



Ministry of Housing,
Communities &
Local Government



English Housing Survey

Quality Report, 2019-20



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Introduction and summary

1. This Quality Report provides a brief summary of the key quality related matters that users of the English Housing Survey (EHS) need to be aware. The report begins with the purpose and background of the EHS, a brief introduction to the methodology, and a summary of work undertaken in 2019-20 to improve the quality of EHS statistics. A more detailed discussion of the survey methodology and how it affects quality is provided in the EHS Technical Report, which includes chapters on sampling, questionnaire, fieldwork, response rates, data processing, weighting and standard errors.
2. This report covers all dimensions of quality defined by the Eurostat's European Statistics Code of Practice as recommended by the Government Statistics Service (GSS) Quality Centre¹ and aligns with the core objective of the National Data Strategy² and the 2018 to 2020 Analysis Function Strategy³.
 - Relevance – The report discusses work undertaken to ensure that the EHS meets user needs, including details of the user consultation process for the 2019-20 reporting strategy and the 2021-22 questionnaire.
 - Accuracy and reliability – This report also outlines the main sources of bias and other errors in a sample survey of this type, which affects the degree of closeness between EHS estimates and the true population value.
 - Timeliness and punctuality – In addition, this report provides information on headline and all other data releases from the EHS and considers the trade-off between timeliness and the other quality dimensions.
 - Accessibility and clarity – The different methods available for accessing EHS outputs is described. That includes reports, tables and datasets released via the Open Government Licence on gov.uk as well as the End User Licence, Special Licence and Secure Access of the UK Data Service.
 - Coherence and comparability – The final section explains how the EHS monitors and reports on coherence and comparability of survey over time, harmonisation

¹ <https://gss.civilservice.gov.uk/policy-store/quality-statistics-in-government/#the-ess-dimensions-of-quality>.

² <https://www.gov.uk/guidance/national-data-strategy>

³ <https://www.gov.uk/government/publications/the-analysis-function-strategy>

of the survey with GSS standards, reporting of geographic variables, and information on similar housing surveys carried out by devolved administrations.

National Statistics status

3. The UK Statistics Authority designated the official outputs of the EHS as National Statistics in April 2011 following an assessment by the Authority in September 2010⁴. The assessment was made in accordance with the Statistics and Registration Service Act 2007 and signified compliance with the Code of Practice for Official Statistics. Designation means that the official outputs of the EHS meet the highest standards of trustworthiness, quality and public value as set out in the Code of Practice. In short, the official outputs of the EHS: meet identified user needs; are well explained and readily accessible; are produced according to sound methods and are managed impartially and objectively in the public interest.
4. Once statistics have been designated as National Statistics, it is a statutory requirement that the Code of Practice for Statistics is observed. It is the responsibility of statisticians at the Ministry of Housing Communities and Local Government (MHCLG) to ensure that the EHS maintains compliance with those standards.
5. Since the designation of the official outputs of the EHS as National Statistics in April 2011, MHCLG has complied with the Code of Practice for Statistics, and has also made the following improvements:
 - Production and publication of an annual Quality Report to inform users about the quality of the statistics (this report).
 - Production and publication of an annual Technical Report containing detailed information about survey methodology.
 - Revised the publication timetable to improve the timeliness of the release of the headline and detailed annual reports.
 - Made the annual reports more user-friendly by releasing a number of short thematic reports tied to policy interests instead of two long generic reports.
 - Improved the presentation of the key findings by providing more visual and bitesize information, for example, releasing infographics from 2015-16 and factsheets from 2018-19.

⁴ https://uksa.statisticsauthority.gov.uk/wp-content/uploads/2015/12/images-assessment-report-57-statistics-from-the-english-housing-survey_tcm97-34184.pdf

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- Added the name of the responsible analyst in all reports.
 - Collaborated regularly with the housing survey teams in Wales, Northern Ireland and Scotland to: share best practice; to present UK-wide findings (for example at the 2018 conference of the Royal Statistical Society); and to improve the coherence, harmonisation and comparability of data and findings across the UK.
6. Going forward, MHCLG is considering adopting additional best practice initiatives. Those include releasing EHS outputs in HTML format in order to make them more accessible and reviewing the administrative data sources used on the EHS against the Office for Statistics Regulation's Regulatory Standard for the quality assurance of administrative data⁵.
 7. The review by the UK Statistics Authority in September 2010 was the last time the EHS underwent a full assessment against the Code of Practice for Statistics. The Office for Statistics Regulation is carrying out a compliance check on the EHS at the time of writing.

The primary purpose of the English Housing Survey

8. The English Housing Survey (EHS) is MHCLG's flagship survey. It is designed to collect information about people's housing circumstances and the energy efficiency and condition of the housing stock in England. It covers all housing tenures and provides valuable information and evidence to inform the development and monitoring of MHCLG's housing policies.
9. The Department for Business, Energy and Industrial Strategy (BEIS) makes an annual financial contribution to the EHS and uses the data to measure the effectiveness of its policies designed to improve the energy efficiency of English homes and to monitor the statutory fuel poverty targets.

A brief history of the English Housing Survey

10. The EHS is one of the longest standing surveys in government, with 2017 marking the 50th anniversary of the first survey in 1967. The initial one page survey form used in 1967 was the first in the world to set benchmark for housing conditions based on inspections of a random sample of the homes across whole nations. At

⁵ <https://osr.statisticsauthority.gov.uk/guidance/administrative-data-and-official-statistics/>

that time, the survey covered England and Wales⁶. Data collection was carried out by trained public sector personnel including environmental health professionals.

11. The EHS, as we know it now, was launched in April 2008 bringing together two former housing surveys – the Survey of English Housing and the English House Condition Survey.
12. The English House Condition Survey started in 1976 and was carried out every five years until 2001. From 2003 onwards, the English House Condition Survey operated continuously until it merged with the Survey for English Housing to form the EHS. Prior to the English House Condition Survey, a Regional Housing Survey in 1967 and Housing Condition Survey in 1971 included a physical survey similar to that in the English House Conditions Survey. The physical survey from 1986 was carried out by professional chartered surveyors, architects or environmental health officers. The English House Condition Survey reports are available on The National Archives website⁷.
13. The Survey of English Housing was a continuous household survey. It collected information from nearly 20,000 households each year about the housing characteristics of households and people's attitudes to housing and related matters. It started in 1993-94 and operated continuously until 2007-08. The Survey of English Housing reports are available on The National Archives website⁸.
14. The first four English Housing Surveys (2008-09 to 2011-12) were conducted by the Office for National Statistics, MMBL-CADS and the Building Research Establishment (BRE). A consortium consisting of the National Centre for Social Research (NatCen), CA Design Services (CADS), BRE and Bryson Purdon Social Research carried out the 2012-13 to 2015-16 surveys. In 2015, MHCLG awarded a contract to carry out the EHS to NatCen in consortium with CADS and BRE. That contract covers the survey years 2016-17 to 2018-19 and has a provision to be extended to cover the 2019-20 and 2020-21 surveys. MHCLG took up that provision to extend the contract in 2018.

⁶ A report to mark the 50th anniversary of the EHS, which examines how the English housing stock changed between 1967 and 2017 can be found here: <https://www.gov.uk/government/publications/50-years-of-the-english-housing-survey>

⁷ <https://webarchive.nationalarchives.gov.uk/20121102183508/http://www.communities.gov.uk/housing/housingresearch/housingsurveys/englishhousecondition/>

⁸ <http://webarchive.nationalarchives.gov.uk/20121108165934/http://www.communities.gov.uk/housing/housingresearch/housingsurveys/surveyofenglishhousing/>

Overview of methodology

15. The population or key units of interest of the EHS are residential households and dwellings in England. A dwelling is defined as a unit of accommodation where all the rooms and amenities are for the exclusive use of the household(s) occupying them. The EHS collects information about the respondents' main home so it defines a household as one person or a group of people (not necessarily related) who have the accommodation as their only or main residence, and (for a group) share cooking facilities and share a living room or sitting room or dining area. This definition is slightly different from the definition used in the 2011 Census⁹.
16. The EHS has two components, an interview survey undertaken with approximately 13,300 households each year and a physical inspection of a random sample of the dwellings of about 6,000 of the households included in the interview survey. The physical inspection also includes a random sample of about 200 dwellings in the sample found to be vacant at the time of the interview survey. The interview surveys are conducted by trained interviewers and the physical surveys are carried out by qualified surveyors. Data collection on the EHS operates continuously over all four quarters of the year.
17. The data collected from the 13,300 households selected for the interview surveys are analysed on an annual, financial year, basis. The data from the physical survey are analysed on a two year rolling basis. The results of the physical survey presented for '2019' are based on fieldwork conducted between April 2018 and March 2020.
18. The sample of the EHS is representative of the population of England. For the survey years 2008-09 to 2011-12, the sample was selected using a simple random sample design. The sample design changed in 2012-13 so that the sample is currently unclustered over two years of the survey, but is clustered over a single year. The advantage of this approach is that it reduces the fieldwork area to half the country in any one year so interviewer and surveyor travel time and costs are significantly reduced.

⁹ Unlike the EHS, the 2011 Census' definition of a household did not require household members to have the accommodation as their only or main residence. So the 2011 Census defined a household as one person living alone, or a group of people (not necessarily related) **living at the same address** who shared cooking facilities and shared a living room or sitting room or dining area.

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19. The EHS sample is stratified by geographic region, Census-based data on tenure and households with a Household Reference Person who worked in non-manual occupations, and subsampled by tenure (identified using Experian's Residata)¹⁰.
20. To produce unbiased estimates for the population of households and dwellings in England, a process of weighting is carried out. This includes:
- Scaling up to the total number of addresses in the sample frame;
 - Adjusting for selection probabilities where there is not a one-to-one relationship between the address and dwelling or the dwelling and household;
 - Modelling to produce response weights adjusting for non-response bias;
 - Calculating a design factor to adjust for tenure subsampling; and
 - Calibration to control totals.
21. Since the 2013-14 EHS, weights have been calibrated to one set of control totals for households/dwellings using the MHCLG dwelling stock estimates. Before that, the calibration was to two sets of control totals for households by age, sex and tenure from the Labour Force Survey and dwelling control totals from MHCLG's dwelling stock estimates. Details on the weighting methodologies applied before and after 2013-14 are available on Gov.uk¹¹.
22. A smoothing procedure was introduced to the weighting process from the 2015-16 EHS. The smoothed weights were used for producing the published findings of the 2015-16 and subsequent surveys in the series. The dwelling-to-household ratios used to derive the weights were smoothed by taking the average ratio across two years of the EHS (2018-19 and 2019-20 for the 2019-20 EHS weights). The smoothing procedure is described in more detail in the technical report of the 2015-16 EHS¹².

¹⁰ Experian possess a database that contains information obtained from a number of sources including insurance companies, Census, etc. referred to as Residata. It is from this that information is taken on predominant tenure within a postcode as well as other information. The matching of the EHS sample to Residata is carried out by BRE.

¹¹ <https://www.gov.uk/government/publications/english-housing-survey-weighting-methodology-introduced-in-2013-to-2014>

¹² <https://www.gov.uk/government/publications/english-housing-survey-2015-to-2016-technical-report>

Section 1

Relevance

The degree to which statistical outputs meet users' needs¹³.

Annual user consultation

- 1.1. Each year, the EHS team conducts a review of forthcoming data collection and reporting priorities with the EHS User Group to ensure that the EHS meets user requirements. The User Group comprises over 30 policy officials and analysts from the core government departments that use the EHS (MHCLG, BEIS and the Home Office). Membership of the EHS User Group is reviewed and refreshed annually to ensure that all relevant policy teams have representation. The group is chaired by the Head of the EHS. The survey's Senior Reporting Officer is consulted before any major change is implemented.
- 1.2. The annual review has three main objectives.
 - To review the data collected through the interview survey questionnaire to ensure that policy requirements are being met.
 - To review the modelled data to ensure that the concepts measured and standards applied are still appropriate to what users want to measure.
 - To review the outputs published, in particular the annual reports and the live tables.
- 1.3. The 2019 annual user consultation was slightly different to previous years'. Given the speed at which policy priorities were changing in the latter half of 2019 due to a General Election, the EHS team, with the agreement of the EHS User Group, decided against developing brand new questions to collect data which may no longer be relevant for policy development when they are available in 2022. Instead, the data collection review in 2019 focused on improving the core questions in both the interview and physical surveys to ensure that the EHS will provide better quality data for policy making going forward.
- 1.4. The review of outputs and modelled data took place as in previous years. The EHS team organised a number of meetings with EHS policy and analytical users across MHCLG and BEIS to review the existing outputs and modelled data. On

¹³ <https://gss.civilservice.gov.uk/policy-store/quality-statistics-in-government/#the-ess-dimensions-of-quality>

the basis of those discussions, the EHS team devised the 2019-20 reporting strategy.

Reporting strategy for 2019-20 EHS

1.5. The findings from the 2019-20 EHS will be published in a series of short thematic reports and factsheets in July 2021. The reports will have about 20 pages of substantive contents while the factsheets will contain two sides of charts and infographics. The topics covered will include:

- Home ownership;
- Private rented sector;
- Social rented sector;
- Energy efficiency;
- Fire safety and feeling safe;
- Adaptations made to the home; and
- Well-being and loneliness.

The contents of the reports are designed to support a range of government priorities, particularly, housing policy, including work associated with the 2020 Social Housing White Paper (the Charter for Social Housing Residents); the Building Safety Programme; Disability Facilities Grant; decarbonisation; and initiatives for engendering well-being and combating loneliness.

1.6. The reporting strategy was signed off by the EHS User Group. The reporting format was developed in 2014-15 as a direct response to feedback from survey users who felt that the EHS reports produced before 2014-15 were too lengthy and technical. The current approach also fits well with guidance produced by the Government Statistical Service Good Practice Team and it is our view that it makes the EHS data more accessible to a wider audience.

1.7. In addition to the annual thematic reports, a series of over 100 data tables are published on gov.uk each year. These live tables are a rich source of trend data as they have been published each year since 2008-09.

1.8. The 2019-20 thematic reports supplement information provided in the headline report which was produced by the EHS team and was published in December 2020. While the user consultation helped identify priorities for the headline report, the content of the headline report does not change much year on year and the EHS team does not consult directly on its content.

Section 2

Accuracy and reliability

The degree of closeness between an estimate and the true value¹⁴.

- 2.1 This section summarises the steps taken to quality assure the EHS data and the main sources of bias and other errors that affect a sample survey of this type. The main sources of error are sampling error and non-sampling error, which includes coverage error, non-response error, measurement error, processing error and model assumption error. While it is not possible to measure all sources of error, quantitative estimates have been produced where possible and are published in the Technical Report.

Sampling error

Sampling error is the error that arises because the estimate is based on a sample survey rather than a full census of the population.

- 2.2 The results obtained for any single sample may, by chance, differ from the true values for the population but the difference would be expected to average to zero over a number of repeats of the survey. The amount of variation depends on the size of the sample and the sample design and weighting method.
- 2.3 Although the estimates produced from a sample survey will rarely be identical to the population value, statistical theory allows us to measure the accuracy of any survey result. Standard errors can be estimated from the results obtained for the sample, and these allow calculation of confidence intervals which give an indication of the range in which the true population value is likely to fall.
- 2.4 A measure of the impact of the variation introduced by the sample design and the weighting is the design factor (deft). This is evaluated relative to the error that would have been produced had the survey been carried out using a simple random sample. A deft greater than one shows that the design and weighting have increased the variability of the estimate and increased the measure of the standard error relative to simple random sample design.

¹⁴ <https://gss.civilservice.gov.uk/policy-store/quality-statistics-in-government/#the-ess-dimensions-of-quality>

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- 2.5 Sampling error is discussed in more detail in Chapter 7 of the EHS technical report. That chapter includes examples of standard errors and confidence intervals calculated using the appropriate design factors.

Coverage error

Coverage error arises from failure to cover all members of the population being studied adequately

- 2.6 The EHS sample is drawn from the Postcode Address File (PAF), a list of addresses maintained by the Post Office. That source provides good coverage of the population of interest, i.e. residential households and dwellings in England. The achieved sample of dwellings does not include any new dwellings built since the creation dates of PAF files from which the sample taken. The weights are adjusted using the number of new dwellings built between the PAF date and the reference date for the weighting to account for this error in coverage.

Measurement error

Measurement error may arise due to inaccuracies in individual measurements of survey variables because of the inherent difficulties of observing, identifying and recording what has been observed

- 2.7 Measurement error may occur randomly, or may reflect a problem experienced by most or all interviewers or surveyors. The EHS has key mechanisms in place to minimise measurement error focus on the questionnaire and physical survey form development process and interview and surveyor training.
- 2.8 For the interview survey, researchers at NatCen responsible for the interview fieldwork, use in-house expertise in question design and testing to ensure that the questions are understood by respondents in the way intended. In addition, new questions introduced to the survey are reviewed by NatCen and MHCLG after the first quarter of data collection. While full-scale piloting of questions is not routinely undertaken for the EHS, NatCen's Questionnaire Development and Testing Hub reviewed the EHS questions asked of leaseholders in 2017-18 using a method known as cognitive testing. The recommendations of the review were implemented on the EHS from 2018-19¹⁵.

¹⁵ <https://www.gov.uk/government/publications/english-housing-survey-methodology-paper-cognitive-testing-of-leasehold-questions>

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- 2.9 For the physical survey, BRE and CADS who lead on the inspections work together apply expert knowledge of buildings research and housing surveys to minimise inconsistencies in the data collection process.
- 2.10 Assessing the condition of an individual dwelling poses more practical difficulties compared with collecting information about the characteristics of a household. Those difficulties mainly stem from the technical problems in the diagnosis and prognosis of any defects found in the dwelling. Difficulties are found particularly in more subjective assessments such as the state of repair. To assess effects of surveyors making different judgements about the same information, a calibration workbook exercise and a surveyor variability study (SVS) were conducted in 2014-15. The calibration workbook was a desk-based exercise, with surveyors asked to record assessments as they would in the field for a set of examples with descriptions and photographs of a number of dwelling faults. Results from the 2014-15 exercise showed no significant difference overall in the surveyors' assessments. The SVS involved a call-back exercise in which 300 properties were re-surveyed by a second surveyor and results compared with the first surveyor¹⁶. The survey measures with low levels of agreement tended to be found in the topic areas covering external environments and stock condition, and typically required a surveyor's opinion on topics with generally high degrees of variability (e.g. an opinion of the local area or the condition of a property). The annual training sessions for surveyors have been updated to target more the topics identified as having a higher observed level of variability.
- 2.11 In 2019-20, the EHS carried out a Surveyor Quality Study (SQS) to explore measurement errors in the physical survey component of the EHS. The SQS required all surveyors to survey two test properties for which a model answer had been produced by BRE and CADS. The test properties contained dwelling condition features of particular interests to the EHS. The surveyors carried out the work as a component of the practical element of their 2019-20 EHS briefing. The SQS was carried out in place of the SVS because the SQS can provide data on surveyor variance against an ideal or 'model' answer and so is of greater value for driving improvements in data quality compared with the SVS. The report of the SQS is due for publication in early 2021 on the EHS Methodology page of Gov.uk¹⁷.
- 2.12 All new interviewers receive distance learning material and complete a one-day training course in administering the EHS interview before starting fieldwork. All new surveyors receive distance learning material and complete a week long

¹⁶ <https://www.gov.uk/government/publications/english-housing-survey-methodology-paper-findings-from-the-2014-15-surveyor-variability-study>

¹⁷ <https://www.gov.uk/government/collections/english-housing-survey-technical-advice>

residential briefing course before starting work on the survey. Ongoing refresher distance learning via a newsletter and briefing days for interviewers and surveyors are provided as needed to ensure that fieldwork staff are kept up to date with new developments in the EHS.

Processing error

Processing error includes errors in data capture, coding, editing and tabulation of the data as well as in the assignment of weights.

2.13 Processing error can be systematic, for example, an error in the programming syntax that leads to a wrong code being consistently applied in a particular set of circumstances. The EHS has mechanisms in place to ensure accurate data capture and processing to minimise processing error. They include:

- carrying out systematic testing of the Computer Assisted Personal Interviewing (CAPI) program used by interviewers to record interview survey answers;
- conducting extensive tests on the validation systems used in processing physical survey data; and
- testing the syntax for the automated data checking processes.

2.14 While random errors in entering data would, across replications, cancel each other out, such processing error can have an impact on the variance of survey estimates. The key checks put in place to minimise processing errors include:

- minimising data entry errors caused by the interviewer or incorrect answers given by respondents using a number of validation checks built into the CAPI program;
- reviewing addresses containing multiple household or dwellings to ensure selection that the sampling protocol has been followed;
- comparing key variables collected at the household interview with the physical survey; and
- validating data outputs with:
 - checks on case and variable completeness;
 - investigation of outliers;
 - time series comparison;
 - comparison with external data sources; and
 - selective case by case analysis.

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- 2.15 The number of errors that required alterations to raw data is monitored to ensure that quality standard is maintained.

Response rates

Non-response bias may occur if non-respondents differ from respondents. Non-response can lead to an increase in the variance of survey estimates, as non-response will reduce the sample size.

- 2.16 The effect of non-response bias is minimised by steps applied in the weighting process. Valid but non-responding cases are checked to assess if they are typical of those that have responded to the EHS. Where non-response biases were found at any stage of the survey, adjustments were made to the responding cases in the weighting procedures for that stage.
- 2.17 To ensure that an adequate sample size is attained with an acceptable level of variance, a target number of interview surveys are set and an assumption made for non-response rate, from which the size of the required issued sample is calculated. Response rates are continually monitored and interviewers are trained to maximise response rates.
- 2.18 For item non-response, imputation is carried out when creating key derived variables, using either external data sources or sample median from other information collected on the EHS. Addressing non-response through imputation can lead to the appearance of the variance being reduced, as imputed values are usually less extreme than would be observed from sampling alone.
- 2.19 Imputation rates are monitored and reported on through the Quality Monitoring reports. Overall response rates, key item non-response and imputation rates are published in the EHS technical report.

Model assumption error

- 2.20 In October 2012, the Cabinet Secretary and the Head of the Civil Service commissioned a review of the quality assurance of analytical models that inform government policy. The review published a final report in March 2013, setting out results of work to map business critical models and quality assurance in government.¹⁸ The models used in the EHS have been reviewed in light of the recommendations in that report and updated model documentation has been

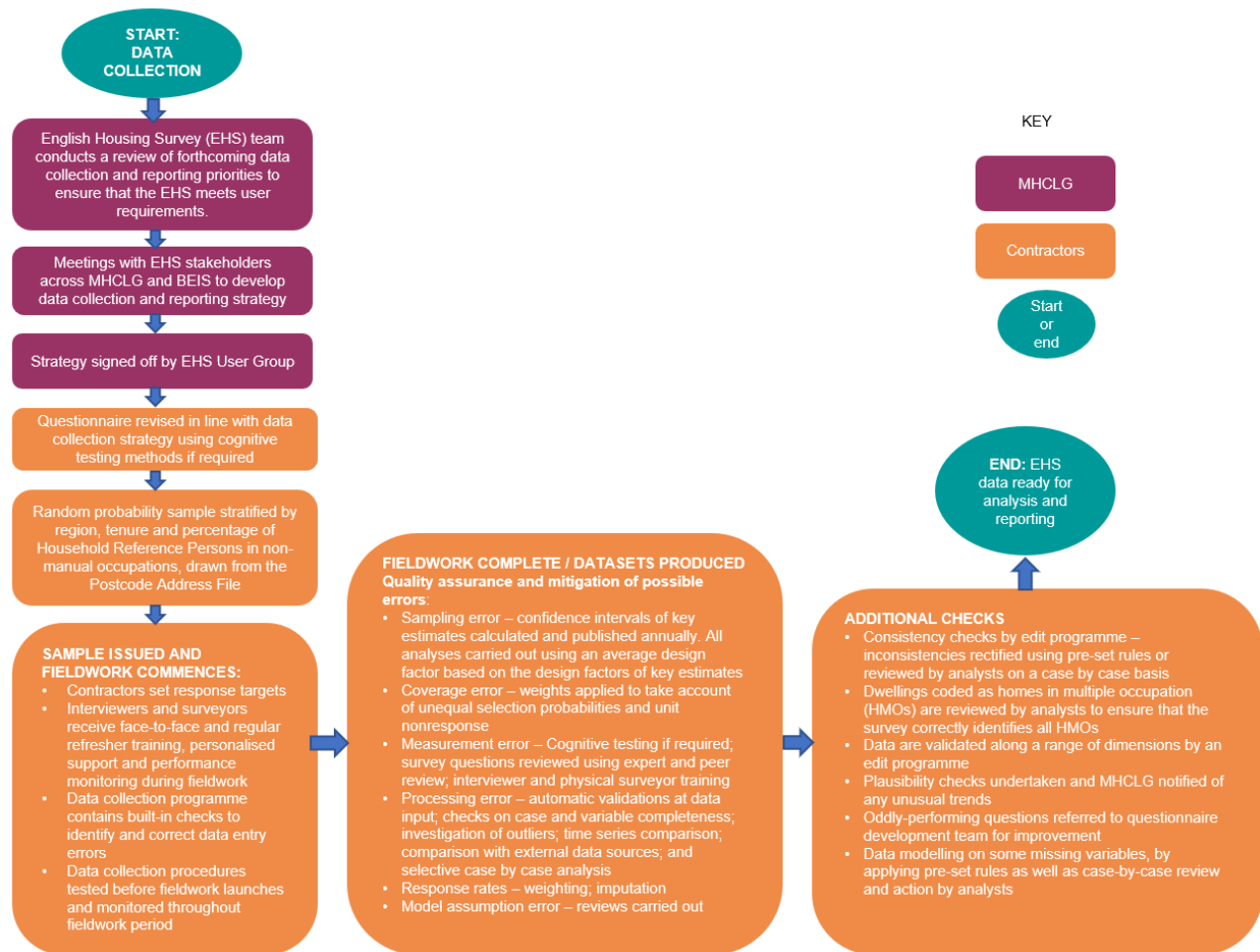
¹⁸https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/206946/review_of_qa_of_govt_analytical_models_final_report_040313.pdf

produced. In particular, the underlying assumptions of the model are now clearly identified, the inputs required and the key outputs of the models are documented, and any changes to the model are recorded. The model documentation is consistent with that used for other models in MHCLG developed as part of a Quality Assurance working group. The model assumptions are discussed further in the EHS technical report.

Quality flow charts

2.21 A summary of the quality assurance processes for both data collection and reporting are provided in the flow charts below:

Quality assurance flowchart: data collection



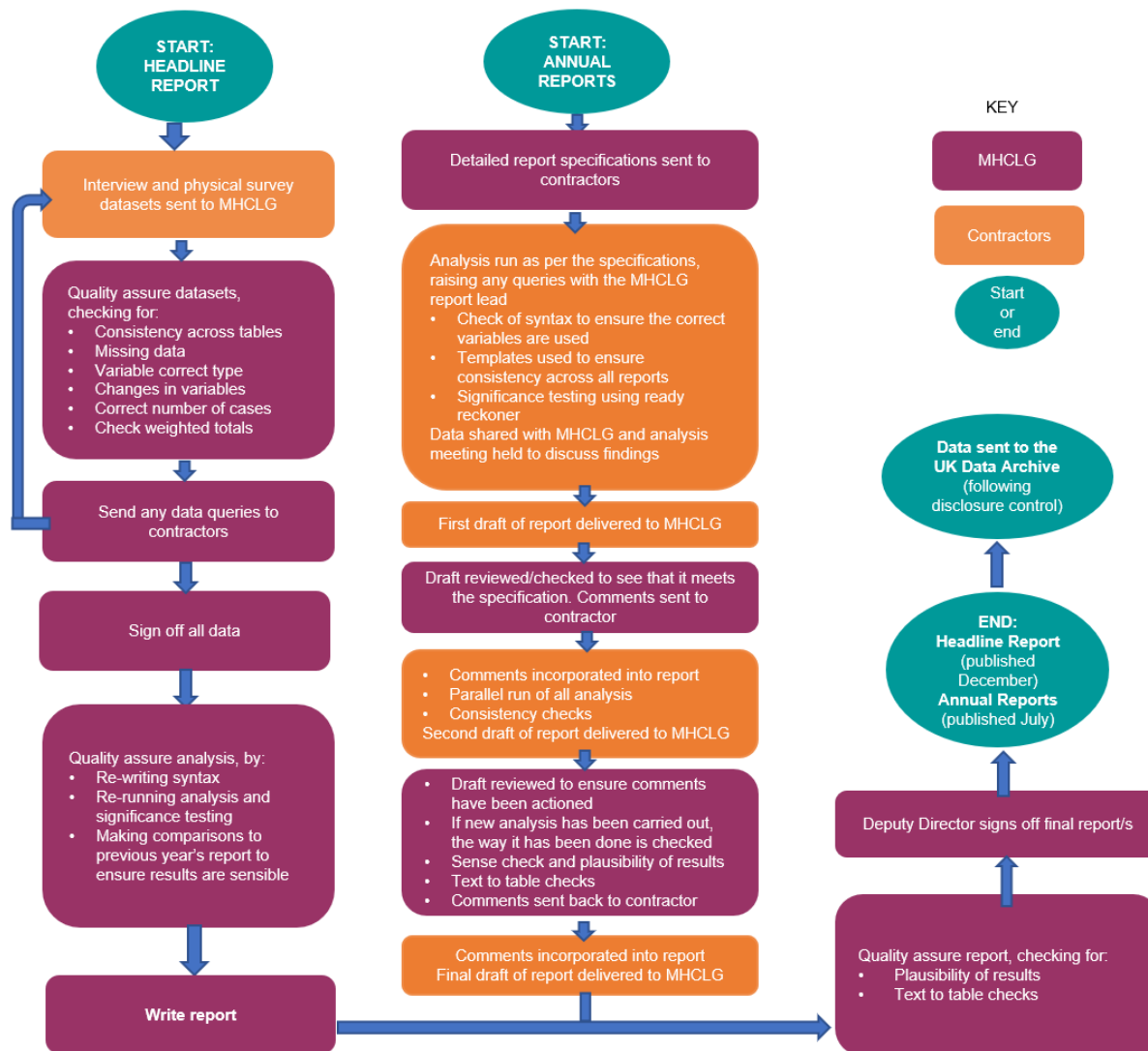
Quality assurance flowchart: data collection (accessible version)

1. English Housing Survey (EHS) team conducts a review of forthcoming data collection and reporting priorities to ensure that the EHS meets user requirements.
2. Meetings with EHS stakeholders across MHCLG and BEIS to develop data collection and reporting strategy
3. Strategy signed off by EHS User Group
4. Questionnaire revised in line with data collection strategy using cognitive testing methods if required
5. Random probability sample stratified by region, tenure and percentage of Household Reference Persons in non-manual occupations, drawn from the Postcode Address File
6. Sample issued and fieldwork commences:
 - Contractors set response targets
 - Interviewers and surveyors receive face-to-face and regular refresher training, personalised support and performance monitoring during fieldwork
 - Data collection programme contains built-in checks to identify and correct data entry errors
 - Data collection procedures tested before fieldwork launches and monitored throughout fieldwork period
7. Fieldwork complete / Datasets produced. Quality assurance and mitigation of possible errors:
 - Sampling error – confidence intervals of key estimates calculated and published annually. All analyses carried out using an average design factor based on the design factors of key estimates
 - Coverage error – weights applied to take account of unequal selection probabilities and unit nonresponse
 - Measurement error – Cognitive testing if required; survey questions reviewed using expert and peer review; interviewer and physical surveyor training
 - Processing error – automatic validations at data input; checks on case and variable completeness; investigation of outliers; time series comparison; comparison with external data sources; and selective case by case analysis
 - Response rates – weighting; imputation
 - Model assumption error – reviews carried out

8. Additional checks:

- Consistency checks by edit programme – inconsistencies rectified using pre-set rules or reviewed by analysts on a case by case basis
- Dwellings coded as homes in multiple occupation (HMOs) are reviewed by analysts to ensure that the survey correctly identifies all HMOs
- Data are validated along a range of dimensions by an edit programme
- Plausibility checks undertaken and MHCLG notified of any unusual trends
- Oddly-performing questions referred to questionnaire development team for improvement
- Data modelling on some missing variables, by applying pre-set rules as well as case-by-case review and action by analysts
- Ready for analysis and reporting

Quality assurance flowchart: reporting



Quality assurance flowchart: reporting (accessible version)

Headline Report

1. Interview and physical survey datasets sent to MHCLG
2. Quality assure datasets, checking for:
 - Consistency across tables
 - Missing data
 - Variable correct type
 - Changes in variables
 - Correct number of cases
 - Check weighted totals
3. Send any data queries to contractors
4. Sign off all data
5. Quality assure analysis, by:
 - Re-writing syntax
 - Re-running analysis and significance testing
 - Making comparisons to previous year's report to ensure results are sensible
6. Write report
7. Quality assure report, checking for:
 - Plausibility of results
 - Text to table checks
8. Deputy Director signs off final report
9. Publication (December)
10. Data sent to the UK Data Archive (following disclosure control)

Annual Report

1. Detailed report specifications sent to contractors
2. Analysis run as per the specifications, raising any queries with the MHCLG report lead
 - Check of syntax to ensure the correct variables are used
 - Templates used to ensure consistency across all reports
 - Significance testing using ready reckoner
 - Data shared with MHCLG and analysis meeting held to discuss findings
3. First draft of report delivered to MHCLG
4. Draft reviewed/checked to see that it meets the specification. Comments sent to contractor
5. Comments incorporated into report
 - Parallel run of all analysis
 - Consistency checks
 - Second draft of report delivered to MHCLG
6. Draft reviewed to ensure comments have been actioned
 - If new analysis has been carried out, the way it has been done is checked
 - Sense check and plausibility of results
 - Text to table checks
 - Comments sent back to contractor
7. Comments incorporated into report
8. Final draft of report delivered to MHCLG
9. Quality assure report, checking for:
 - Plausibility of results
 - Text to table checks
10. Deputy Director signs off final report/s
11. Publication July
12. Data sent to the UK Data Archive (following disclosure control)

Revision policy

- 2.22 The revision policy of the EHS has been developed in accordance with the UK Statistics Authority's Code of Practice for Statistics and the Ministry of Housing, Communities and Local Government Revisions Policy and can be found at: <https://www.gov.uk/government/publications/statistical-notice-dclg-revisions-policy>. It covers two types of revisions:

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- Non-scheduled revisions - where a substantial error has occurred as a result of the compilation, imputation or dissemination process. The headline or annual reports, live tables and other accompanying releases will be updated with a correction notice as soon as possible.
 - Scheduled revisions – To provide timely data to users, key headline figures from the EHS are published in a headline report, usually within 10 months of the end of each survey year. A further series of thematic reports and/or factsheets are published in the year after the end of each survey year.

Section 3

Timeliness and punctuality

Timeliness refers to the lapse of time between publication and the period to which the data refer. Punctuality refers to the gap between planned and actual publication dates. Whether the outputs are up to date with respect to users' needs¹⁹.

- 3.1 There is a trade-off between timeliness and the other quality dimensions, in particular accuracy, accessibility and clarity. It is important to ensure that the EHS has adequate processes to ensure accuracy of the survey data and produce clear publication tables, and apply appropriate disclosure control to the public datasets released.
- 3.2 To provide timely data to users, key headline figures from the EHS are published in a headline report, usually within 10 months of the end of the survey year. As part of MHCLG's drive to improve the timeliness of the EHS, the publication of the 2019-20 EHS headline report was brought forward by a month to December 2020.
- 3.3 A further series of thematic reports and factsheets on the 2019-20 EHS will be published in July 2021. The topics covered in the reports and factsheets reflect current policy interests and will include: Home ownership; the private rented sector; the social rented sector; energy efficiency; fire safety and feeling safe; adaptations to the home; and well-being and loneliness.
- 3.4 The publication date for the headline and annual reports is pre-announced on the official statistics release calendar²⁰.
- 3.5 The EHS is a key data source for the annual Fuel Poverty Statistics published by BEIS. As specified in the Memorandum of Understanding in Relation to Data Sharing between BEIS and MHCLG, the two departments are to coordinate the publication of the EHS and Fuel Poverty Statistics. BEIS will publish the Fuel Poverty Statistics based on the combined 2018-19 and 2019-20 EHS in spring 2020 after the release of the 2019-20 EHS headline report.
- 3.6 In accordance with Pre-release Access to Official Statistics Order 2008, ministers and eligible staff are given pre-release access to EHS statistics 24 hours before

¹⁹ <https://gss.civilservice.gov.uk/policy-store/quality-statistics-in-government/#the-ess-dimensions-of-quality>

²⁰ <https://www.gov.uk/government/statistics/announcements>

release. The EHS pre-release access list is published on the MHCLG statistics web page²¹.

- 3.7 In addition to releasing substantial findings from the EHS, MHCLG deposits the data of the EHS at the UK Data Archive for researchers to carry out secondary analyses. The data of the EHS are due to be delivered to the Data Archive in the in the second half of 2021.
- 3.8 MHCLG keeps the data production and publication schedule of the EHS under review and takes into account user needs when considering the timeliness of future data releases.

²¹ <https://www.gov.uk/government/organisations/departments-for-communities-and-local-government/about/statistics>

Section 4

Accessibility and clarity

Accessibility is the ease with which users are able to access the data, also reflecting the format in which the data are available and the availability of supporting information. Clarity refers to the quality and sufficiency of the release details, illustrations and accompanying advice²².

- 4.1 MHCLG releases the outputs of the EHS in a range of formats via a number of channels.

GOV.UK

- 4.2 Reports and live tables containing a wide range of EHS statistics as well as documentation on the EHS are available from the EHS webpages which are accessible from the MHCLG statistics launch page²³. The table below shows the total number of hits and unique users on selected EHS webpages or documents for calendar year 2020.

Page	Page views	Unique page views
https://www.gov.uk/government/collections/english-housing-survey-annual-reports-and-live-table	23,353	14,723
reporthttps://www.gov.uk/government/statistics/english-housing-survey-2018-to-2019-headline-report	8,915	6,794
https://www.gov.uk/government/publications/english-housing-survey-2018-to-2019-questionnaire-and-physical-survey-form	1,076	792
https://www.gov.uk/guidance/english-housing-survey-guidance-and-methodology	997	777

- 4.3 Between April 2019 and end of March 2020 the EHS team received a large number of requests for advice/information about the EHS from other government departments and outside the government as well as for ad-hoc analysis by

²² <https://gss.civilservice.gov.uk/policy-store/quality-statistics-in-government/#the-ess-dimensions-of-quality>

²³ <https://www.gov.uk/government/organisations/department-for-communities-and-local-government/about/statistics>

MHCLG colleagues. The team also responded to a large number of Parliamentary Questions.

UK Data Archive

- 4.4 The anonymised EHS datasets are released every year via the UK Data Service of the UK Data Archive²⁴. Checks are undertaken on the archived datasets to avoid the release of disclosive information. Any potentially disclosive data items such as free text and string variables are removed from the datasets and only high level statistical region geographic identifiers are included. From the release of the 2014-15 data, only simplified versions of the derived variables datasets are available under the End User Licence to minimise the risk of data disclosure. More detailed data are available only as Special Licence datasets. The Special Licence datasets include the detailed 'raw' interview and 'raw' physical survey files and extended versions of the derived datasets. The lowest geography in the End User and Special Licence datasets is region. A list of the general, interview and physical derived variables released under the End User and Special Licences is available in Chapter 5 of the EHS technical report.
- 4.5 The decision to release the datasets under Special Licence was taken to ensure that the EHS complies with the Government Statistical Service guidance contained in GSS/GSR Disclosure Control Guidance for Microdata Produced from Social Surveys²⁵. The contents and the level of disclosure control applied to the 'new' Special Licence datasets is similar to what had been released under the End User Licence up to and including 2013-14. For more information on Special Licence datasets, see <https://www.ukdataservice.ac.uk/get-data/how-to-access/conditions/special-licence>.
- 4.6 To enhance the analytical potential of the EHS, the postcode and the Lower Layer Super Output Area code of the households that have taken part in the EHS are released through the Secure Data Service (SDS) of the UK Data Archive to enable researchers to attach on additional data that describe the respondents' local area. The SDS provides access to data that are too detailed, sensitive or confidential to be made available under the standard End User or Special Licences. Researchers accessing data released by the SDS have to be accredited and to have undergone special training on data security and disclosure. They also have to apply to MHCLG for access the EHS data on a project by project basis. Researcher accessing the SDS data cannot download

²⁴ <http://ukdataservice.ac.uk/>

²⁵ Published October 2014, available from: <http://www.ons.gov.uk/methodology/methodologytopicsandstatisticalconcepts/disclosurecontrol/policyforsocialsurveymicrodata>

the data but have to access them remotely from their institutional desktop or in the Safe Centre at the University of Essex. In addition, outputs of all completed analyses have to be reviewed by the SDS to ensure that no individual respondents can be identified before they are released to the researcher for publication.

- 4.7 EHS datasets are available in SPSS, Stata or tab delimited formats. Due to limited demand, data are not routinely made available in SAS or R, but data in SPSS format can be imported into some versions of SAS or R.

Open data standards

- 4.8 The data published on the EHS pages of GOV.UK are subject to rights detailed in the Open Government Licence v2.0, as specified on the MHCLG statistics summary page²⁶. The data are currently published in pdf format and Excel.
- 4.9 The more disclosive of the EHS datasets released through the UK Data Service dictate a more restrictive licence than the Open Government Licence. As discussed above, EHS datasets are released on an End User or a Special Licence and a dataset of postcodes and Lower Layer Super Output Area identifiers is released by the Secure Data Service of the UK Data Archive. The datasets from the UK Data Service are available in tab-delimited format (meeting Level 3 of the Scheme, namely, data made available in an open, non-proprietary format).
- 4.10 The MHCLG Linked Open Data Communities is an initiative launched to improve the accessibility of datasets held by the Department.²⁷ Data released through the Linked Open Data Communities meet Level 5 of the Five Star Scheme (i.e. linked data in multiple machine-readable formats including JSON, RDF, Turtle and N-triples, and a SPARQL 1.1 endpoint). The EHS is not currently included in the sets of data on Open Data Communities, but will be considered as the site is expanded to publish new data.

English Housing Survey data security strategy

- 4.11 All respondents taking part in the EHS are given an assurance by MHCLG and its contractors that the information they provide will be handled in the strictest confidence as directed by the Code of Practice for Statistics, the Data Protection Act and General Data Protection Regulation. MHCLG undertakes to ensure that

²⁶ <http://www.nationalarchives.gov.uk/doc/open-government-licence/version/2/>

²⁷ <http://opendatacommunities.org/>

the survey information is used to produce anonymous statistics for decision making in government and for genuine research purposes only. The steps taken to ensure respondent anonymity while still maximising the utility of the statistics for users are published on the EHS pages on Gov.uk²⁸.

²⁸ <https://www.gov.uk/government/publications/english-housing-survey-data-security-strategy-and-arrangements>

Section 5

Coherence and comparability

The degree to which data can be compared over time and domain (for example geographic level). The degree to which data that refer to the same topic but are derived from different sources or methods, are similar²⁹

- 5.1 Following user feedback, the EHS annual reports have included more findings on long-term trends and information on changes in definitions over time in the English House Conditions Survey, Survey of English Housing and EHS. Variable naming has been retained from English House Conditions Survey and Survey of English Housing variables where there has been no significant change to the data collected.
- 5.2 MHCLG routinely compares EHS data outputs with comparable data sources on similar topics. Inconsistencies where identified are flagged up in the reports.
- 5.3 The EHS team reviewed and changed the weighting methodology in 2013-14. The new weighting approach may have an impact on the coherence with other available data sources on households and dwelling stock and on the comparability of the EHS data over time.

Devolved administration data sources

- 5.4 Scotland, Northern Ireland and Wales conduct their own housing surveys. The EHS Team works closely with the research team of those surveys to share best practice.
 - **Scottish House Condition Survey** – the largest single housing research project in Scotland, and the only national survey to look at the physical condition of Scotland's homes as well as the experiences of householders. Since 2012, the survey has been an integrated component of the Scottish Household Survey³⁰.
 - **Northern Ireland House Condition Survey** – provides a comprehensive picture of the dwelling stock, including condition and energy efficiency, and

²⁹ <https://gss.civilservice.gov.uk/policy-store/quality-statistics-in-government/#the-ess-dimensions-of-quality>

³⁰ <http://www.scotland.gov.uk/Topics/Statistics/SHCS>

examine the association between dwelling conditions and the social and economic circumstances of households.³¹

- **Welsh Housing Conditions Survey** – is very similar to the EHS and the housing surveys in Scotland and Northern Ireland and is run on an ad-hoc basis. The most recent Welsh Housing Conditions Survey took place in 2017-18 using a sample drawn from eligible households in the National Survey for Wales 2017-18³².

EHS data for sub-national geographies

- 5.5 MHCLG receive frequent queries on the availability of EHS data for sub-national geographies, such as at former Government Office Region (GOR), local authority or Lower Layer Super Output Areas (LSOA) level. The EHS datasets available through the End User and Special Licences from the UK Data Service provide geographical identifier for statistical region (England divided into nine areas) to allow users to create their own regional statistics.
- 5.6 Due to the relatively small sample size at local authority and LSOA level, the EHS is not designed to be representative at local authority or a lower level of geography. EHS data cannot, therefore, be used for analysis below regional level. MHCLG has concerns about the potential disclosure of individual respondents if EHS datasets containing lower geography variables were released with no restrictions. Restricted access to the lower geography variables is made available only via the Secure Data Service of the UK Data Archive for users to link the EHS to other datasets for analyses designed to produce aggregated national or regional level findings (see Accessibility section).

Harmonisation of statistics inputs and outputs

- 5.7 A cross-governmental programme of work aimed at standardising statistical inputs and outputs used in the production of National Statistics is currently underway. This is known as harmonisation. The Government Statistical Service published a Harmonisation Strategy in 2019³³. Its aim is to make it easier for users to draw clearer and more robust comparisons between data sources. The EHS adopts harmonised questions where possible and the EHS is a member of the Harmonisation Champions Network for Housing. That network is one of the

³¹ <https://www.nihe.gov.uk/Working-With-Us/Research/House-Condition-Survey>

³² <https://gov.wales/welsh-housing-conditions-survey>

³³ <https://gss.civilservice.gov.uk/policy-store/government-statistical-service-gss-harmonisation-strategy/>

groups supporting the statistical Heads of Profession and the Government Statistical Service Harmonisation Team.

Sources for further information or advice on the EHS

- Headline report
<https://www.gov.uk/government/collections/english-housing-survey>
- Annual reports
<https://www.gov.uk/government/collections/english-housing-survey>
- Technical reports
<https://www.gov.uk/government/collections/english-housing-survey-technical-advice>
- Data security strategy
<https://www.gov.uk/government/publications/english-housing-survey-data-security-strategy-and-arrangements>
- Data sharing agreement
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/939846/BEIS-MHCLG_DataSharing_2020_update_v2_signed.pdf
- Open data standards
<https://www.gov.uk/government/publications/open-data-white-paper-unleashing-the-potential>
- Guidelines for Quality, published by the Government Statistical Service Quality Centre
<https://gss.civilservice.gov.uk/guidances/quality/>
- Official Statistics Release Calendar
<https://www.gov.uk/government/statistics/announcements>
- Code of Practice for Statistics
<https://www.statisticsauthority.gov.uk/code-of-practice/>
- Further information email
ehs@communities.gov.uk

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This document/publication is also available on Gov.uk
<https://www.gov.uk/government/publications/english-housing-survey-quality-report>

If you have any enquiries regarding this document/publication, complete the form at <http://forms.communities.gov.uk/> or write to us at:

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