

ASTDEA4

Undertake energy inspections



Overview

This standard covers the competencies required to inspect property in order to determine the energy performance of property and make recommendations for its improvement. The aim of the inspection is to gather data and information, in accordance with the Reduced Data SAP (RDSAP) methodology, to enable the generation of an Energy Performance Certificate and associated recommendations.

Note that the term 'assessment' is used throughout the standards when referring to the overall process of determining the energy performance of a property, whereas 'inspection' is used only when referring to on-site inspection of the property features.

The standard covers the competencies required to inspect property in accordance with the RDSAP methodology, i.e. the inspection of all aspects of the property that fall within the remit of RDSAP. You are expected to conduct a thorough visual inspection of the property, taking measurements and notes as appropriate and identify factors that affect the energy performance of property. You must draw on your knowledge and experience of property structure and construction, materials performance, space and water heating systems and lighting systems, etc. and understand the detailed requirements of the Energy Performance Certificate and recommendations.

The standard also requires that you maintain complete and accurate records of our findings. You must record information using appropriate methods and ensure that records are legible and complete, providing sufficient evidence to justify your decisions on values recorded and energy efficiency measures made.

ASTDEA4

Undertake energy inspections

Performance criteria

Inspect property to determine energy performance

- You must be able to:*
- P1 ensure that you have the equipment and resources needed for the inspection
 - P2 use equipment correctly and interpret data accurately
 - P3 identify yourself to those present at the property before commencing the inspection, providing evidence of your identity
 - P4 identify any **circumstances** when at the property that prevent you continuing with the inspection and explain the reasons to the customer
 - P5 undertake a methodical visual inspection of all relevant aspects of the property in accordance with the requirements of the Reduced Data SAP (RDSAP) methodology and its conventions
 - P6 identify and record the age and method of construction of the property, the main materials used including the glazing, the space heating, water heating and lighting systems present
 - P7 make accurate observations and measurements which are necessary to provide data for the calculation of an energy performance rating
 - P8 obtain all additional information that is needed about the property especially where this is needed to avoid recording an item as 'unknown'
 - P9 make further investigations where observations are inconsistent with existing evidence and expected findings, identifying the causes of these inconsistencies
 - P10 identify **critical property features**, where incorrect choice of values will be significantly detrimental to accuracy and take appropriate steps to correctly represent these features to arrive at an accurate assessment of the property
 - P11 follow the correct procedures for collecting information to enable the energy efficiency of the property to be determined
 - P12 where possible and appropriate during the inspection, provide basic behavioural advice regarding energy efficiency to occupants and suggest possible sources of further information and advice
 - P13 identify and record any factors that could affect the choice of **energy efficiency measures** for the property, such as **issues that make them unsuitable for the property**, listed building status and interactions between building fabric and building services

Maintain records of inspection findings

- You must be able to:*
- P14 produce and maintain complete, accurate and legible records of your findings, including investigations carried out, values recorded and options considered, to the level of detail required to:
 - P14.1 produce a complete and comprehensive Energy Performance Certificate

ASTDEA4

Undertake energy inspections

- P14.2 justify your decisions on values recorded and energy efficiency measures recorded
- P15 collate **relevant information** as evidence to support the specific decisions made on values chosen and energy efficiency measures considered
- P16 create, maintain and supply when requested records of which energy efficiency measures were considered and rejected with reasons
- P17 keep accurate and traceable records of investigations carried out, values attributed and options considered
- P18 record clearly, if necessary, where and why accurate inspection has not been possible or where data is recorded as 'unknown'
- P19 store your records securely
- P20 catalogue your records methodically
- P21 ensure that records can be accessed readily for future use when called upon
- P22 co-operate promptly with requests for inspection records in relation to monitoring or investigation by your Accrediting Body, or equivalent in the Devolved Administrations

ASTDEA4

Undertake energy inspections

Knowledge and understanding

Inspect property to determine energy performance

You need to know and understand:

- K1 the principles of building structure, services, elements and fabric as relevant to energy performance of property
- K2 what equipment and resources are needed for the inspection and how to use them
- K3 the detailed inspection requirements and conventions that apply to the property as defined by the current RDSAP methodology
- K4 the definitions and conventions that apply to the current RDSAP methodology and the affect of changes over time
- K5 the consequences, for both the rating result and **energy efficiency measures**, of recording an item as 'unknown' or 'as built'
- K6 how to recognise the various characteristics of buildings
- K7 how to identify the space and water heating system(s) and lighting system(s) present at the property
- K8 how to conduct the inspection in a manner which is thorough, methodical and provides an outcome which is consistent with other energy assessors
- K9 how to make accurate observations and take accurate measurements
- K10 how to make further investigations where observations are inconsistent with existing evidence and expected findings and how to identify the causes of these inconsistencies
- K11 the requirements and application of relevant building regulations and other technical standards
- K12 the factors which are relevant to determining the energy performance of a property
- K13 the assumptions that are made in determining energy performance
- K14 the factors that are not deemed to affect the energy performance of the property
- K15 the relative sensitivity of the different factors that affect the energy performance of property and **critical property features** where incorrect choice of values will be significantly detrimental to accuracy
- K16 the outline differences between RDSAP and the Standard Assessment Procedure (SAP) energy assessment methodologies
- K17 how to collate information required to assess the energy performance of property
- K18 the importance of keeping your records legible, complete and accurate
- K19 the purpose behind government procedures for assessing the energy performance of property
- K20 the types of behavioural advice regarding energy efficiency that can be provided to occupants during inspection
- K21 the sources of information and advice about energy performance to which occupants can be referred

ASTDEA4

Undertake energy inspections

K22 the factors that could affect the choice of **energy efficiency measures** for the property, including **issues that make them unsuitable for the property**, interactions between building fabric and building services and listed building status/conservation areas

Maintain records of inspection findings

You need to know and understand:

- K23 the range of methods, formats and conventions for recording information and evidence on the property and its energy performance
- K24 the required range of information and evidence relating to the property and its energy performance as defined by the current RDSAP methodology and its associated guidance and conventions
- K25 the level of detail within your records required to produce a complete and comprehensive Energy Performance Certificate and justify your decisions on the values recorded and **energy efficiency measures**
- K26 the importance of making and maintaining records that are complete, accurate and legible
- K27 the reasons why it is necessary and important to record where and why accurate inspection has not been possible
- K28 the circumstances in which records can include the fact that information is 'unknown' and the evidence required to support this choice
- K29 the importance for storing records securely allowing for future access the purposes for which your records may be used

ASTDEA4

Undertake energy inspections

Additional Information

Scope/range

- 1 **circumstances**
 - 1.1 situations/occupants upon which it would be inappropriate to intrude
 - 1.2 the discovery of unexpected or hazardous conditions or materials
 - 1.3 other potential threats to health and safety
 - 1.4 property unsuitable for assessment with the RDSAP methodology

- 2 **critical property features**
 - 2.1 rooms in the roof
 - 2.2 retrofitted insulation
 - 2.3 unseparated conservatory
 - 2.4 extensions
 - 2.5 wall construction
 - 2.6 primary, secondary and portable heating
 - 2.7 inadequate heating
 - 2.8 age of main property and of any extensions or roof rooms
 - 2.9 low and zero carbon technologies
 - 2.10 any other features that when incorrectly identified will have a significant detrimental affect to rating accuracy

- 3 **energy efficiency measures:**
 - 3.1 all energy performance improvements listed at Appendix T of the current version of SAP
 - 3.2 any other improvements that may be supported by UK Government policy or that of the Devolved Administrations, as listed in relevant legislation or guidance

- 4 **issues that make them unsuitable for the property**
 - 4.1 property situation e.g. subject to extreme weather
 - 4.2 property condition e.g. state of repair of external walls
 - 4.3 inadequate ventilation
 - 4.4 traditional construction
 - 4.5 system built property
 - 4.6 any other features of the property, or its site/location, which might adversely affect the performance of the recommended improvement, or the building's performance after improvement

- 5 **relevant information**
 - 5.1 legible site notes
 - 5.2 clear site sketches (plan, elevation) to give an adequate record of the inspection for audit purposes

ASTDEA4

Undertake energy inspections

- 5.3 clear photographs containing mandated data (e.g. time and date) appropriately staged and annotated where necessary
- 5.4 legibly completed survey forms
- 5.5 records of web searches or other research
- 5.6 any other information you consider necessary to support your decisions
- 5.7 any other information required by Scheme Operating Requirements

ASTDEA4

Undertake energy inspections

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Suite Domestic Energy Assessors, Home Inspectors

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