
Overview

This standard is about conducting inspections of buildings for energy assessments for Operational Ratings, Display Energy Certificates and Advisory Reports for non-dwellings.

The standard includes understanding and safely using the equipment, resources and techniques required to undertake building inspections. It is about identifying, recording and analysing building environmental information, building construction information, building services and controls information, energy supplies and metering information and systems of building occupation, management, maintenance and operation. It is also about identifying opportunities for the installation of Low and Zero Carbon (LZC) technologies.

The production of the Display Energy Certificate and Advisory Report is covered in other standards.

Note that the term 'assessment' is used throughout the standards when referring to the overall process of determining the Asset Rating of a property, or its Operational Rating, whereas 'inspection' is used only when referring to on-site inspection of the property and its features.

The references to customers throughout the standard refer both to internal customers, such as line managers, as well as external customers; for example, individuals who have contracted your services or representatives of external customer organisations.

You must understand and work to the requirements of each devolved nation.

Performance criteria

You must be able to: **Undertake building inspections for energy assessments**

1. confirm the availability of the equipment and resources required to conduct the inspection of non-dwellings for energy assessment
2. use the relevant test and measuring equipment in accordance with the manufacturer's instructions
3. observe and take measurements to provide the required data for the energy assessment of the building, including determining the floor area
4. undertake and record a risk assessment based on the hazards observed around and in the building, taking mitigating actions as required to ensure the safety of the inspector and that of others in and around the building
5. obtain the required additional information about the property and its use
6. undertake further investigations where observations are inconsistent with existing evidence and expected findings
7. produce, maintain and retain records of findings in accordance with the relevant professional requirements and data protection legislation
8. identify circumstances when at the property that prevent you from continuing with the inspection and explain the reasons to the customer

Identify, record and analyse building environmental, construction, building services and controls information

1. use available sources of existing information to identify environmental factors, and to identify and characterise building construction, building services and controls
2. analyse and identify the environmental features that could impact on the building's energy performance
3. use available sources of existing information to identify and characterise the age, geometry, fabric and materials, building elements, construction techniques and building services used in the building
4. use available sources of existing information to identify and characterise the building services and controls used in the

- building and the type and state of maintenance
5. notify the customer of any instances of inadequate maintenance or neglect, which may have implications for energy efficiency or health and safety, giving reasons
 6. undertake a visual, non-invasive, on-site inspection of the fixed building services and controls and to establish relevant sources of energy consumption

Identify, record and analyse energy supplies and metering information

1. use available sources of existing information to identify and locate the energy sources used in the building and the energy metering and measuring devices used
2. undertake a visual, non-invasive, on-site inspection of the building's energy sources to establish or confirm their type, location, storage and energy capacity and distribution systems
3. locate and identify how energy consumption is recorded or metered and determine whether any sub-metering is installed
4. maintain and store records securely in accordance with the relevant data protection legislation

Identify, record and analyse systems of building occupation, management, maintenance and operation

1. use available sources of existing information to identify and locate how the building is occupied, managed, maintained and operated
2. undertake a visual, non-invasive, on-site inspection of the building's energy use to determine how the building is occupied, managed, maintained and operated in practice
3. undertake the inspection to provide a Display Energy Certificate for a subsequent year, observe that a Display Energy Certificate is displayed on-site and record its reference number to allow it to be verified on the Central Register
4. identify suitable locations for the installation of Low and Zero Carbon (LZC) technologies taking into account whether the building is listed or in a conservation area

Knowledge and understanding

You need to know and understand: **Undertake building inspections for energy assessments**

1. the equipment and resources required to undertake the inspection and how to use them
2. the detailed inspection requirements that apply to non-dwellings as defined in the relevant guidance documents and conventions
3. the different sources of information that may be used, including existing drawings, calculations and energy assessment reports from previous inspections
4. how to recognise the various types of building construction, materials, services and fuel supplies from drawings as well as building structures
5. the level of detail required within your records to produce a Display Energy Certificate
6. the importance of keeping electronic and paper records in accordance with the relevant data protection legislation
7. the reasons why it is important to record where and why accurate inspection has not been possible
8. the approved criteria when a Display Energy Certificate may be produced without undertaking a site visit to the building it covers
9. the circumstances in which records can include the fact that information is 'unknown' and the evidence required to support this choice
10. the importance for storing records securely allowing for future access and the purposes for which your records may be used

Identify, record and analyse building environmental information, building construction information and building services and controls information

1. how to analyse environmental features that could impact on the building's energy performance
2. the types of information sources that would assist in identifying and characterising the age, geometry, fabric and materials, building elements, construction techniques and building services
3. the types of information sources that would assist in identifying and characterising the building services and controls and the type

- and state of maintenance
4. how to recognise building services and controls from drawings, specifications and on-site inspections, commissioning records and test results and building logbooks
 5. how to recognise inadequate maintenance or neglect which may have implications for energy efficiency or health and safety
 6. how to undertake a visual, non-invasive, on-site inspection of the fixed building services and controls and to establish relevant sources of energy consumption

Identify, record and analyse energy supplies and metering information

1. the types of information sources relating to the energy sources used in the building and the energy metering and measuring devices used
2. the requirements of industry best practice guidance on energy sources and metering
3. how to undertake a visual, non-invasive, on-site inspection of the building's energy sources to establish or confirm their type, location, storage and energy capacity and distribution systems
4. how to identify different types of metering and energy recording systems including systems for sub-metering

Identify, record and analyse systems of building occupation, management, maintenance and operation

1. the types of information sources relating to how the building is occupied, managed, maintained and operated
2. how to undertake a visual, non-invasive, on-site inspection of the building's energy uses to determine how the building is occupied, managed, maintained and operated in practice
3. the recognised Low and Zero Carbon (LZC) technologies that can be used to improve the energy performance of non-dwellings, and their characteristics
4. how to assess location and site for suitability for LZC technologies

Scope/range

Relevant Information:

- legible site notes
- clear site sketches (plan, elevation) to give an adequate record of the inspection for audit purposes
- clear photographs containing mandated data (e.g. time and date) appropriately staged and annotated where necessary
- legibly completed survey forms
- records of web searches or other research
- any other information you consider necessary to support your decisions
- any other information required by the Operational Ratings (OR) methodology, OR conventions and the Scheme Operating Requirements

Circumstances:

- the discovery of unexpected or hazardous conditions or materials
- other potential threats to health and safety
- properties beyond your current level of competence

Customer(s):

- internal
- external

Environmental features:

- geographical location
- exposure
- building orientation
- the building's thermal mass
- solar heating effects and shading

Environmental factors:

- orientation
- roof design
- shading
- location

Characteristics:

- location and site requirements
- installation requirements
- efficiencies and other technical data relating to their energy performance

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