to deliver a high response rate in the critical first contact with householders. It is also assumed that some form of automatic appointment system, as used on the current EHS, whereby interviewers make a timed appointment for a surveyor’s visit, will continue since it has proved operationally successful.
- 2.18 The Department is receptive to the introduction of new cost effective data capture technology for the physical survey as long as it is capable of delivering data of comparable quality to the current method based on using digital pens. Any new technology would need to be fully field tested before introduction. The Department therefore expects that the digital pen technology will continue to be used for at least the first year of the new contract. The current data capture equipment and all associated software will be available to the Provider.
- 2.19 It is envisaged that the model for training surveyors will be retained although further efficiencies will be sought wherever practicable. The Provider will be responsible for the recruitment and management of surveyors and for the administration of their training.
- 2.20 The Provider will also be responsible for agreeing any changes to the annual interview and physical survey instruments, design and delivery of the technical training of surveyors and interviewers, running the automated data collection systems and creation of complex derived measures from the physical survey.

## Outputs

2.21 A range of outputs are required at varying stages during the Contract. They include:

- primary datasets for the interview and physical survey (see Section 8);
- weighting factors (see Section 5);
- management datasets and user documentation (see Sections 4, 6,7);
- reports and web tables (optional component) (see Section 9);
- survey instruments and bespoke syntax and models (see Sections 6, 8).

Each of these is outlined briefly below and described in more detail in the subsequent sections.

## Primary datasets

2.22 The primary datasets will comprise clean databases for both the interview and physical surveys for each year of the survey. Some files will also be required on a two year rolling basis (see Section 8). Each data base will comprise a number of separate data files ready for immediate use with the software package PASW-SPSS (Predictive Analytics Software - Statistical Package for Social Scientists) and delivered electronically.

2.23 Each year, we also require the contractor to provide an anonymised dataset and documentation to the UK Data Archive. That dataset comprises data from both the interview and the physical survey. The deposit of a more disclosive file to the Archive's Secure Data Service will also be required. See Sections 3 and 8.

## Weighting factors

2.24 Details of the current weighting methodology are set out in the EHS Technical Advice Note at:

<https://www.gov.uk/government/publications/english-housing-survey-weighting-methodology-introduced-in-2013-to-2014>

2.25 It is proposed this methodology is adopted for the new contract to generate the range of weights described in Section 5 relating to both the households and dwellings. The current SPSS syntax files will be available to the Provider.

## Management datasets

2.26 The Provider will deliver management data files containing all the key information relating to the progress and outcomes of the survey. The Department also requires the Provider to compile and deliver a number of address files for each year of the survey.

2.27 The management datasets should contain all the relevant information necessary for survey accountability, database management, weighting, and any follow up surveys outside of the EHS contract. The data are likely to be drawn from the contractor's Survey Management System that itself enables and/or records the assembly of the sample frame, sampling, address allocation, progress monitoring, survey outcomes and subsequent sampling. The requirements of the Survey Management System and the specific outputs required are covered in more detail at Section 4.

## Reports, documentation and web tables

2.28 The documentation requirements are as follows:

- Fieldwork progress reports are required weekly during the fieldwork period to keep the Department's project manager up to date on response rates for all stages of fieldwork. See Section 4.
- An annual technical report covering the interview and physical surveys describing/evaluating the survey methodology and outcomes with recommendations for any changes. It is expected to include a set of standard errors for a subset of key variables. The contents of the technical report are provided in Annex 2A. The latest technical report is available from:

<https://www.gov.uk/government/collections/english-housing-survey-technical-advice>

- Full, indexed documentation of the interview survey – showing question wording, routing, variable names, value labels and file location for each variable. This needs to be readily useable by analysts in the Department and be updated annually to show all changes on a cumulative basis. The current documentation can be viewed at:

<https://www.gov.uk/government/publications/english-housing-survey-questionnaires>

- Documentation for the physical survey in the form of an annotated questionnaire showing the variable names assigned to each question on the form. The current documentation can be viewed at:

<https://www.gov.uk/government/publications/english-housing-survey-physical-surveys>

- A data dictionary containing information on all the derived variables in the datasets delivered to the Department. A copy of the data dictionary is deposited with the UK Data Archive:

[http://doc.ukdataservice.ac.uk/doc/7801/mrdoc/pdf/7801\\_dictionary\\_of\\_derived\\_vars\\_12-13.pdf](http://doc.ukdataservice.ac.uk/doc/7801/mrdoc/pdf/7801_dictionary_of_derived_vars_12-13.pdf)

2.29 N/A

2.30 The Department will continue to publish a series of tables based on information collected about both households and dwellings to supplement the information provided in the annual reports. The Provider may be required to update these tables and provide them in a pre-determined format ready for publication on Gov.uk. Currently the EHS lodges around 100 household live tables on the web and about 30 summary statistics tables relating to the housing stock. The list of tables will be reviewed annually.

<https://www.gov.uk/government/collections/english-housing-survey#statistical-data-sets>

2.31 The Department's reporting and dissemination strategy is kept under review and the contractor will be required to work flexibly with the Department in meeting this element of the requirement.

## Survey instruments and bespoke programs

2.32 The Department will require the Provider to supply:

- Copies of the main computer assisted personal interviewing programs developed specifically for the EHS each year;
  - Copies of the annual weighting programs (and documentation);
  - Copies of any SPSS syntax set to create derived variables with properly annotated comments to explain the underpinning logic; and
  - Copies of any bespoke models developed under this contract to create complex derived measures for analysis. This includes, in particular, those used to generate complex stock related measures described in Section 8 of this specification.
- 2.33 Copies of the programs, syntax and models used in the current contract will be available with supporting documentation to the new contractor for ongoing use on the EHS where appropriate. An overview is provided in relevant annexes to sections 6, 7, and 8.

#### Survey Timetable

- 2.34 The Department wishes to make results from each yearly survey available as early as possible after the completion of fieldwork. Reporting is expected to follow the current timetable with a headline report (to be drafted by the Department) covering key topics from both the household interview and the dwelling sample published in January of the year following completion of fieldwork. Thus, the headline report for 2016-17 will be published in or, ideally, before January 2018. Early delivery of clean data and weighting factors is, therefore, a key requirement.
- 2.35 The headline report is expected to be followed by more detailed reports covering household related topics and housing stock issues. These reports will be ready for release no later than six months after the headline findings. For this second phase of analysis, timely delivery of the full set of secondary derived variables for analysis including, for example, repair costs and energy efficiency ratings is essential.

#### Annual Outputs

Interview survey data - full annual dataset

Interview documentation

Technical Report

Interview household weights (single year, two consecutive years combined)

Household based derived variables including income; rents and mortgage payments

Draft annual report of findings of the interview survey, if required

Updates of web tables of the interview survey

Interview survey CAPI instrument

Physical survey dataset

Physical survey derived measures including energy efficiency indicators; floor space;

Draft annual report of findings of the physical survey, if required

Updates of web tables of the physical survey

Physical survey documentation

Weights (for Dwelling Sample and Household Sub-sample) – single-, two- and three-year sets

Private landlord address details

Final sampling and outcomes file

Complete sample address file with details of all address changes

Datasets to be deposited with the UK Data Archive

## Annexes

2A Requirements for content of EHS Technical Report

### **3. PROJECT MANAGEMENT**

#### Management structures

- 3.1 In view of the size and scope of this project, effective project management procedures are vital to a successful outcome. The Provider needs to be fully aware that activity on a number of elements of the survey process needs to be undertaken concurrently. Work does not move forward in a simple linear progression.
- 3.2 To secure effective project management, procedures will need to be set up by both the Department and the Provider to steer work and monitor progress across all elements of the project.
- 3.3 Management of the EHS will be undertaken at the Department by a small team of professional staff who will retain overall responsibility for the content and design of the survey and its subsequent reporting and analysis. The Department's project manager will chair regular meetings of a Project Management Group at the Department's offices (Westminster, London) approximately every two to three months with key members of the wider contractor team to review progress. The Provider will provide summaries of progress in advance of each meeting and discussion papers as appropriate. Meetings will be minuted by the Department.
- 3.4 It is expected that the Department's project manager will have weekly telephone contact with the project leader from the Provider side to discuss day-to-day issues.
- 3.5 Key members of the contractor team will also be invited to attend and contribute to the Technical Advisory Group meetings (held twice a year).
- 3.6 The Provider will need their own project management framework reporting to senior management within their organisation. It is particularly important that all sections of the contractor's (or consortium members') organisation are fully engaged and committed to the proposals made in the tender proposals. For example, any commitments concerning fieldwork arrangements are endorsed by the relevant field teams and sufficient resources are available to meet the commitments set out in the proposal.
- 3.7 The Provider should have clear project management arrangements and lines of control. The Department will require the contractor to nominate a dedicated project manager with on-going commitment to the project as it proceeds. That project manager will be responsible for managing all aspects of the work of all the sub-contractors. The Provider's project team will be expected to hold full authority to command adequate resource levels from within the organisation and any of the named sub-contractors.
- 3.8 The Provider will be required to accept a responsibility of due care for any material transferred to them from the Department and to provide adequate and secure storage for all such material for the duration of the project. All security features are to be consistent with the data and other security guidelines on the survey, including the Code of Practice for National Statistics and the Data Protection Act.

#### Responsibilities of the Department

- 3.9 The Department will be responsible for determining the overall strategy for the survey and steering the direction of the project to ensure it meets the information needs of the Department. In addition to its overall strategic role, the Department will also be responsible for a number of specific tasks identified in the relevant sections throughout this document. It should be assumed that all other work relating to the organisation and running of the survey will be the

responsibility of the contractor working in consultation and agreement with the Department.

- 3.10 The Department's Project Director will be Scott Dennison and the Project Manager will be Stephanie Freeth.

Responsibilities of the Provider

- 3.11 Running the EHS on a continuous basis demands a high level of expertise across a range of disciplines covering research, statistics, surveying, sampling, administration and IT. It is unlikely that a single contractor will be able to provide the necessary range of expertise and resources.

- 3.12 N/A

- 3.13 The Provider will be expected to bring together a team with both a high level of managerial expertise and specific professional skills relevant to the different aspects of the surveys. These specific skills will include:

an ability to plan and manage a number of inter-disciplinary activities to time and budget;

- an ability to work flexibly and responsively to address emerging requirements and issues;
- high level IT and data base management skills to develop appropriate survey management and validation processes;
- the ability to handle complex datasets and to ensure their integrity and consistency;
- statistical expertise to develop an appropriate sampling and weighting strategy;
- survey design skills (including use of computer assisted personal interviewing techniques) to set up the required survey instrument for the interview survey;
- the ability to manage a suitably skilled field force of interviewers effectively;
- the ability to manage a professional field force of surveyors effectively;
- the ability to bring innovative thinking to all aspects of the survey process;
- high level analytical and report writing skills so that outputs suitable for end users with no in-depth knowledge of the survey can be produced requiring minimum re-drafting by the Department;
- a sound knowledge of issues relating to the condition of the housing stock; measuring energy efficiency of the housing stock and the government's Housing Health and Safety Rating System outlined in the Technical Report.;

<https://www.gov.uk/government/publications/hhsrs-operating-guidance-housing-act-2004-guidance-about-inspections-and-assessment-of-hazards-given-under-section-9>

- professional expertise on a wide range of issues related to the collection of data on the physical survey – see Section 7;
- expertise in data modelling for implementing and running a number of bespoke models to derive secondary variables for analysis (see Section 8).; and

- a general understanding of the relationship between the findings of the survey and the Department's priorities.

3.14 N/A

#### Contingency planning and quality control

- 3.15 The EHS involves a high level of inter-dependencies between the survey components. Delays in one area could have serious repercussions on progress in other areas of the survey. Tenderers are expected to put in place contingency/back up plans for dealing with unexpected events, for example, loss of key personnel through sickness or resignation; delays in starting or completing fieldwork; unexpected data quality issues; failure of sub-contractors; IT failures etc.
- 3.16 Effective quality control procedures are vital to secure the high quality results required by the Department and to meet the standards set for National Statistics outputs. The Department needs to be assured that adequate procedures are in place to ensure the integrity of the data bases including the logging of sampling and fieldwork outcomes. Other issues would include, for example, ensuring that correct address details are passed between different stages of the survey.

#### Confidentiality

- 3.17 The Provider will be responsible for ensuring that the requirements of the Data Protection Act 1998 are upheld.
- 3.18 It is essential that the Department can give a commitment to all participants in the EHS that the results will be treated in the strictest confidence in line with the requirements of the Code of Practice for National Statistics regarding release of data. The contractor will be required to honour that commitment and must ensure that the survey adheres to strict protocols regarding the handling and release of Official Statistics as set out in the Code of Practice for Official Statistics. No information which could be used to identify individuals or companies is revealed to anyone except the Department's research team or with the agreement of the Department's project manager to another appointed contractor. In addition, no results from the survey are released prior to the formal publication.
- 3.19 The Department routinely deposits the anonymised datasets at the UK Data Archive and a disclosive file with geographic identifiers at the Archive's Secure Data Service. The contractor will be responsible for ensuring this is made clear to all respondents as necessary and all appropriate provisions and consents are in place to enable these transfers to proceed. The Provider will also be responsible for checking the anonymised datasets for risk of disclosure and to take action to minimise the risk.
- 3.20 Respondents' address details may be used in subsequent stages of the survey and/or further data matching exercises. The Provider will ensure these requirements can be met and that householders are advised of these proposed uses as appropriate and all necessary consent questions are in place to enable recontact.
- 3.21 All information provided or assembled in connection with the survey must be safeguarded at all times and returned to the Department on completion of the project.

Annexes – **none**



## 4. SURVEY MANAGEMENT INFORMATION

### Purpose

- 4.1 The Provider will be required to provide the Department with regular management reports that monitor the survey's overall progress as well as with information which records the progress and outcome of each case as it passes through the various stages of fieldwork and data processing and validation. The Department sees this system as the critical tool for ensuring that the survey is effectively managed.

### Requirements of the system

- 4.2 The system must be capable of meeting a number of basic requirements:
- a) To provide a responsive monitoring and information system;
  - b) To produce files holding all information relating to sampling and weighting;
  - c) To provide formatted address and other ad hoc output files for use by the Department and/or contractor on possible follow up work to the EHS.

### Monitoring reports

- 4.3 The Department (and the Provider) will require regular feedback on progress of fieldwork and data processing throughout the course of the project. This will be of particular importance during the main fieldwork stages so that the response to the survey can be accurately assessed. Any problems will need to be detected at an early stage so that strategies to deal with them can be implemented. It will be for the contractor to design appropriate fieldwork monitoring procedures to meet both its own organisational requirements as well as those of the Department. The Department will require regular standardised progress reports showing achieved against expected outcomes by region, tenure and occupancy together with interpretation and assessment by the contractor on any action needed.
- 4.4 The format of these reports would be agreed with the Provider at an early stage in the survey planning. An example of a progress report used to monitor progress on the current EHS is attached at Annex 4A and is indicative of the range of information that will be required by the Department's project team. While such reports would form the principal means of keeping the Department informed, the Department may also require ad hoc information, for example in response to queries from respondents. The system must therefore be capable of providing rapid up-to-date information about any given address in a flexible manner.

### Survey outcome files

- 4.5 N/A
- 4.6 The system will be required to produce an output file for transfer to the Department on completion of each year's fieldwork. These files would be referenced by a unique case identifier and relevant area identifiers and contain:
- a) Household and dwelling weighting factors for achieved samples to allow accurate weighting back to agreed national and regional control totals. This requirement is discussed in more detail in Section 5.
  - b) Details of all stages in the assembly of the sampling frame, stratification information, sampling cell counts and numbers selected, and any other information relevant to weighting. The file will include information for all cases in the initial sample issued for the interview survey and should include full details of sub-sampling and survey outcomes for each of the survey

components and the reasons underpinning these outcomes. These files may be used, for example, by the Department or others for weighting any follow up exercises.

- 4.7 The precise contents of each of these files will be agreed between the Department and the contractor in the set up period. It should be assumed that these will be SPSS files formatted as for the current EHS – see Annex 8A.

#### Address files

- 4.8 The Provider will also be required to use the system to produce a series of additional output files for annual delivery to the Department (or a separate contractor appointed by the Department to undertake follow-up exercises):
- a) Names and addresses of private landlords collected from tenants in the interview survey some of whom may be contacted again as part of a separate private landlord survey. The Provider will be responsible for 'cleaning' these addresses so that landlords can be traced accurately.
  - b) A complete address file of all the addresses in each annual issued sample and a range of geographic identifiers for each address. The address file should include details of the original address recorded on the sample frame as well as the changes made by the interviewers and surveyors. Those address details will enable the department to carry out follow up studies such as the Market Value Survey or to match the survey with other Geographic Information Systems (GIS) in order to map on data items such as the Index of Multiple Deprivation.
  - c) The Provider will provide geographical identifiers which are expected to include Ordnance Survey Grid References, 2001 and 2011 census area based codes as well as property referencing via Unique Address Reference Numbers (UARNs). This list may be extended over time.
  - d) It is very important that an appropriate system is set up to log any changes made to addresses as they progress through the survey and that the addresses provided to the Department reflect and include any changes made by either interviewers or surveyors where the issued address has been changed or does not relate to a single dwelling. The address file content delivered to the Department will be required to be aligned to the 'UK statistical geographies' product of the Office for National Statistics.
  - e) Address details for the main address file will need to be cleaned and formatted to conform to BS 7666 or equivalent. This is an industry standard designed to facilitate matching of address files from different applications. The Department requires delivery of a full address file annually (ie three or four files in total) compliant with BS7666 or equivalent (accurate as at 1st April in each survey year) to enable the matching of EHS address files with other GIS applications. Annex 4B provides an indication (based on what is currently delivered for the EHS) of the range of information required and how address details should be formatted. Files must be compatible with the Department's analysis software – SPSS.

#### Technical requirements

- 4.9 N/A
- 4.10 The precise structure of the Survey Management System will be for the contractor to design and implement but the Department will require confirmation that it will meet the information needs of the Department.
- 4.11 Measures will need to be in place to ensure, for example, that address identities are correctly entered when new data are being added to the system.

- 4.12 A new identification code covering all cases will have to be devised. The code will need to be unique to each case over the life time of the contract so that annual datasets can be combined (including combination with data from the current EHS) without the risk of duplicated identifiers. The code should be non-disclosive so as to ensure that when datasets are passed outside the Department they cannot be linked to individual properties. The current address code (variable aacode) is an 8 digit string variable comprising an initial alpha character to indicate the survey year starting with A in 2002/03 followed by a seven digit sequence number.
- 4.13 The accurate identification of addresses is crucial to all stages of the survey.
- Annexes

4A – Example of EHS progress report

4B – Current EHS address file

## 5. SAMPLING, RESPONSE AND WEIGHTING

### Outline of Sampling and Weighting Requirements

- 5.1 A new sample design was first used in 2012-13. In addition, a new weighting methodology was implemented on the 2013-14 survey.
- 5.2 The current sample adopts a design which gives an unclustered sample over any two consecutive years. It consists of:
- a household sample of 13,300 household interviews annually (referred to as the Full Household Sample - FHS); and
  - a physical survey sample of 6,200 cases annually with sub-sampling to achieve a specified tenure distribution (referred to as the Dwelling Sample). NB. 200 of the 6,200 cases are vacant properties. Cases where both a household interview and a physical survey are achieved are referred to as the Household Sub-sample.

Constraints on budgets may necessitate running with a smaller sample size.

The Full Household Sample and the Dwelling Sample will form the core datasets for delivery. Securing those two output streams through a random sampling approach is a firm output objective of this contract. Weighting factors are required for each case in both the Full Household Sample and the Dwelling Sample to enable results to be grossed to national and regional totals on a consistent basis. Additional weights for the Household Sub-sample are also required.

- 5.3 Some of the considerations underpinning the current sample size are set out in the consultation on the cost saving measures proposed for the 2011/12 survey available on Gov.uk:  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/8540/1686260.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/8540/1686260.pdf)
- 5.4 A sampling review, conducted by ONS (2006), found that with the move from a clustered to an unclustered sample design, the same level of precision could be achieved with a reduced number of household interviews, and, as a result, the sample was reduced from the 19,000 achieved on the former Survey of English Housing to 16,000 in the first year of the EHS. However, due to the large proportion of measurement error, even with the move to an unclustered sample, the size of the achieved physical sample could not be significantly reduced.
- 5.5 N/A
- 5.6 There is flexibility around the size of the achieved Full Household Sample and the Dwelling Sample as this will be dependent on the sampling strategy proposed.
- 5.7 The Provider will be responsible for finalising the sampling strategy in discussion with experts in the Department. The Department, however, intends to limit its involvement in this area to agreement of the broad design of the sampling and weighting strategies and agreement of the targets to be achieved for the survey overall and for specific tenure types. It will be the Provider's responsibility to develop and implement the detailed sampling and weighting strategies to meet the broad criteria set by the Department. The Provider will be expected to bring relevant statistical expertise to this task and to develop a sampling and weighting strategy for the Department's approval.

- 5.8 The Provider will have full responsibility for the implementation of the agreed weighting strategy. This will encompass the definition of the achieved samples, all stages of non-response analysis, appropriate adjustments for non-contact and refusals, and the production of weights for households for all achieved cases in the Full Household Sample and both dwelling and household weights for cases in the Dwelling Sample and Household Sub-samples. The weights produced should be able to allow the data to be grossed back accurately to agreed national and regional totals. Household weights for the Full Household Sample and the Household Sub-sample must be controlled to the same set of control totals. As some addresses in the sample will have more than one dwelling and some dwellings will be occupied by more than one household, household and dwelling weights derived for the Dwelling Sample also need to take into account the ratio of dwellings to address as well as households to dwelling. The weighting programmes and documentation developed for the current EHS will be available to the new contractor. A technical paper setting out the key components of the current weighting strategy is available on Gov.uk:
- <https://www.gov.uk/government/publications/english-housing-survey-weighting-methodology-introduced-in-2013-to-2014>
- 5.9 The weights must be delivered promptly following delivery of the primary data for each year's fieldwork. These are critical deliveries to the annual reporting round and the Department attaches considerable importance to having an effective and fully resourced system in place to handle this work stream. A clear delivery timetable must be presented for each set of weights. Further details are provided below.

#### The Department's Responsibilities

- 5.10 *Sampling* The Department will be responsible for agreeing with the Provider the broad structure of the main sample, including requirements for any stratification by tenure. The Provider will then be responsible for designing the issued samples to deliver the required achieved samples within the boundaries agreed with the Department regarding acceptable levels of non-response and non-response bias. Other specific Departmental responsibilities will include provision of auxiliary geographical data such as ACORN codes to assist in the adjustment for non-response bias.
- 5.11 *Weighting* The Department will provide syntax and documentation for the current suite of programs (written for SPSS and also making use of the SPSS AnswerTree module). The Department will set out its broad weighting requirements and agree with the contractor control totals at national and regional level to which EHS results will be grossed. It will provide timely comments on and approval of a weighting strategy developed by the Provider.
- 5.12 The Department will also provide details of all full Large Scale Voluntary Transfers (LSVT) completed and Arms-length Management Organisations set up each year. These are currently used in determining final tenure for some cases, eg for any cases showing a reported tenure of local authority within an authority where all stock has been transferred through an LSVT at the time of interview, the tenure should be overwritten to Registered Social Landlord (RSL ie housing association). The Department will also provide dwelling stock estimates and any necessary information relating to new house completions since the time of the drawing of the main sample so this can be reflected in the weighting.
- 5.13 The Department will also make available weights for previous years of the EHS as required so that these can be used by the contractor to create two or three year weights as specified below.

## Summary of Provider Responsibilities

- 5.14 The Provider will first determine its broad sampling strategy including selecting the appropriate sampling frame, determining how the sample is assembled, selected and stratified, and expected levels of non-response at the national and regional levels.
- 5.15 The sample may comprise several components and it is envisaged that at least the Dwelling Sample will need to be stratified by region and tenure. Following agreement of the broad sampling strategy the Provider will be responsible for determining the size and structure of the issued sample for the EHS interview component and the subsequent physical survey. In doing this, the Provider will take responsibility for determining the appropriate sizes of issued sample in total and in each cell of the sampling frame, so that the required achieved sample can realistically be achieved, whilst achieving target response rates (see paragraph 5.37).
- 5.16 It is envisaged that the outcome of the interview survey will be used to determine the sample to issue for the physical survey. Each of these key areas is discussed more fully below.
- 5.17 The Provider will track and record the outcome of each case and use this to determine the final set of cases in the achieved samples. These will then form the basis for the derivation of weights.
- 5.18 The Provider will generate a set of standard errors showing the impact of sampling including any design factors on a subset of variables (including derived variables) for inclusion in the annual technical report. (See section on outputs and timing below.)

## Assembling The Sample For The Interview Survey

- 5.19 A number of factors will affect the final design of the sampling strategy. These include:
- Whether any clustering is proposed;
  - Whether stratification of both the Full Household Sample and Dwelling Samples is proposed;
  - An effective method of identifying cases for the physical survey such that efficient and practical working arrangements for interviewers and surveyors can be maintained;
  - The length of the fieldwork period;
  - Integration of the interview and physical survey processes;
  - Approaches to achieving target response rates.
- 5.20 Each of the annual samples is to be composed entirely of freshly drawn addresses. It is not required to take forward any addresses from the current EHS or to undertake any re-visits to properties during the lifetime of this contract. Properties may however be revisited through independent follow-up surveys. On completion of each year's fieldwork, the Provider must supply the Department with full details of the sampling and weighting outcomes for each address in the survey as detailed in Section 4.
- 5.21 The basic building block for the Department's analysis is the financial year (April-March), but some analysis may be undertaken for periods less than this (eg. quarterly). A quarterly sample that is broadly nationally representative is therefore desirable for analytical purposes if this can be achieved in a cost effective way without jeopardising the linkage between the physical and

interview components. The Provider will, therefore, in devising their allocation strategy for the interview and particularly physical survey, need to ensure a balanced spread of addresses across the fieldwork period in terms of tenure and region. Quarterly weights are not required.

- 5.22 The number of months of the year over which fieldwork will be undertaken and the implications this has for creating cost-effective work packages for the physical survey surveyors will also affect the sampling strategy. This issue is discussed more fully in Section 7. Fieldwork in the first three years of the current contract ran in only 8 months of the year (2 months on and 1 month off per quarter). To accommodate a delay to the start of the survey due to the consultation on the future shape of the EHS, fieldwork in the current year (2015-16) takes place over 3 quarters of the year, beginning in July 2015 and running in 6 months of the year, again adopting 2 months on and 1 month off pattern. Both fieldwork patterns enable the creation of suitable work packages for the 150 or so surveyors who work on a loosely paired basis with interviewers making timed appointments for the follow up surveyor visit. The efficient use of surveyors' time is essential and it is important that viable blocks of work are created.
- 5.23 The achieved samples for 2013-14 and 2014-15, along with the forecast samples for 2015-16 by tenure are shown in the table (Table 5.1) below. A spreadsheet showing the assumptions underpinning the current 2015-16 strategy is provided as Annex 5A. The Provider will need to agree the proposed sampling strategy and sample sizes (overall and by tenure types) with the Department.
- 5.24 During the fieldwork year, the Provider will keep response and sub-sampling rates under review and to be able to work flexibly in adjusting these if necessary in order to meet the agreed targets as closely as possible. For example, the 2015/16 forecasts in Table 5.1 have been based on response assumptions from 2014/15 but if response rates in the first half of the year deviates from the assumptions, then further adjustments may need to be made to the physical survey sub-sampling rates from the start of quarter 3 to ensure an outturn that is close to the agreed targets.

**Table 5.1 EHS Sample Sizes Overall and By Tenure (provisional)**

<b>Data taken from Fieldwork Progress Report</b>						
<b>Interview Survey (full household sample)</b>						
	2012-13		2013-14		2014-15	
Owner occupied	8,302	61%	7784	58%	7823	59%
Private rented	2,099	15%	2,054	15%	2,076	16%
Local Authority	1,765	13%	1,708	13%	1,693	13%
Housing Association	1,519	11%	1,761	13%	1,589	12%
Total	13,685	100%	13,307	100%	13,181	100%
<b>Physical Survey (excluding vacants) (Dwelling Sample)</b>						
	2012-13		2013-14		2014-15	
Owner occupied	2,576	42%	2,296	39%	2,486	42%
Private rented	1,189	20%	1,182	20%	1,189	20%
Local Authority	1,242	20%	1,218	20%	1,124	19%
Housing Association	1,056	17%	1,249	21%	1,108	19%
Total	6,063	100%	5,945	100%	5,907	100%
<b>Physical Survey (vacants)</b>						
Owner occupied	61	24%	48	20%	46	22%
Private rented	106	41%	105	43%	90	43%
Social rented	92	36%	93	38%	71	34%
Total	259	100%	246	100%	207	100%

- 5.25 Achieving sufficient numbers of cases in the private and social rented sectors to support detailed analysis is an essential requirement, especially in the Dwelling Sample. The tenure sample sizes/ proportions as forecast in the 2015-16 physical survey need to be protected and, ideally, enhanced. However maintaining an appropriate tenure split to support analysis of small sub-groups within the owner occupied sector, eg first time buyers, is also important. Given the changing nature of the social sector there is some flexibility around the split between Local Authority and Housing Association cases.
- 5.26 An initial 'office sift' stage was introduced to help optimise the tenure split for the reduced number of achieved cases. Achieving sufficient numbers of rented cases for the Dwelling Sample is an important requirement and so owner occupiers are currently under sampled.
- 5.27 Currently the tenure stratification is achieved by drawing a large sample of around 40,000 addresses from the Postcode Address Small User file – and matching this at postcode level against the 'Residata' database to give a 'predominant tenure' (owner occupied; private rented; social rented; mixed tenure) for each address. A small proportion of cases cannot be matched.

<http://www.isl-online.com/residatalifetypes.htm>

For 2014-15 55% of cases in predominantly owner occupied areas and 100% of all other categories were then 'sifted in' to give an set issued sample of around 24,000. (The corresponding figures for 2015-16 are not yet available.)



- 5.28 Sub-sampling is expected to be required to achieve the appropriate tenure split for the smaller Dwelling Sample. Currently this is achieved by sifting out owner occupier cases during the interview fieldwork. In 2014-15 45% of cases where an interview is achieved at an owner occupied property are flagged as eligible for the physical survey, together with all rented properties (see spreadsheet at Annex 5A). The Provider will therefore need to develop a strategy for achieving an appropriate split of addresses by tenure for the dwelling sample.
- 5.29 N/A
- 5.30 Regardless of the main source of addresses, top-up samples of Housing Association, Private Rented Sector and Local Authority dwellings may be considered due to the small proportion of such dwellings in the total stock. These have not, however, been found necessary with the current survey.

#### Sample Size options

- 5.31 Constraints on budgets may necessitate running with a smaller sample size. We therefore wish tenderers to provide cost estimates for three sample size combinations:
- achieved physical survey sample of 6,200 (including 200 vacant properties) plus an achieved interview survey sample of 13,300
  - achieved physical survey sample of 6,200 (including 200 vacant properties) plus an achieved interview survey sample of 9,000
  - achieved physical survey sample of 6,200 (including 200 vacant properties) plus an achieved interview survey sample of 6,000

#### Response Rates and Outcomes

- 5.32 N/A
- 5.33 The Department wishes to ensure the highest possible effective response rate, in order to reduce non-response bias.
- 5.34 Response rates achieved on the 2013/14 survey are given in the Technical Report:  
<https://www.gov.uk/government/publications/english-housing-survey-2013-to-2014-technical-report>
- 5.35 Details of the response rate assumptions made for each stage of the survey for the 2014-15 survey are given in Annex 5A. Response to the interview survey is currently around 55%. Approximately 74% of eligible cases agree to a physical survey at the end of the interview and a physical survey is subsequently achieved at around 84% of these cases plus 29% of vacant cases.
- 5.36 We expect the response rates achieved by the current EHS to be improved upon. The response rate to the interview survey is currently below target. There is also continuing concern about the consent rate achieved to the surveyor's visit.
- 5.37 The Department requires, as far as possible, that similar response rates are achieved in each of the tenure categories, regions, dwelling age bands and dwelling types, in order to minimise response bias and ensure adequate samples in all main subgroups required for analysis.
- 5.38 For the current EHS, 'first impressions' of the dwelling and neighbourhood are collected by the interviewer for all addresses in the main sample for use in the analysis of non-response bias. It is expected that these would continue to be collected as part of the interviewer contact procedures unless the Provider

offers an alternative approach.

## SAMPLES FOR SUBSEQUENT SURVEY COMPONENTS

### Physical survey

- 5.39 It has been assumed for the purposes of this specification that the interview survey will go into the field first. The addresses which go forward to the physical survey will be a subset of those at which an interview has been obtained, together with a subset of vacant and derelict dwellings identified by the interviewer.
- 5.40 It is important to note that vacant properties are eligible for the physical survey and will need to be accurately identified by the interviewer and passed through for a physical inspection. Vacant properties are currently sub-sampled in the same proportion as occupied properties, using information on last known tenure collected by the interviewer on the doorstep form.
- 5.41 There can be confusion in surveys between vacant dwellings and those classed as non-contacts. This must not occur on the EHS as surveyors need to maximise the number of full surveys they achieve at vacant dwellings.

### Dwelling Identification

- 5.42 Sampled addresses, from whatever source, may not necessarily represent one dwelling as defined by the Department. There will be cases where an address represents part of a dwelling eg a bedsit in a House of Multiple Occupation (HMO), or where an address represents more than one dwelling eg where a house has been converted into self-contained flats. The Provider will need to take steps to ensure that cases where there is not a one-to-one match between the sampled address and a dwelling are correctly identified during fieldwork and appropriately flagged on the data base. The Provider may, additionally, need to take account of any address duplication or partial duplication occurring in the sampling frame.
- 5.43 The accurate identification of dwellings by both the interviewer and surveyor is therefore a critical and unique requirement of this survey and likely to add complexity compared with a survey designed to collect information solely from the household. The complexities particularly affect contact procedures and the weighting of both dwellings and households.

### Weighting The Data

- 5.44 The provision of weights is a key delivery of the contract. Weights should be delivered as early as possible following delivery of the primary data for both the Full Household Sample and the Dwelling Sample each year. Early delivery of the weights is a key requirement of the contract as little analysis can proceed without accompanying weights.
- 5.45 The main requirements of the weighting methodology are that it should be accurate, timely and replicable so that any problem cases can be 'traced' through the system. Replicability is best achieved by implementing a suite of programs requiring minimal intervention for handling special cases.
- 5.46 It is important that the weighting methodology is fully documented and can be readily transferred to a future Provider or the Department and can be built on for future sweeps of the survey by the Provider or others. The Provider will be required to deliver documented copies of the weighting programs to the Department on completion of each year's weighting.

An outline of the current process is available on Gov.uk:

<https://www.gov.uk/government/publications/english-housing-survey-weighting-methodology-introduced-in-2013-to-2014>

- 5.47 The weighting method for the current survey involves a number of separate SPSS programs (syntax scripts) with outputs from one stage being passed through as inputs to subsequent stages. These stages are set out in the technical note referenced in Paragraph 5.46. In addition a final calibration stage is conducted to control totals to an agreed set of external totals (Currently, these are the Department's dwelling estimates by tenure and region). The current SPSS syntax files will be available to the new contractor.
- 5.48 The Provider will be responsible for deciding, for each year, the cases that form part of the achieved sample for both the Full Household Sample and the Dwelling Sample. This is an essential first step in the weighting process. This will require close co-operation and co-ordination between the teams managing the weighting, the interview fieldwork and the physical fieldwork e.g. for setting a deadline for final receipt of cases at the end of the fieldwork year, and ensuring all teams are working with a common set of cases so that data modelling for example is undertaken on the correct set of cases.
- 5.49 Only one set of control totals is currently used for households and dwellings: the Authority estimates of tenure within region, which are used in conjunction with the age/sex distribution of population estimates.
- 5.50 Considerable resources have been devoted to developing this weighting process and it is assumed that the basic methodology will remain in place although adaptations would be required if a change in sampling is agreed. One feature of this methodology is to deliver consistent grossed outcomes for key variables between the two separate data streams (Full Household Sample and the Dwelling Sample) for households by region and tenure to assist with data presentation. These headline figures are currently controlled to Authority estimates. Other published series may become available over the course of the new contract. The Department is receptive to assessing applicable emerging data series for use as control totals.
- 5.51 A number of weights are required:
- a) Annual household weights for all addresses where a full interview was achieved in each year (the Full Household Sample).
  - b) Annual dwelling weights for all cases in the Dwelling Sample each year (ie where a physical survey has been achieved, whether occupied or vacant).
  - c) An annual household factor for all occupied cases where both household interview and a physical survey are achieved. (ie the Household Sub-sample).
  - d) Two and three yearly dwelling weights for the Dwelling Sample and two and three yearly household weights for the Household Sub-sample, for combined two and three annual datasets on a rolling basis. The Department will make available necessary weighting factors for cases in the 2014-15 and 2015-16 EHS to enable the creation of:
    - Three year weights for the period 2014-15 to 2016-17 (dwelling and household sub sample only);
    - Two year weights for 2015-16 and 2016-17.
- 5.52 If budget constraints necessitate a reduction in the sample size to the extent that the contract cannot deliver data comparable in robustness to the current contract, the contractor will also be required to deliver a two yearly household weight for the Full Household Sample on a two year rolling basis starting with

2015-16 plus 2016-17. As this requirement is dependent on a number of contingencies, please treat it as an optional element and provide a separate cost estimate.

5.53 As a new weighting methodology was implemented in 2013-14, the Department does not envisage that any weighting revisions will be required.

5.54 N/A

#### Outputs and Timing

5.55 The annual outputs of this stage of the work should include:

- a) Annual, two-year and three-year weights as described above;
- b) A final file giving all issued addresses together with any modifications found necessary during the survey process to identify the addresses both of the household interviewed and of their dwelling; to be delivered annually;
- c) A final file giving all information relating to sample selection, survey outcomes at each stage of fieldwork, and derived weights, to be recorded as part of the management database together with appropriate documentation (see Section 4). File to be delivered annually with documentation;
- d) Copies of weighting programs with documentation – annually;
- e) A set of standard errors for a sub-set of variables from the interview and physical surveys, including some derived variables, to be stipulated by the Department. Those standard errors should show the impact of sampling error on survey estimates, taking into account any design factors. Errors associated with both annual and two-yearly estimates will be required. This information will be published in the annual technical report. Examples of the type of information required can be seen in the 2013-14 Technical Reports on Gov.uk. The syntax should, if required, also be transferred to the Department to enable analyst to generate standard errors on an ad-hoc basis to support analysis.

#### Annexes:

5A Current sample design

5B 2015-16 Sampling spreadsheet

## 6. THE INTERVIEW SURVEY

### Key Requirements

- 6.1 The key requirements of the interview survey are to:
- Maximise response rates;
  - Collect high quality data from households, minimising item non-response;
  - Provide the Department with a dataset that is clean and fully documented.
- 6.2 The information collected by the survey will cover a range of topics including household characteristics, housing attitudes, tenure, housing history, income and housing costs.
- 6.3 The survey uses Computer Assisted Personal Interviewing (CAPI) and the household interview includes “core” topics which will be covered every year and a number of rotating modules containing topics which, while important, do not need to be covered every year. These modules will appear in the survey from time to time (eg alternate years, every third year or two years in and two years out). The household interview will need to accommodate two or three of these modules every year. The median length of the household interview is currently 37 minutes.
- 6.4 The Provider will seek to maximise response within the survey. In doing this, they will need to consider the length, burden and relevance of the survey to the respondent, and also how to maximise contact rates and cooperation, including whether or not to offer tokens of appreciation such as a gift vouchers.
- 6.5 Consideration should be given to how the interview and physical fieldwork can be optimally staged and co-ordinated. Fieldwork for the 2011-13 to 2014-15 EHS commenced in April and spread over the year. To accommodate a delay to the start of the survey due to the consultation on the future shape of the EHS, fieldwork in the current year (2015-16) started in July and takes place over 3 quarters of the year. In all four years of the current contract, fieldwork takes place in batches (or waves) with two waves of fieldwork per quarter. Interviewers are given six weeks in which to complete their quotas of work in each wave. Surveyor fieldwork takes place in the last two weeks of the interview fieldwork period plus a week beyond the end of interviewer fieldwork date. This pattern helps ensure a speedy conclusion of all fieldwork overall and also to help maintain response rates with the surveyor visiting the property while the interview is still fresh in the minds of respondents. A co-ordinated approach to management and supervision of both sets of field workers is therefore required. This has important implications for the way in which work is allocated for both surveys and for fieldwork management and monitoring.
- 6.6 This section covers the data collection and validation processes. Work associated with creating derived variables post fieldwork and in the analysis and reporting of results from the household interview is described in Sections 8 and 9 respectively.
- 6.7 N/A
- 6.8 N/A

### Responsibilities of the Department

- 6.9 The Department will have overall responsibility for the content of the interview survey and will:
- a) Comment on and agree the design of the main questionnaire and the rotating modules each year;

- b) Provide any specialised input to the interviewer briefing which may be required;
- c) Agree letters/leaflets to occupants of sample addresses and to local authorities;
- d) Comment on and agree the questionnaire and data file content and format.

#### Provider's Responsibilities – Interview Survey

- 6.10 The broad responsibilities of the Provider on the interview survey will be to develop a rigorous, cost effective and wherever appropriate, an innovative approach, to managing the interview process. Tasks will include:
- a) to work with the Department to update and finalise the survey questionnaire each year
  - b) to develop and test the CAPI software (the current program will be available to the contractor)
  - c) allocation of addresses to interviewers
  - d) to draft and issue letters to occupants and other descriptive information about the survey
  - e) to provide suitably trained and experienced interviewers
  - f) in-depth briefing of all interviewers and production of briefing material
  - g) to organise, supervise and monitor fieldwork each year to maximise response
  - h) to develop and implement robust validation checks within the CAPI program and post-fieldwork
  - i) to manage co-ordination of the interview and physical survey field forces
  - j) to pass on information from the interviewers to the surveyors to assist in the location of all dwellings
  - k) to arrange for interviewers to record their first impressions of the condition of the dwelling and neighbourhood of all issued cases prior to contact; the information will be used in the analysis of non contact/non response bias
  - l) to conduct debriefing of interviewers, as appropriate, on the fieldwork and its management/organisation with the aim to improve the subsequent sweeps of the survey
  - m) to set up clean interview survey datasets to an agreed format (see sections 2 and 8)
  - n) to deliver indexed documentation to the Department to an agreed structure and format as outlined in Sections 2 and 8 and in the Documentation section below. This documentation should cover all core topics and rotating modules.

#### Interview Survey Schedule

- 6.11 The Provider will take an active role in advising on question design. Although the annual questionnaire will consist largely of the agreed “core” questions plus the rotating modules earmarked for that year, some additional changes may also be made annually to the survey content to meet emerging policy requirements. Each year, the Provider will work with the Department on the development of the schedule and, if required, in refining the questions.
- 6.12 Although full scale field piloting of such new questions is not routinely required, such a facility could occasionally be an advantage. The Department is normally able to give a first indication of the new questions under consideration in December, but would hope to have the flexibility to finalise details much closer to the start of interviewing in April. However, the Department recognises that,

for the start of the survey in April 2016, it will need to provide as much time as possible for the Provider to be able to prepare for the survey to enter the field.

- 6.13 There are some general issues that the Provider needs to consider in the design of the questionnaire. Many 'core' questions for government surveys have been harmonised to allow information to be used from across different surveys. Detailed information is available at:  
<http://www.ons.gov.uk/ons/guide-method/harmonisation/index.html>
- 6.14 In general, therefore, the questionnaire should use the harmonised versions of questions. However, for some specific topics, the Department may require a departure from the harmonised questions - though in most instances this would involve the inclusion of additional questions rather than actual changes to the harmonised questions themselves. The Provider will agree with the Department each case where harmonised questions are or are not to be used.
- 6.15 The median length of the interview survey, excluding the time for the interviewer to gain consent to the physical survey or to carry out administration tasks is currently 37 minutes. The length of the interview survey under the contract is under review and will be agreed with the Authority and the Provider.

#### Incentives and Tokens of Appreciation

- 6.16 N/A

#### Basic information/Contact sheets

- 6.17 EHS interviewers currently use a paper 'doorstep form' (see Annex 6A) to collect essential information at the initial contact stage with householders. Interviewers also collect details crucial to the weighting process, including the relationship between the sample address and a dwelling, whether any dwelling or household selection was necessary, and details of vacant properties. The information collected on the doorstep form is subsequently keyed into the CAPI program by the interviewer after the interview and transmitted back with the interview data itself.
- 6.18 'First impression' data on the condition of the property and the neighbourhood are also recorded on the doorstep form for all addresses in the issued sample (including all non-contacts and doorstep refusals). Those data are required for adjusting for non-response bias and it is assumed that this approach will continue as part of the initial contact process. Detailed reasons for non-response and non-contact should also be recorded (excluding cases where the refusal is made direct to the Provider prior to the interviewers visit to the address). See also paragraph 5.38.
- 6.19 It will also be important for interviewers to be aware that vacant properties are 'eligible' for the physical survey and they will be required to collect certain information from neighbours about the reason/length of vacancy and previous tenure together with any information that may be of assistance to surveyors in securing access to the property.

#### Landlord details

- 6.20 Tenants renting from a private landlord will continue to be asked, in all years of fieldwork, for the name and address of their landlord and for permission to contact their landlord to invite them to participate in a possible follow-up Private Landlord Survey. The full set of cleaned contact details will also be a separate deliverable to the Department. See details of Address Files in Section 4.

#### CAPI Development

- 6.21 It is assumed face-to-face personal interview using Computer Assisted Personal Interviewing (CAPI) will remain the primary means of data collection in order to deliver data to a standard comparable to that of the current survey. The Department are receptive to alternative approaches, in particular a mixed-mode approach for certain groups of cases, if the contractor can demonstrate these will deliver data to a comparable standard and without incurring unacceptable levels of bias.
- 6.22 The Provider will be responsible for developing the CAPI program. The current questionnaire developed in Blaise will be made available to the Provider. A copy of the questionnaire can be found at:  
<https://www.gov.uk/government/publications/english-housing-survey-questionnaires>
- 6.23 If the Provider wishes to reprogram the questionnaire for a different CAPI system, they must, as part of the contract, demonstrate to the satisfaction of the Department that the program they propose to use can check for consistency between data items and can check that the data entered are within the valid range. In addition, the Department will need to be satisfied that the program can display on screen all the question contents signed off by the Department. Those contents include the full text of the questions, instructions/prompts/aids to the interviewers and alerts triggered by the data checks.
- 6.24 N/A
- 6.25 N/A
- 6.26 N/A
- 6.27 The Department will make the Blaise programs used on the current EHS available to the successful tenderer. Please note that the version of the programs released will not include any associated programs which are the property of the current contractor such as, associated administrative processes, response monitoring, the recall and administration sections of the interview, the family unit coding and coding of socio-economic groups. The Provider would therefore have to make their own arrangements for such items.

#### Briefing and Fieldwork

- 6.28 N/A
- 6.29 An important requirement within the survey is that interviews are conducted with a household at precisely those addresses selected in the sample, and that subsequently, physical survey surveyors visit the same household's address.
- 6.30 Since a number of the dwellings visited as part of the interview survey (including vacant dwellings) will also be visited in the physical survey, the contractor will need to consider how occupied and vacant property is defined and identified by interviewers where there is no contact. It is essential that interviewers are adequately briefed on reaching a decision on whether a property is classed as vacant or an 'occupied non-contact'. *Tenderers should indicate how they would handle this issue (Q5.5). See also Section 5*
- 6.31 It is possible that the physical surveyor will find that some addresses classed as vacant by the interviewer were in fact occupied at the time of the interview.
- 6.32 The Provider will be responsible for providing suitably trained and skilled interviewers, who are experienced in CAPI and in undertaking random sample surveys.
- 6.33 The Provider will be responsible for the comprehensive briefing of all interviewers so that they have a clear understanding of, and confidence in, carrying out the survey. Currently interviewers receive a one-day bespoke EHS



training day before undertaking work on the survey and then, depending on experience and performance, a shorter follow-up face-to-face briefing or a self-briefing (mainly focusing on any changes that had been made to the survey).

- 6.34 It is the Provider's responsibility to ensure, through training and monitoring, that all interviewers apply the EHS concepts/definitions and procedures for household selection correctly.
- 6.35 The Provider will be responsible for contacting respondents, including drafting and sending out initial contact letters (to be agreed with the Department) to all sampled addresses. The Department has developed a 'branding' for the survey and the Provider will be required to make use of this as appropriate on all survey literature. The current EHS letters and leaflets are available at:  
<https://www.gov.uk/guidance/english-housing-survey-guidance-for-survey-users-and-participating-households>
- 6.36 If a Departmental letter is agreed, it is envisaged the Department will supply an electronic template with scanned signature from which the Provider can then produce and distribute letters to all sampled households.
- 6.37 N/A
- 6.38 The Provider will be responsible for allocating addresses to interviewers and ensuring they adopt a rigorous approach in the field in order to maximise response.
- 6.39 The Provider will be responsible for monitoring, assessing and reporting progress. The Provider will have in place an effective means of monitoring and checking contact rates and attempts at contact, and recording non-response, including stage and reasons for refusals. An example of the fieldwork report for the current EHS interview survey is given at Annex 4A.

#### Surveyor Appointments

- 6.40 Interviewers currently make fixed appointments for the follow-up surveyor visit for those cases eligible for a physical survey. The time slots when a surveyor is available are provided to the interviewer who then introduces the surveyor visit and steers the respondent to a time slot when the surveyor is working in their area. Appointment details are then transmitted electronically directly to the relevant surveyors' diary. This requirement is discussed more fully in the physical survey Section 7.

#### The fieldwork pattern

- 6.41 As highlighted in Section 5, fieldwork in the first three years of the previous contract began in April. It took place quarterly but ran in only 8 months of the year (2 months on and 1 month off per quarter). To accommodate a delay to the start of the survey due to the consultation on the future shape of the EHS, fieldwork in the current year (2015-16) takes place over 3 quarters of the year, beginning in July 2015 and running in 6 months of the year, again adopting 2 months on and 1 month off pattern. Both fieldwork patterns enable the creation of suitable work packages for the surveyors who work on a loosely paired basis with interviewers.

#### Documentation

- 6.42 Early delivery of user friendly documentation is an important requirement of this contract.

- 6.43 Copies of the EHS documentation are available from:  
<https://www.gov.uk/guidance/english-housing-survey-guidance-for-survey-users-and-participating-households>
- 6.44 It is envisaged that a new set of documentation will be started for 2016-17 onwards along with a summary indicating changes between 2015-16 and 2016-17. The existing Technical Report will, however, be continued and the Provider will be required to update these annually to reflect any changes to the survey methodology or the creation of derived variables.  
<https://www.gov.uk/government/collections/english-housing-survey-technical-advice>

#### Quality control

- 6.45 A continuous survey presents the opportunity to improve on the way the survey is conducted over the year by collecting/providing feedback from/to the field force on their performance or any problems that have been identified.
- 6.46 It is also envisaged that work on data checking each year will also identify questions which have not worked well, for example with high levels of non-response, or where questions with an 'other specify' category have identified response categories which should be built into the main coding frame.

#### Data Checks and Validation

- 6.47 The Provider will be responsible for developing the checks to be carried out on the data within the CAPI program, for developing and undertaking post-survey validation checks on the database, and for formatting the final output data files correctly. These should all be agreed with the Department. The cases that go on to receive a physical survey will need a further set of cross checks to ensure consistency between the two datasets. This should include checks to ensure, for example, that both interviewer and surveyor have gone to the same address, the tenure information recorded is consistent and the definition of a dwelling applied by the interviewer is consistent and correct.

#### Derived Variables

- 6.48 The Provider will be responsible for constructing a number of derived variables based on information collected in the household interview and for incorporating these into the database. See Section 8.

#### Reporting of Results

- 6.49 The reporting requirements from the interview survey are set out in Section 9.

#### Annexes

- 6A EHS Doorstep form
- 6B Potential rotating topics and tentative annual schedule for their inclusion
- 6C Summary of changes made to the interview content since 2013-14.

## 7. THE PHYSICAL SURVEY

### Key Requirements

- 7.1 The physical survey is a key component of the EHS and provides core data on the condition and energy efficiency of the housing stock. The key requirements for the Provider in managing the physical survey are:
- to maximise response rates;
  - to collect high quality data on the condition, health and safety, composition and energy efficiency of the stock and an assessment of state of the neighbourhood;
  - to provide the Department with datasets that are 'clean', of high quality and fully documented.
- 7.2 This section covers the requirements in relation to the training of surveyors undertaking the physical survey and to the collection and validation of the physical survey data. Work related to data modelling and to analysis and reporting is covered in Sections 8 and 9 respectively.

### RESPONSIBILITIES OF THE DEPARTMENT

- 7.3 The Department will undertake a broad strategic role in steering the overall direction of the physical survey and will wish to be closely involved in key development decisions including, for example, agreeing the broad content of the physical survey schedule and the content of the surveyor training.

### KEY RESPONSIBILITIES OF PROVIDER

- 7.4 The Provider will be responsible for the overall management of the physical survey process and the Department will look to the contractor for expert advice on a wide range of issues relating to the collection of data on the physical condition and energy efficiency of the housing stock.
- 7.5 Core responsibilities are listed below and are outlined more fully in the following sections:
- Advising on and implementing annual changes to the survey form and the associated validation software; piloting any changes if considered necessary;
  - Preparing the data capture software and instruments (the current system is based on the use of digital pens);
  - Provision of the full contents of the data capture instrument (Currently, this is in the form of a .pdf file containing an annotated copy of the physical survey form showing the labels of the variables);
  - Administration, technical design and delivery of the surveyor training programme including distance learning material;
  - Providing a technical assessment of the competence of the surveyors attending the surveyor briefing;
  - Assembling and distributing all briefing and fieldwork material including the briefing manuals, forms and any distance learning material;
  - Updating of surveyors technical briefing manuals including guidance on administrative procedures;
  - Establishing effective fieldwork procedures and co-ordination of the interview and physical survey components including an electronic appointment system for surveyor visits;

- Implementing and monitoring the rules agreed with the Department regarding the maximum number of surveys any individual surveyor can complete so that the work of any one surveyor cannot unduly bias measures of condition and disrepair at the regional level;
- Setting up and maintenance a data validation system for use by surveyors as well as a support system for surveyors (the current contract uses a web-based support system);
- Provision of IT, other technical and wider support to surveyors throughout the data collection periods;
- Providing support to interviewers and respondents in relation to the appointment process;
- Providing access to the digital photographs gathered by the surveyors and, if applicable, the electronic images of the completed survey forms;
- Maintenance of the data capture hardware and supply of data capture consumables (Currently the digital pens and survey forms printed on paper designed to be used with the pens);
- Development and management of an electronic surveyor calibration workbook exercise;
- Final data validation and reconciliation of key variables with interview survey data;
- Delivery of clean physical survey data files for single financial years and on a two-year rolling basis;
- Creation of a number of complex derived measures for analysis (see Section 8) and assisting in analysis and reporting (see Section 9).

7.6 To undertake their responsibilities the Provider's team will require a high level of technical expertise related to conducting housing stock surveys, the management of surveyors and the handling of complex data bases. Responsibility for the delivery of the final clean outputs, together with the tasks itemised above, are core requirements that the contractor will be required to undertake.

7.7 The Provider should also be aware that the physical survey currently uses digital pen technology to capture data. The data capture procedure includes a web-based validation system operated by surveyors before data are downloaded to a central data base currently held on a dedicated section of the web site of the Building Research Establishment. The Department will make available the equipment and necessary software to support the ongoing use of this technology but it is receptive to consider other cost-effective data capture approaches which can deliver data of a comparable or superior quality. Further details are provided at Annex 7A.

7.8 The Provider should be aware that transferability of material is an important requirement in any development work undertaken under the new contract. Any systems or software developed in order to deliver the physical survey process should be fully documented and developed in such a way that they can be passed back to the Department or its contractors for future waves of the survey.

## THE SURVEY FORM

7.9 The physical survey is designed to collect a wide range of data in a structured format and to accommodate all dwelling types in all tenures groups and all types of neighbourhood.

7.10 A copy of the current survey form is available from Gov.uk

- 7.11 The average completion time for a full survey is currently around 70 minutes although this varies considerably depending on the complexity of the property and the experience of the surveyor. For example a survey of a purpose built high rise flat would typically take 13 minutes longer than this average
- 7.12 The content of the physical survey is expected to remain largely unchanged but the Department will look to the Provider to advise on any updates needed to collect information on new housing standards or to reflect changes in new technology, including, energy efficiency measures such as insulation types, heating systems and renewable energy sources. Other changes may be necessary to reflect emerging policy interests. Any major review of the physical survey will be funded through the proposed 'call-off' component of this contract. See Sections 9 and 10
- 7.13 The Provider will, therefore, be required to undertake an annual review of the contents of the physical survey and recommend any amendments in the light of changing policy requirements, feedback from surveyors and their supervisors and from validation issues that have been identified. This will include any external changes which necessitate amendments to the data to be collected, for example, updates to the Housing Health and Safety Rating System (HHSRS) and Standard Assessment Procedure (SAP). The review work must be undertaken in a timely fashion so that all parties have an opportunity to feed into decisions regarding the form content. All changes to the form and the accompanying facing page notes must be agreed with the Department's Project Manager who will have the final responsibility for the content of the form.
- 7.14 Data capture on the physical survey is currently being carried out using digital pens and a form printed on special paper designed for use with the pens. The Department is receptive to consider using other cost effective methods of data capture provided that it will deliver the same or higher quality data.
- 7.15 If digital pens are to be used, the Provider will be responsible for the timely delivery of printed copies of the final form and the dissemination of those to the surveyors. Any changes to the form will require programming for Optical Character Recognition. Electronic files containing the master blank form and a Word document providing the facing page notes must also be supplied to the Department each year to form part of the documentation for internal and external analysts.
- 7.16 Throughout the course of the physical survey fieldwork the Provider will be expected to handle any technical surveying queries that arise from surveyors/supervisors in the field regarding form completion. Any precedent-making decisions must be logged, agreed with the Department and disseminated to all those working on the survey. The time spent on this support should be very low given the well established nature of the process.

## SELECTION OF SURVEYORS AND SUPERVISORS

### Background issues

- 7.17 Rigorous surveyor training aims to ensure that all surveyors operate to the same standard. However some element of surveyor variability is inevitable. Assessment of the HHSRS and other condition measures involves professional

judgements which will vary between surveyors. There will always be some surveyors who are characterised as 'hard' or 'soft' markers. To help overcome this problem, the number of surveyors working on the survey should be as high as is practically possible so that surveyors should not be able to unduly influence the results of any one region or sub-set of data.

- 7.18 About 150 surveyors currently work on the physical survey. On average, each survey carries out around 40 surveys a year.

#### Employment of surveyors

- 7.19 The Provider will be responsible for the recruitment, general management and payment of surveyors and, if applicable, their supervisors. This will involve agreement of all contractual terms and conditions, rates of pay and other terms of employment. The surveyors are currently employed on a part-time basis. Retention rates have been high and there has been limited requirement for additional recruitment over the last few years (7 new surveyors joined the survey in 2013/14; no new recruitment was needed in 2012/13, 2014/15 or 2015/16).
- 7.20 The Provider will be responsible for setting the surveyors' pay rates. Details of the current rates employed are attached at Annex 7C.
- 7.21 The survey has to be conducted by suitably qualified surveyors - typically architects, building surveyors, or environmental health officers. The aim is to ensure a degree of mix between different groups so that no one group accounts for more than half the field force. There is some flexibility around this target and, currently, the split is approximately 50% environmental health officers with the remaining 50% split between other professional groups.
- 7.22 It is intended that as many as possible of the surveyors working on the current EHS will be re-employed to continue work on the survey. The Department has invested considerably in the training of these surveyors and wishes to retain their services to minimise the risk to data consistency. The Department will be able to provide a list of surveyors who produced satisfactory work in the current EHS (expected to be about 170). The Provider will be required to make use of these contact details in recruiting surveyors for the survey.
- 7.23 It will be for the, Provider in agreement with the Department, to determine if any surveyors new to the EHS need to be recruited for the first and subsequent years of the survey. This will have significant implications for the surveyor training requirement. *Tenderers should indicate the size of field force they estimate will be required (Q5.9)* and the implications for future recruitment needs taking into account an expected drop-out rate each year and the need for 'back-up' surveyors etc.
- 7.24 While the Department will offer support in developing the work package for surveyors, the, Provider as the contracting agent, will bear full responsibility for contractual arrangements with surveyors. The contractor will be responsible for all administrative tasks including any on-going recruitment and retention issues, discussions with surveyors about performance, contractual issues, address allocations, payments, and responsibility for terminating contracts, length of the contractual period for surveyors, completion periods, and basis for payment and nature of supervision.
- 7.25 From past experience some loss of surveyors also occurs once fieldwork is underway due, for example, to illness.

#### Surveyor supervision

- 7.26 The current surveyor field force is professionally supervised by 3 full time equivalent supervisors. Each supervisor is currently assigned 45 surveyors

with one being assigned 16 surveyors. Key responsibilities of the supervisors are the recruitment of new surveyors for their areas, day-to-day supervision of surveyors in the field, undertaking accompanied visits with surveyors on completion of the training and, intermittently thereafter, overseeing the validation of forms using a web based system and final submission of cases. Supervisors also attend/support the training for their group of surveyors and feedback on pre-training test material.

- 7.27 It is for the Provider to decide whether this is an appropriate structure for the new survey and to put forward their own proposals. The Department will approve the broad mix of surveyors and supervisors but selection of individuals will be a Provider responsibility.

## SURVEYOR TRAINING

### Background

- 7.28 A key role of the Provider is the training of professional surveyors undertaking the physical inspection of properties as part of the EHS, ensuring that surveyors are working to a common standard and are thoroughly conversant with the substantive contents of the physical survey and the data capture instruments. The professional judgments that are required is critical to the overall reliability and robustness of the physical survey dataset. Managing an effective training regime is therefore Provider re a core requirement of the project.
- 7.29 A key role of the is therefore to **design and deliver** the technical training to all surveyors to ensure that they are thoroughly familiar with all aspects of the survey and are working to a common standard. The Provider must therefore:
- Develop and deliver an appropriate training package for surveyors continuing to work on the EHS, including pre-training exercises, that refreshes their knowledge of the survey and briefs them on any changes to the survey for the coming year;
  - Develop and deliver an appropriate training package for new recruits (if new recruitment is considered necessary) that introduces them to all aspects of the survey. This will include monitoring the performance of surveyors at the training and providing technical input to a final assessment as to whether surveyors are competent to work on the survey. The final decision on the recruitment of surveyors will rest with the, Provider based on a professional assessment of their competency.
- 7.30 A bespoke web site operated by the BRE is currently being used widely as a learning and reference tool. For example, a 'Frequently Asked Questions' fact sheet on particular topics is available from the current BRE EHS web site and worked examples of assessments under the current Housing Health and Safety Rating System (HHSRS). The Department is agreeable to seeing this approach continued and expanded but is also receptive to other innovative forms of providing learning and support. Any innovations must however be shown to be cost effective and practical in assisting surveyors in the field.
- 7.31 It is proposed that the training will continue to be provided directly by the Provider team. The Provider must ensure the availability of suitably qualified staff to provide technical training on, for example, the HHSRS or specialist structural issues. The Department will provide support to the training through an initial introductory session on survey developments and reporting but this material may then be presented by the Provider for subsequent iterations of the training.

### Training requirements for new recruits

- 7.32 Details of how surveyor training is currently scheduled is attached at Annex 7E. Information on the residential training programme for recruits new to the survey is provided at Annex 7F.
- 7.33 If it is proposed to train new recruits, The Provider is encouraged to think innovatively in developing their proposals for delivering the training, bearing in mind the standard expected.. *It should be noted that the maximum size for a single training group is considered to be 20-24*
- 7.34 N/A
- 7.35 The overall objectives of the training of new surveyors are to:
- Ensure surveyors understand the concepts that underpin the survey fully;
  - Ensure surveyors are clear about the terms and distinctions to be made about problems related to the housing stock and the judgements made about appropriate remedies;
  - Ensure surveyors are able to complete the survey form fully, accurately and in line with requirements;
  - Ensure as far as possible that surveyors all operate to a common standard; and
  - Ensure that surveyors have a good grasp of processes and procedures to effectively conduct the survey.
- 7.36 New surveyors being considered for work on the current EHS have, to date, received a distance learning pack prior to being accepted onto the residential training programme to familiarise them with the survey form and form completion. The packs comprise a cut down version of the technical training manual, a training DVD and copies of the survey forms with model answers. Surveyors are required to complete trial surveys prior to the training and completed forms are reviewed by their supervisor. This has formed part of the recruitment process and informed decisions about whether the surveyor should be accepted onto the residential training programme. This approach has provided a useful early quality check and ensured all recruits come to the main training with a common understanding of the physical survey. A small number of copies of the DVD will be available to the new contractor if required plus a master copy. It will be the contractor's responsibility to make any necessary additional copies and to arrange dissemination.
- 7.37 Surveyors new to the EHS receive a five-day residential briefing. The rigorous residential training involves both desk-based and practical sessions and is designed to enable surveyors to adopt a standard approach to the assessment and reporting of the condition of the dwellings they will be inspecting. Surveyors not familiar with the HHSRS also undertake an additional half day of training on the HHSRS.
- 7.38 In advance of their training, all new surveyors are issued with an EHS technical manual which sets out key definitions and provides guidance on correct completion of the survey form. New surveyors also received a set of worked examples on the Housing Health and Safety Rating System (HHSRS). The worked examples are made up of model answers from the Authority and scenarios based on test properties used in previous briefings. Used primarily for benchmarking purposes, those scenarios are intended solely to aid the completion of the HHSRS within the EHS form.
- 7.39 In previous years of the EHS, the full training for new surveyors comprised practice surveys on selected test houses with a debriefing in the evening. The contractor would be required to locate such test houses and secure safe access



to them for the duration of the training. The objectives of the evening debriefings are:

- To clear up queries on how the form should have been completed for the test houses and to clarify definitions;
- To give surveyors feedback on how their answers compared with model answers;
- To identify surveyors who were having problems and who could be targeted for extra tuition.

7.40 Designing and delivering the technical content of the training will be the responsibility of the contractor. This will include delivery of training on the HHSRS by specialists in these fields and training on the administrative process, including securing co-operation and gaining access and liaison with interviewers.

#### Training 'returning' surveyors

7.41 Currently surveyors who are continuing to work on the survey for further years receive an annual one-day 'refresher' training preceded by a set of e-learning exercises. Those modules are completed by the surveyors at home prior to attending the briefing and the results are fed back to them during a dedicated training session. Surveyors attend the 'refresher' training in eight separate groups of about twenty participants. The refresher training involved fieldwork so all the attendees are offered one overnight stay.

7.42 The aims of the refresher training are:

- To bring surveyors up to date with any changes to the survey content or methodology;
- To refresh their knowledge of the survey immediately before going back into the field;
- To calibrate their performance;
- To flag up any ongoing validation errors/survey problems.

The training programme is outlined at Annex 7D.

7.43 It is assumed that future refresher training will broadly follow the current approach (see Annex 7D) but updated to reflect new changes to the form or any emerging validation issues together with feedback from previous cohorts of trainees. The Department is keen to further develop new approaches based around web based technology wherever this is feasible. The current interactive e-learning exercises will be available for the new contractor.

7.44 It should be assumed that all returning surveyors are briefed before they start their fieldwork to familiarise them with changes to the form and any new administrative arrangements.

#### The Venue

7.45 The Provider will be responsible for selecting the venue for all the training sessions proposed subject to the Department's agreement. The venue for training of new recruits must be within easy access to a range of housing types for training exercises in the field, and a range of neighbourhoods.

7.46 In addition to the team delivering the training, provision also needs to be made for accommodating a small number of visitors. New members of the EHS team at the Department, for example, will be encouraged to attend some sessions as may staff new to the contractor teams. The Provider should budget on the basis that there will be 3 extra 1 day non-residential places required annually.

#### Administrative coverage at the training

7.47 The Provider will be responsible for all day-to-day management at the training sessions. This will include:

- Administrative cover/help desk at the training venue throughout the training period to deal with surveyors' and training teams' queries (12 hour per day for the current contract).
- Liaison with the venue staff over accommodation and equipment and provision of administrative back-up to the training team.
- Ensuring the venue is provided with adequate training facilities including equipment, briefing materials and on-line connections for trainers.
- ensuring that IT and other equipment is serviceable at all times and that surveyors have all the stationery/materials needed.
- if proposing the use of test houses, the contractor will need to organise appropriate transport and insurance arrangements as necessary.

7.48 N/A

#### Surveyor endorsement

7.49 It will be the Provider's responsibility to ensure that only competent surveyors undertake the fieldwork. Therefore, the Provider needs to put in place a process, agreed with the Department, whereby any surveyors new to the survey can be assessed at the end of their training and passed as competent to start live fieldwork.

7.50 The Provider will also need to make the decision about whether surveyors continue to be competent to work on the survey and whether their employment should be continued. This assessment would be based on clearly defined assessment criteria which should be made available to surveyors at the start of their contract. The assessment should be based on satisfactory completion of administrative tasks and their professional competence. It is important that no consideration of surveyors' professional judgements is included in this assessment although overall competence should be considered.

7.51 N/A

#### Debriefing

7.52 The Provider will be required to organise the debriefing of all surveyors after their completion of the training and present a report with any resulting recommendations for changes to the training to the Department for consideration. The debriefing 'questionnaire' will require updating each year to reflect changes to the training content. This process is currently also operated electronically via the BRE web site.

#### Technical Manuals

7.53 For the current EHS, each surveyor and supervisor was provided with a set of hard copy training manuals. These manuals cover both the technical and administrative aspects of the survey. Copies of these can be viewed at the Department if required. Currently these are updated annually through a set of replacement pages. Producing the substantive contents, printing and dissemination of the technical manuals and updates will be the responsibility of the Provider

7.54 Electronic versions of the current manual will be made available to the contractor who will be responsible for their on-going maintenance. An electronic version of the manual is also currently made available on-line

- 7.55 The Provider must keep a clear 'audit trail' of all amendments so that an accurate copy of the training manual is available for each year of the survey. One copy of the manual will be required both in hard copy and electronically by the Department in a format that can be readily used and updated. Longer term transferability to any new contractor is a key requirement.
- 7.56 The Provider will also be responsible for the production of guidance on administrative procedures setting out, for example, how the appointment system is to operate and where/how they log progress on a case-by-case basis, or submit expense claims. Currently, this forms part of the main technical manual. Separate guidance may be required for any supervisors.
- 7.57 N/A

#### Fieldwork procedures

- 7.58 Running the physical survey successfully is dependent on organising an efficient fieldwork model with careful consideration of the way in which the fieldwork periods for the interview and physical surveys are time tabled and the level of integration proposed between the two field forces. This will include, for example:
- how work is allocated effectively to surveyors
  - address/dwelling identification issues between interview and physical surveys
  - contact procedures with householders
  - fieldwork monitoring
  - timing of training and debriefing sessions
  - how and when cases for the physical survey are to be selected

#### Surveyors' Allocations

- 7.59 The Provider will be responsible for devising an effective allocations strategy for delivering work to surveyors. The system must ensure a balanced volume of work for all surveyors such that the work of any one surveyor cannot unduly bias measures of condition and disrepair at regional level. It is proposed that current rules regarding surveyor allocations will remain in place. These restrict the maximum number of surveys any one surveyor can complete to 65 with no one surveyor completing more than 36 surveys in the North East and no more than 45 surveys in the regions. This will mean many surveyors will be required to work outside their home GOR.
- 7.60 Within each quarter, the surveyors work for two periods of 16 days immediately following the interviewers' one month of fieldwork. Annex 71 sets out the current fieldwork periods. Fieldwork for the first three years of the current contract is spread only over eight months of the year not 12. To accommodate a delay to the start of the survey due to the consultation on the future shape of the EHS, fieldwork in the current year (2015-16) takes place over 3 quarters of the year, beginning in July 2015 and running in 6 months of the year.
- 7.61 An electronic appointment system is currently in operation whereby interviewers make a timed appointment for a named surveyor to visit the properties selected for the physical survey.
- 7.62 An appointment-based system has proved popular with surveyors and helped secure high retention rates and means the field force have built up extensive expertise on the survey. It has therefore helped to deliver a good quality end product and reduced the need for costly training of new surveyors. The Department would therefore wish to see some form of electronic appointment

system continued unless alternative options can be shown to deliver equally successful results.

- 7.63 Creating manageable yet attractive quotas of work for surveyors is key to maintaining the success of the physical survey. Achieving this is one of the primary challenges of successfully integrating the interview and physical surveys. Having invested considerable resources in the training of the current surveyor field force it is highly desirable that surveyors remain committed to the survey and an attractive working pattern can be set up to foster this. Work quotas therefore need to be managed so that appointments can be grouped both geographically and over time. In this way travel costs are minimised and the most economic use is made of surveyor time. The Provider will organise fieldwork effectively so that cases going on for a physical survey can remain grouped to avoid the 6,200 physical survey cases being spread too thinly and, therefore, undertaken less cost effectively.
- 7.64 The Provider will be required to set up a system that is easy and transparent to administer and seeks a pragmatic balance between minimising surveyor travelling time and securing a balance of properties in terms of their tenure.

7.65 N/A

#### Surveyor Variability

- 7.66 The Department is aware that there is variability in the way surveyors will assess the condition of a property and what repair work will be recommended. Such issues are matters of professional judgement and some level of variability is, therefore, unavoidable. We do however make every effort to ensure that surveyors' performance in the field is calibrated to a common standard. This is currently achieved through the rigorous training regime and supervision process outlined above.
- 7.67 It is important that we are able to measure the extent of the residual surveyor variability and how this affects the robustness of survey results. Exercises are carried out periodically to measure the impact of variability on results. A call-back exercise was conducted in 2010/11 with an achieved sample of around 300 call-back surveys. A summary of the methodology and results of that exercise are provided at Annex 7G. A similar surveyor variability study took place in 2014-15 but the results are not yet available.
- 7.68 The Department will take up the option of the surveyor variability study.

#### Automated Data Capture

- 7.69 The EHS physical survey currently uses a process of automated data capture. The approach is based on the use of digital pens supported through a bespoke web-based system. The 'questionnaire' continues to be paper based but printed onto special paper that enables Optical Character Recognition software to be used. Surveyors complete the form as for a normal paper and pen exercise but data are captured automatically onto the digital pens. The pens are then docked onto the surveyor's home computer and data downloaded to a central web site currently hosted by BRE. Digital photographs of each property are attached to the survey data at this point. Surveyors then run each completed survey through a comprehensive set of validation routines and are prompted to make corrections/supply missing data on an iterative basis until all (or the great majority) of faults are removed. The validation includes both within page and cross page consistency and plausibility checks as well as range checks and checks for missing data.
- 7.70 The system allows surveyors for example to 'park' forms during validation and return to them at a later point. The 'clean' survey is then submitted to their supervisor who makes a final check, referring back to the surveyor if required,

before the case is submitted onto a central data base maintained by the BRE. All surveyors are required to have high speed internet access to enable the rapid down loading of data.

- 7.71 This system has proved very successful in delivering high quality data in a timely way requiring little post-fieldwork cleaning and reconciliation. Further details of the methodology and what will be available to the Provider is set out at Annex 7A
- 7.72 The Department is receptive to the introduction of new cost effective data capture technology capable of delivering data of comparable or a higher quality. The new technology needs to be fully field tested on the survey before introduction. The Department, therefore, expects that digital pens will continue to be used for at least the first year of the new contract.
- 7.73 Whichever data capture system is used, the Department expects it to have the key features detailed below.
- Electronic or a web-based facility with sufficient capacity to handle the volume of transactions for EHS fieldwork ie about 150 surveyors processing a minimum of 6,200 cases a year - often with distinct peaks of web traffic;
  - Security features consistent with the data security guideline on the survey;
  - Facilities for supervisors to monitor and feedback on surveyors' performance, quality standards and progress;
  - IT systems with facilities to transfer data effectively, to provide updates on the status of each case for tracking purposes and to provide progress summaries to keep the contractor and the Department advised about overall progress on the survey;
  - A secure fully backed up case management system accessible to staff assigned to the EHS only. The system should be access restriction features which limits surveyors access to their own cases only and supervisors are restricted to accessing only the data for their own surveyors.
  - Facilities for surveyors to attach and view photographs to the matched survey data and containing checks to minimise the risk of photographs being attached to the wrong case data;
  - User friendly facilities giving the Department quick and easy access to photographs, captured data and, if relevant, images of the survey forms if required.
  - IT support functions to ensure surveyors can access the web server at all times and to resolve installation or application problems; User friendly documentation for all surveyors to assist with the use of hardware and software in the field;
  - An appropriate procurement, maintenance and replacement strategy for all the software licenses as well as portable and fixed hardware.
- 7.74 The Provider will take on responsibility for the full implementation of the data capture hardware and software and ensuring all necessary licenses are in place. The software will require updating to reflect changes to the physical survey throughout the life time of the new contract. See details of current system at Annex 7A.
- 7.75 The Provider will be responsible for the purchase and maintenance of any additional equipment and for the provision of an IT support service throughout the fieldwork periods, including some out-of-hours provision since much surveying is undertaken in the evenings and at weekends.
- 7.76 N/A

## Fieldwork Monitoring

7.77 *It will be important that effective IT tracking systems are in place and that the systems set up to track separate stages of the fieldwork process are linked effectively. For example, the system for managing the interview fieldwork is linked to the system for handling the physical survey so that appointment information can be transmitted between the two systems. For day-to-day management purposes it will be necessary for surveyors to log outcomes of surveys so that supervisors can review progress, validate pay claims etc. It will be the contractor's responsibility to monitor survey progress and inform surveyors where they appear to be falling behind schedule.*

7.78 Individual surveyors' performance in the field will also require monitoring. Currently supervisors undertake accompanied visits with all surveyors as early as possible after the start of fieldwork and all survey forms are submitted electronically via the supervisor for a 'light touch' inspection prior to sign off.

## Photographs

7.79 Digital photographs are required for each surveyed address. These should be clearly labelled and can be easily linked back to the survey data. Four photographs are currently required per dwelling - front and back of the dwelling and two of the local environment. It is obviously critical that the data and photographs are correctly matched.

7.80 It will be the Provider's responsibility to source and supply digital cameras as required.

7.81 *The Provider will have responsibility for providing the Department with access to a set of digital photographs uniquely referenced by case number each year.*

## Administrative Support to fieldwork

7.82 During the fieldwork periods, the Provider must also provide a support service to deal with administrative (as opposed to technical) queries that will arise from both surveyors and respondents and, possibly, by interviewers regarding the scheduling of appointments. Currently a help desk operates from 9am - 9pm on weekdays and 10am-4pm on weekends and Bank Holidays, using a staff 'on-call' system outside normal office hours. It is important that interviewers'/surveyors' queries are dealt with very quickly so that fieldwork is not held up. These calls are likely to range from surveyors seeking help in locating an address to requests for additional survey forms. Respondents will need a contact point to cover, for example, the need to reschedule an appointment.

## HOUSES IN MULTIPLE OCCUPATION (HMO)

7.83 The physical survey of HMOs need to be undertaken by experienced surveyors and these are currently conducted by the selected surveyors. Around 30 such dwellings are likely to be included in the physical survey in each survey year.

7.84 The Provider will be required to undertake additional manual validation of these complex cases to ensure that data recorded on the interview and physical surveys are consistent and the correct address to dwelling information feeds into the weighting process. Validation of cases must be undertaken promptly (on a quarterly basis) so that these cases do not hold up any part of the end-of-year weighting process. Currently the capture and validation of the data for this small but complex set of properties is very resource intensive and the Department welcomes proposals for a more efficient approach.

## SCANNING THE SURVEY FORMS

- 7.85 The current data collection process generates a scanned image of each completed form as part of the data collection process. The forms are lodged on the host web site. The contractors currently maintain an archive of these forms for the length of the contract. Surveyors are currently required to shred the first two and the final comments page of all their paper survey forms to maintain data security. The remainder of the forms are then disposed of once instructed to do so by their supervisor when all queries for that quarter have been resolved. *If the Provider uses paper forms they are expected to develop a protocol for handling the completed forms which offers at least the same level of data security safeguard.*

### Documentation

- 7.86 Once the content of the survey form is agreed each year, the Provider will be responsible for the allocation of new variable names for any new fields and for creating a pdf version of the physical survey form, showing the variable names attached to each field of the form. It should be assumed that, wherever possible, variable names from the existing EHS will remain unchanged. This document should also indicate on which final SPSS data file the variables are located.
- 7.87 Once the 'clean' data are logged on a host server by surveyors the Provider will be responsible for running data conversion routines to set up the fully labelled SPSS files that will form one of the primary deliverables of this contract (between 20 and 30 such files are produced under the current contract). The contractor will have responsibility for final reconciliation checks against data from the interview survey and for final delivery to the Department. This requirement is discussed more fully in Section 8.

### Surveyor Calibration

- 7.88 From past experience, the Department is also aware that there can be shifts over time in the way that surveyors assess properties and make recommendations about the work required to bring dwellings up to a satisfactory standard. It is important that the Department has confidence in the data emerging from the survey and that time series reflects real changes on the ground rather than a shift in surveyor standards.
- 7.89 In order to monitor whether surveyors' personal assessment standards have drifted over time or not, all surveyors are required to complete an electronic calibration workbook at home once in the course of the current contract. The material currently used will be provided to the new contractor. The Provider will be responsible for continuing this process for collating results and reporting back to the Department, including any recommendations about areas of the form that require additional training. The workbooks may also require updating periodically to include new examples and the Department will look to the contractor to offer advice on this issue and implement any enhancements.
- 7.90 A report on the most recent calibration exercise is provided at Annex 7H

### Annexes

- 7A Details of data capture software and equipment available to new contractor
- 7B Summary of changes to survey form since 2013-14
- 7C Surveyor pay rates/ training attendance fees

- 7D 2011/12 Training programme
- 7E 2009/10 Training schedule
- 7F 2009/10 Full training programme for new recruits
- 7G Surveyor variability study 2010/11 (extract)
- 7H Calibration workbook report (extract)
- 7I Fieldwork dates



## **8. Creation of data base and derived variables**

- 8.1 This section describes the work that the Provider will be required to undertake after the completion of fieldwork to generate the key deliverables to the Department.
- 8.2 Once interviews and physical surveys are completed and the raw data has been quality assured, the Department requires further work to:
- set up a structured set of labelled files for delivery to the Department ;
  - create a number of derived measures which will form some of the key variables used in analysis and reporting;
  - Prepare a public dataset for deposit at the UK Data Archive.

### **DATABASE DEVELOPMENT**

#### **Data Reconciliation**

- 8.3 The Provider will be responsible for developing and carrying out cross checks on a small number of key variables. Those checks are to be applied to the cases that receive a physical survey. The checks are designed to ensure consistency between the interview and physical datasets. Currently a series of 'comparison edits' is undertaken which compares a small number of key variables from the interview and physical survey to determine if these agree. The checks also provide a useful means of establishing if both interviewer and surveyor have gone to the same address or where address labels have been misallocated. They also ensure that tenure is recorded consistently and that the definition of a dwelling is consistent for weighting purposes.
- 8.4 The Provider will have responsibility for undertaking the necessary checks and editing the interview and/or physical files to reconcile the two datasets. This may include edits to individual fields or the deletion of complete cases, where, for example, it is established that the interviewer has gone to the wrong address. Provider
- 8.5 It will be for the to decide what cases form the final achieved sample to be grossed for both the Full Interview Sample and the Dwelling Sample. This will involve an assessment of whether there is sufficient data collected to constitute a viable case, ie, the level of missing data are acceptable for analytical purposes. It is essential that there is early agreement of these issues so that work can progress on both the weighting and the creation of derived variables.
- 8.6 The Provider will also be responsible for any further data cleaning and imputation that is necessary to enable data to run correctly through each of the key data models to create derived variables (DVs) as detailed below.

#### **Database Creation**

- 8.7 The Provider will be responsible for creating a set of labelled interview and physical survey SPSS files for delivery to the Department. Those files are to contain the primary data collected in the field. They will contain all the cases from the achieved Full Interview Sample or the Dwelling Sample and which will be part of the grossed datasets. The data in those files must have been quality assured and reconciled between interview and physical survey.
- 8.8 The detailed format and content of these databases will need to be agreed with the Department early on in the development of the project. Each dataset must

be accompanied by documentation that clearly sets out their structure and content. Great importance is attached to the timely delivery of clean, high quality and well documented data.

- 8.9 The exact list of variables to be delivered will need to be agreed as part of the development phase of the survey. The contents are expected to comprise:
- all contact information, including the interviewers' first impressions of the properties and neighbourhoods
  - responses to all direct and interviewer coded questions within the interview
  - all data collected via the physical survey
  - certain interim/system variables generated during fieldwork
  - a set of derived household based variables generated after fieldwork. This will include, for example, a final tenure variable (also used as part of the weighting) as well as certain descriptive variables, including bedroom standard, rent before and after Housing Benefit, and a number of other derived household-based variables. These will be required for all cases where a full interview is achieved.
  - a set of derived measures from the physical survey, including floor space and other more complex energy efficiency measures.
- 8.10 The Department requires delivery of the primary datasets in SPSS data format (.SAV) for interrogation using a version of SPSS to be agreed (at least version 18). All files should be supplied to the Department in this format unless agreed otherwise. Full descriptions of the way in which the current EHS data base is structured and formatted are provided in Annex 8A. The Provider should assume that a data base of this level of complexity will be required, including files at a number of different levels of aggregation. For example, some files are at household level while others at person level. All variables and values must be fully labelled, missing values assigned and responses to multi code questions supplied as individual binary yes/no variables.
- 8.11 The responsibilities of the Provider with respect to primary data files are to:
- a) Agree a file structure for the interview and physical survey datasets with the Department which will achieve as much consistency as possible with the current data base (see Annex 8A);
  - b) Deliver final versions of all primary data files consecutively for both component surveys according to the overall timetable agreed with the Department;
  - c) Label all variables and values to specified or agreed conventions, including missing values. Current variable names and labels will be required wherever there is complete continuity in the data collected.
  - d) Provide electronic documentation, in a format to be agreed, for each annual primary dataset.
- 8.12 The precise list of data files will change year on year depending on the modules included in the interview and physical surveys. It is important to note that while the household data are required and analysed on an annual basis, the physical survey data are analysed on a two-year rolling basis. The Department will therefore require delivery of both annual files for the physical survey and combined two year files on a rolling basis. Datasets are therefore required covering different time periods as follows:
- A set of annual files containing interview survey data for all cases in the achieved Full Household Sample – starting with FY 2016-17

- A set of annual files containing interview survey data for all cases in the Household Sub-sample (ie for cases where there is a matched physical survey) starting with FY 2016-17;
  - A set of annual files for all data from the physical survey for all cases in the Dwelling Sample including vacant cases starting with FY 2016-17;
  - A set of two yearly files (on a rolling basis) based on the interview survey data for all cases in the achieved Full Household Sample starting with '2016' covering a period April 2015 to March 2017 ie with April 2016 as the mid point;
  - A set of two yearly files (on a rolling basis) based on the interview survey data for all cases in the achieved Household Sub-sample (ie for cases with a matched physical survey) starting with '2016' covering a period April 2015 to March 2017 ie with April 2016 as the mid point;
  - A set of two yearly files (on a rolling basis) based on the physical survey data for all cases in the achieved Dwelling Sample (including vacant cases) starting with '2016' covering a period April 2015 to March 2017 ie with April 2016 as the mid point.
- 8.13 In order to create the two yearly files, the Provider will be required to take delivery from the Department of the datasets for the 2015-16 Full Household Sample, Dwelling Sample and Household Sub-sample (both interview and physical survey datasets) so that these can be combined with the data for 2016/17 to create the rolling two year dataset for '2016', ie comprising data collected April 2015 to March 2017.

#### Version Control

- 8.14 It is very important that the Provider and the Department work with the latest and a consistent set of data files – so that, for example, any reporting and analysis work is based on the correct versions of data files. The teams must therefore all hold exactly mirrored versions of each annual and two yearly data base that would be available to analysts in their team(s). Very careful handling of version control will therefore be essential across all the teams.
- 8.15 Some analysis, particularly time series, will require ongoing access to the past EHS, EHCS and some SEH datasets and the Provider will be required to hold and maintain these existing data bases for the duration of this contract as well as the new EHS data bases they are creating. Revisions may be made to these datasets by the Department if errors are identified and the Provider may therefore be required to take receipt of replacement files and update their database accordingly
- 8.16 Key database tasks for the Provider will, therefore, include:
- Maintain a parallel copy of all continuous EHS databases - for all component surveys ( and possibly earlier EHCS data bases if reworking of time series are required);
  - Maintain back-up copies of all data files in the system;
  - Maintain the existing EHCS/SEH database;
  - Document any new variables added to the shared system and passing all necessary documentation to the Department EHS data base manager;
  - Create a full set of derived variables from the interview and physical surveys and generate combined two year files for analysis;
  - Receive and download files to the Department as required;

- Liaise with the Department EHS data base manager as necessary.

#### Quality of the Data Sets

- 8.17 The Provider will have primary responsibility for the final quality of all the delivered datasets. Comparability and consistency of data from year to year are essential. Time series from the survey must be on a consistent basis, and it must be possible to increase the sample for analysis by combining data from successive years, including combining, where possible, data collected under the contract with that collected under the current EHS.
- 8.18 On receipt of the datasets the Department will use the documentation to ensure it can set up and read all delivered files and interrogate the data base by matching and aggregating files and undertaking initial exploration of the data. The criteria for acceptance will be:
- a) receipt of all files agreed for the primary and management datasets;
  - b) clear and concise documentation for using the data;
  - c) all the files read and match correctly using the unique case identifier;
  - d) frequency counts and other relevant statistics for each variable appear plausible;
  - e) all required variables are present, correctly labelled and for the correct set of cases.
- 8.19 The Department will agree with the Provider a reasonable period of time for the former to carry out its own more detailed tests of the data. The Provider will be expected to provide support during the acceptance period in order to resolve queries arising in the use of the data. It will be the contractor's responsibility to correct any significant problems with data files that emerge. In this situation the contractor will agree with the Department practical steps to provide a remedy and carry out the necessary work.
- 8.20 *The Provider will provide support during acceptance testing of data deliveries and indicate any conditions or limitations they feel should be included in the final agreement*
- 8.21 N/A

#### Creating derived variables

- 8.22 The Provider will be responsible for the creation of a set of secondary derived variables (DVs) from the EHS data collected on an annual basis. This work will involve a high degree of familiarity with both SPSS and the EHS data base and will cover the generation of complex measures based on the base data collected through both the interview and physical surveys.
- 8.23 Some additional geographic identifiers are also required which are expected to include codes from the Index of Multiple Deprivation and a rurality indicator based on the classification produced by the Department for Food and Rural Affairs (DEFRA). This will require matching to census local area codes which the contractor is also required to deliver on the address file (Annex 8B)
- 8.24 It is the Department's intention, subject to sample size limitations, to publish results from each survey as early as possible in the calendar year following completion of fieldwork ie results from the 2016/17 survey will be made available by January 2018. It will be essential, therefore, for all data cleaning and modelling to be set up on a sustainable basis that can deliver a rapid

throughput of results on an annual basis with minimum amounts of intervention on a case-by-case basis. The Department *will look to the contractor to provide a comprehensive understanding of these issues.*

- 8.25 All work under this work stream must be developed and documented so that it can be readily transferred to another contractor if required. The software/web based application should not therefore be tied specifically to the Provider's own IT configuration. Full documentation should form an integral part of the development work and be made available to the Department on request.
- 8.26 Separate user documentation will also be required to explain to users of the survey results how derived variables and indicators have been modelled, including assumptions made in imputing missing data. This will include updating the Technical Report as well as provision of documented syntax/software in a transferable format.
- 8.27 The well-established syntax/code currently used to generate these measures will be available to the. Provider The Provider will need to familiarise themselves with each of these processes to understand how the derived measures are currently generated. While a high level of continuity is important for ongoing analysis of trends, the contractor will be free to introduce changes/enhancements to the process in agreement with the Department. It is important that the contractor can demonstrate that the changes will bring advantages in terms of data quality, speed or cost effectiveness. Annexes 8B to 8G provide details of the models currently used.
- 8.28 The software made available to the new contractor will be fully documented (mainly in the form of annotated SPSS or Delphi programs) with some freestanding word documents to support some models. This should enable the models and programs to be picked up and used by another trained programmer/analyst.
- 8.29 The Provider will have responsibility for the final quality assurance of these variables each year, ensuring that the files containing the derived variables are correctly formatted and labelled. The Provider will also be responsible for delivering the files containing the derived variables annually. A set of combined two year files will be required for the household as well as the dwelling sample.
- 8.30 N/A

#### Derived Variables from the Interview Survey

- 8.31 For costing purposes, it should be assumed that the current set of derived variables (DVs) as shown in Annex 8B will continue to be required. Some variables are straightforward to generate and the SPSS syntax currently used to create these will be available to the contractor. These would include such variables as age of Household Reference Person (HRP), age of oldest person in the household, letting type, age of youngest person; ethnic group of HRP, length of residence etc. DVs created on a consistent basis to previous years are required. Some additional DVs may be required to reflect the Department's emerging policy requirements and changes to the range of data collected in the field.
- 8.32 Some of the DVs are required to be produced with no missing data and complex imputation of missing data will be required based on cases with similar characteristics in the interview survey and sometimes external sources. SPSS syntax files will be available but some will require annual updating to reflect, for example, changes in benefit levels; rent levels etc. These complex variables will include the bedroom standard, whether the household is 'vulnerable', household income, income of HRP and partner; equivalised income, rent, workless households. Details of the modelling involved relating to rent, benefit

and income are provided in Annex 8C. An overview of the modelling of some of the more complex measures are provided in the Technical Report available on the web site:

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/457172/Chapter\\_5\\_Data\\_processing.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/457172/Chapter_5_Data_processing.pdf)

- 8.33 The Provider will maintain and update the existing documentation for the set of derived variables they create, including the syntax used for creating these and any necessary comments to enable analysts to follow the methodology. Any significant changes to the modelling of the complex measures will require updating of the Technical Report by the Provider.

#### Derived variables from the physical survey

- 8.34 The contractor will also have responsibility for deriving a wide range of derived measures from the physical survey, in particular:
- A number of dimensions measures including wall space, floor space and plot sizes;
  - Repair costs for remedying faults identified in the survey; costs to make decent and costs to make safe;
  - Health and safety indicators;
  - Decent Homes indicators - indicators of whether properties fail on any of the four Decent Homes criteria. These are defined in the Glossary to the published reports on the EHS web site and in the Technical Report.
  - Energy efficiency indicators - these include the SAP rating for each dwelling; a series of SAP derived indicators based on the Energy Performance Certificate for the dwelling's current and potential performance; and flag variables for the improvement measures that the dwelling would benefit from. A Reduced Data SAP (RDSap) rating is also required. See section on energy modelling below.
  - Simpler descriptive measures covering topics such as dwelling age; type; heating type etc.
- 8.35 A summary of the main derived variables required from the physical survey is provided at Annex 8B. Other more detailed variables created as part of the modelling process are also required to be delivered to the Department.

#### Quantities and repair cost models

- 8.36 The Provider will generate and deliver the same range of repair costs as under the existing EHS (including basic, comprehensive and urgent costs, at actual and standardised prices). It should be assumed this is will be required annually.
- 8.37 Additionally a set of 'costs to make decent' will continue to be required every year which will be built up from the component repair costs for each of the four Decent Homes criteria and with any duplicate work taken out.
- 8.38 A similar range of costs for making a property 'healthy and safe' will be required every year as for the existing EHS. These will be compiled from work specified by surveyors on the form for both disrepair and improvement. All double counting of work will need to be identified and removed.
- 8.39 Any changes to the modelling assumptions will need to be agreed with the Department and fully documented in the annual update to the Technical Report.

- 8.40 *Details of the existing quantities and Repair Cost Models and what will be available to Provider are provided at Annex 8D.*

#### Energy models

- 8.41 The EHS will continue to collect data that underpins much of the Department's work on monitoring and improving the energy efficiency of the housing stock. The raw data collected in the field requires careful validation and data modelling before being used for analytical purposes. This is a specialised area of expertise involving in depth understanding of energy modelling including the Government's Standard Assessment Procedure (SAP) used to monitor the energy efficiency of dwellings.
- 8.42 The Department intends to continue to report on SAP ratings. The method for calculating SAP was comprehensively updated in 2005 and in 2009, with an update of a more minor nature in 2012. This new SAP 2012 methodology is used in the 2013 EHS reports. Any further updates to the SAP methodology introduced over the course of the new contract would also need to be taken on board and reflected in the EHS methodology. This would involve development work to the models and a re-working of time series data. The monitoring of change over time is an essential feature of this work.
- 8.43 The current model used to derive an EHS-based SAP rating from data collected in the EHS will be available to the new contractor. Details of the current model and what will be available to the Provider are set out in Annex 8E. This will be the model updated to the SAP2012 methodology and with the latest u-values and prices updates. The Provider will be free to propose changes/improvements to this model in discussion with the Department although data continuity will remain a high priority and the impact of any changes on results will require careful consideration.
- 8.44 The energy modelling approach must be capable of delivering key variables including SAP ratings promptly following the end of fieldwork.
- 8.45 The existing EHS SAP model has been enhanced to derive a Reduced Data SAP (RDSAP) measure from data collected in the EHS. The full EHS SAP measure will be the main and preferred reporting variable but an RDSAP variable will be made available for some internal analysis and also for external users via data deposited at the UK Data Archive. For costing purposes it should be assumed that a Reduced Data Sap (RDSAP) measure will be required annually alongside the full SAP rating.
- 8.46 The Department also requires the on-going creation of a wider set of variables related to the current and potential energy efficiency of the dwelling. These are based on assessments made as used in Energy Performance Certificates about a dwelling's current performance, whether it would benefit from a range of high and low cost measures and the likely performance arising from the application of those measures. The following Energy Performance Certificate based indicators are required for both current and potential performance:
- Energy Rating (EER) and bands
  - Environmental Impact Rating (EIR) and bands
  - Primary energy use (kWh/m2)
  - Energy costs (£ per year)
  - CO2 (Carbon dioxide) emissions (tonnes per year)
- 8.47 Further indicators are required showing the improvement measures from which the dwelling would benefit. The Provider should assume that the current range of measures will continue to be required which are: central heating controls; a

condensing boiler; modern fan assisted storage heaters; warm air unit; biomass boiler/wood pellet stove; loft insulation; cavity wall insulation; and hot water cylinder insulation. Further development work may seek to extend the range of measures to include additional measures such as solar water heating; double or secondary glazing; solid wall insulation; complete change of heating system; and solar photovoltaic panels. Such work would be funded through the 'ad-hoc' analysis service described in Section 9.

#### Decent homes modelling

- 8.48 The Provider will be required to create indicators each year in relation to the decent homes standard. This will include creating an overall pass/fail decent home variable and each of its component parts (whether any Category 1 hazards are present under the Housing Health and Safety Rating System (HHSRS); is in a reasonable state of repair; has reasonably modern facilities and services and provides a reasonable degree of thermal comfort). Further details are provided at Annex 8F.

#### Health and Safety modelling

- 8.49 The Provider will be required to generate a range of variables relating to the HHSRS. These will include whether or not a property has one or more Category 1 hazards present. Since 2008 the EHS provides an assessment of 26 of the 29 HHSRS hazards. Six of the hazards are currently assessed in the field (falling on stairs; falling on level surfaces; falling between levels; fire; flames and hot surfaces; damp and mould growth). The other are assessed either as an 'extreme risk' (see page 20 of the physical survey form) or are modelled post-fieldwork. For the purposes of monitoring decent homes a subset of only 15 of the key hazards are used to avoid a break in time series data from 2006.
- 8.50 *Details of the current HHSRS model are at Annex 8G.*

#### Additional ad hoc modelling requirements

- 8.51 *The Department may require the modelling of additional indicators in relation to emerging policy work. This modelling is an optional requirement and it is proposed that if required it will be funded through a call-off budget as set out in Section 10.*

#### Other derived variables from the physical survey

- 8.52 *In addition to the key indicators emerging from the modelling processes outlined above, the Provider will also have responsibility for the development of certain key descriptive variables relating to stock composition and type. The current list is provided at Annex 8B.*

#### Delivery timetable

- 8.53 The derived variables are key to analysis by the Department and early delivery is an important requirement.

#### Depositing data at the UK Data archive

- 8.54 Once the clean primary data files are finalised and the derived variables have been added to the data base, the contractor will be required to deposit clean fully documented datasets at the UK Data Archive. Currently data are deposited as two distinct data streams:



- Interview survey data and associated derived variables on a single financial year basis;
  - Data for the Dwelling Sample and Household Sub-sample on a two- year rolling basis comprising primary interview and physical data plus associated derived variables. These files also currently contain a subset of Fuel Poverty related variables created for the Department for Climate Change (DECC).
- 8.55 The Provider will take on this responsibility for the 2016/17 survey year forward including the deposit of data for the combined '2016' period (ie period April 2015 to March 2017) for the Dwelling Sample and, if required, the Full Household Sample. The Department will make available the relevant data for 2015/16 to enable the Provider to create the necessary combined two-year files. The Department will also make available any additional variables, such as Fuel Poverty, which are appropriate to include on the dataset
- 8.56 The should be aware that deposit at the Data Archive will involve completion of deposit forms; preparation of separate user guides for the two datasets; depositing technical documentation and data dictionary described in paragraph 2.28; and editing of files in line with Archive's rules to prevent accidental disclosure of individual information. This involves the deletion of certain fields particularly string variables; and the 'top-coding' of a number of variables to prevent identification of unusual households or individuals eg large households; those on very high incomes etc.
- 8.57 Depositing a well-documented public dataset is a key dissemination requirement for the Department. The timely creation of the datasets so they can be available to users at or before the publication of the annual reports each summer is therefore essential. Final release dates will be for agreement with the Department and must be consistent with the UK Code of Practice relating to the release of Official Statistics.

## Annexes

8A – SPSS files from the interview and physical survey

8B – Derived variables from the interview and physical surveys

8C - Interview survey models

8D – Quantities and repair costs models

8E - Energy models

8F - Decent homes model

8G – HHSRS model

## 9. DATA ANALYSIS AND REPORTING

### Background

- 9.1 This section sets out the expected role of the Provider in the analysis and dissemination of the results of the survey. It should be noted that the Department's reporting strategy is currently under review and we will confirm the exact requirements at the time of the award of contract.
- 9.2 It is expected that the Provider will be required to provide extensive and flexible support to the Department's team in the analysis and reporting of EHS data as set out below. This will involve the Provider developing familiarity with all elements of the database as well as housing issues relevant to EHS reporting so as to be able to undertake and present analysis in response to a wide range of Departmental requirements.
- 9.3 The key roles of the Provider are expected to comprise:
- Contribution to the annual reports to be published by the Department;
  - Updating of table in Excel format for publication by the Department;
  - Providing an ad hoc analytical capacity which the Department can call on in a flexible way throughout the contract;
  - Offering a bespoke analysis service to external users on a cost recovery basis with no costs to the Department.
- 9.4 These tasks are each described more fully below. *it is possible that some of the drafting of reports will become an in-house responsibility.*
- 9.5 The current dissemination strategy for the EHS is available on the EHS web site:

<https://www.gov.uk/guidance/english-housing-survey-guidance-for-survey-users-and-participating-households#dissemination-strategy>

The Provider should note that the reporting strategy is currently under review with consideration being given to:

- Producing a larger number but shorter, more policy focused reports.
- Achieving further linkage/integration between the two reporting strands ('households' and 'housing stock')

### Drafting of Reports

- 9.6 The Department will be responsible for determining the content and structure of all reports and will look to the contractor to contribute to some of those reports. The Provider's inputs should be timely, well drafted, to the agreed specification and underpinned by accurate and robust analysis. The Provider will be required to contribute to chapters of annual reports, present key findings as tabulations, draft text and graphic outputs, including charts and infographics. The Provider should be able to provide staff with a good understanding of the policy agenda, sound analytical experience and a good writing style so that text, graphics and tables suited to the end audience is created with minimal levels of editing and quality assurance by the Department team. The drafts must be produced to a publishable standard and meet the requirements of a National Statistics publication. The 2013/14 EHS published reports are indicative of the quality required. *Capability will be provided on a consistent basis through the lifetime of the contract*
- 9.7 The Department expect to release the following types of publications each year:

- Annual Headline report – a single report as for the current EHS covering both household and stock issues.
- Annual publication based on data from the Dwelling Sample and Household Sub-sample based on a two year rolling sample similar to the 2013-14 reports on the profile of English housing, energy efficiency of English housing and fire and fire safety.
- Annual publication based on data from the annual household interview similar to the 2013-14 EHS Household Report.
- Annual updating of EHS Technical Report to reflect any changes in methodology and to provide users with annual survey outcomes and the standard errors of the key survey estimates.

Copies of current EHS reports are all available on the web site:

<https://www.gov.uk/government/collections/english-housing-survey>

9.8 Currently, the Department draft the Annual Headline Report while the current contractor leads on the other publications. The Department is reviewing their reporting requirements and it is possible that the Provider would lead only on the reporting of the more complex analyses involving the Dwelling Sample and Household Sub-sample, the Technical Report and sampling errors. Examples of the more complex analyses include analysis related to hard-to-treat cavity and solid walls; HHSRS Category 2 hazards and further analysis of HHSRS data; potential energy efficiency of the dwelling, including solid walls insulation; emerging areas related to fuel poverty and climate change.

9.9 N/A

#### Updating of tabulations

9.10 In addition to the work on the annual reports, the Provider will be required to take the lead role in the annual updating of EHS web-based tables covering both the interview sample only ('live tables') and the stock tables based on data from the Dwelling Sample and Household Sub-sample ('summary statistics tables').

9.11 It should be assumed these will be of similar scope to those available for the 2013-14 survey:

<https://www.gov.uk/government/collections/english-housing-survey#statistical-data-sets>

9.12 The Provider will be expected to contribute to discussions around the content of these tabulations and for creating and updating Excel tables in a format that is consistent with former years and ready to be deposited on the web site with minimal input from the Department.

#### Ad hoc Analysis

9.13 The Department will continue to be responsible for delivering analytical work to policy divisions and ministers. Analysts in the Department will undertake much of the ad hoc analytical work themselves. To enable them to deliver work on time based on the most appropriate analysis they will continue to require additional support from Provider personnel who have an in-depth knowledge of

the EHS data base and who are capable of using a wide range of analytical techniques.

- 9.14 The Provider will therefore be required to provide a capability to respond in a timely manner to requests to undertake ad hoc policy analysis and provide analytical support to the Department. The work will vary in nature and scale and is likely to include the provision of tabulations, model building and drafting of papers. The work will generally range from providing information taking a few minutes up to several days to undertake. The Department will not be in a position to guarantee, in advance, the precise volume of support required. The work could include the drafting of in depth topic reports on particular themes.
- 9.15 Work which takes up to three person days to complete can be commissioned by the Department by telephone or e-mail. For these smaller pieces of work, the Provider will be required to confirm, via e-mail, a brief breakdown of the work to be undertaken, the analyst who will undertake the work and expected input required, completion date and cost. The Department Project Manager must be kept informed of all such work when they are not directly involved in its commissioning. For tasks expected to take over three days the Department, through the EHS Project Manager, will specify the work in writing and the contractor will be required to set out persons to undertake the work, days input, completion date and cost. Each of these commissions will be paid for under the call-off provision of the new contract but a firm price will be agreed prior to the start of work. It should be assumed that up to 150 days of an analyst's time will be required in each financial year.
- 9.16 A separate costing 'sub-head' is required for this work and all work under this sub-head will be paid for on a variable basis ie payment will be made only for specific items of commissioned work. The work may relate to the Full Interview Sample only or to the Dwelling Sample and Household Sub-sample.
- 9.17 N/A

#### Analytical service for external organisations

- 9.18 The Department wishes to continue to make the results of the EHS available in as flexible a way as possible to a wide range of organisations. It is anticipated that the UK Data Archive will continue to support users of the EHS data deposited there. The Department would however like to be able to offer users a bespoke analysis service delivered through the Provider who would undertake analysis on a cost recovery basis independently of the Department. The volume of work is unpredictable but currently between five and ten requests are handled annually by the current contractor. It will be for the contractor to set up and manage this service independently of the Department (i.e. under separate contractual arrangements). The Provider will be free to set their own charges in negotiation with customers.
- 9.19 The Provider will need to put in place careful safeguards to ensure only data already in the public domain are used for such a service and that there is no release of data prior to publication, in line with protocols under the Code of Practice for Official Statistics.

Annexes - none

## 10. PRICE SCHEDULES, INCENTIVES and INVOICING

- 10.1 The pricing schedule, Schedule 2, provides the break down of costs and resources by financial year for running the survey for 3 successive years (from April 2016 to March 2019) plus all associated deliveries.
- 10.2 The pricing schedule, Schedule 2, identifies the number of days to be committed for each task for each of the key members of the Provider's team(s).

### Basis for costing

- 10.3 The contract is a **fixed price** for delivery of all the agreed outputs to the time scale, budget and standard specified. One component of the project, the 'ad-hoc' analysis service described in Section 9 will however be regarded as a call-off arrangement and the Department will only be liable for actual costs incurred. See below (Ad Hoc Analysis).
- 10.4 The initial date after which elements of the price may increase or decrease is 1st April 2017. Thereafter prices may be varied every 12 months. The prices will be varied in line with the Office of National Statistics Average Weekly Earnings Index (regular pay) payments excluding bonuses, Whole Economy. The variation applied will be based on the average percentage change of the index from the previous year.

### Ad hoc Analysis

- 10.5 The Department has set out in Section 9 the proposal for a call-off arrangement for the commissioning of ad hoc work over the lifetime of the contract. Costs to cover this work should be included in the overall budget for the contract but will only be paid for on a take-up basis. The Provider will need to put in place flexible working arrangements such that suitably qualified and experienced named staff are available to meet these demands without unduly jeopardising work on the core work requirements. It is, however, accepted that the additional capacity over and above the core requirement may, but only with express agreement of the Department, have to some extent take the form of diverted resources from other work areas covered by this specification but the Department would wish to limit this as far as possible.

### Running the Survey in Years 2019/20 and 2020/2021

- 10.6 The Department requires the running of the survey for the years 2019/20 and 2020/21 to be an optional element of this contract. It is proposed that agreement is reached between the Provider and the Department during 2018 about extending the work into the fourth and fifth year by which time outputs from the first year of the survey will have been received and validated.

- 10.7 N/A

### Invoicing

- 10.8 The Department will pay monthly invoices in arrears in order to monitor the budget closely and to ensure an acceptable cash flow through the life of the project.
- 10.9 As a minimum requirement, it is expected that one overall invoice will be provided per month, along with a detailed breakdown of spend against key tasks by each organisation using the headings set out in the price schedules. Any work under the call-off component should be itemised separately showing number of hours spent and by whom.

- 10.10 As indicated in the Pricing Schedule, service components viewed as continuous will be invoiced on a 1/12 basis each month, other items should be invoiced as work is complete and accepted.
- 10.11 A invoicing schedule for variable payments will be delivered by the Provider for agreement by the Authority

**Annexes** - none

**BY SIGNING AND RETURNING THIS ORDER FORM THE PROVIDER AGREES** to enter a legally binding contract with the Authority to provide the Service specified in this Order Form together with, where completed and applicable, the mini-competition order (additional requirements) set out in section 2 of this Order Form. Incorporating the rights and obligations in the Call-Off Terms and Conditions set out in the Framework Agreement entered into by the Provider and UK SBS and any subsequent signed variations to the terms and conditions.

For and on behalf of the Provider: -

Name and Title	
Signature	
Date	

For and on behalf of the Authority-

Name and Title	
Signature	
Date	

