

Title:	Assessing the General Condition of Buildings and Dwellings, including for Older and Traditional Buildings.
Level:	4
Credit value:	2
GLH:	4
Unique Reference Number:	F/651/4445
Sector Subject Area:	Construction (Green)
Aim:	The aim of this unit is to provide learners with the knowledge to understand the requirements of a condition survey and how to locate and establish the severity of any potential construction defects.
Assessment Type:	Written examination, tasked based controlled assessment and professional discussion.
Assessment Guidance:	Assessment of this unit will be through written assignment questions, the completion of a condition survey on two different domestic dwellings, and professional discussion.

Learning outcomes

The learner will:

1. Understand condition survey requirements.

Delivery content:

The aim of this learning outcome is to provide learners with the knowledge to understand the requirements of a condition survey. Learners will also consider the basic principles of building decay and sources of best practice guidance available to inform the undertaking of condition surveys.

The learner must understand:

- condition survey requirements of PAS 2035.
- sources of 'best practice' guidance and the competences needed to undertake building condition surveys.

<ul style="list-style-type: none"> • the general approach to the assessment of a dwelling's condition. • the causes of deterioration of building fabric.
<p>2. Be able to identify the type of construction, heritage value and significance of a dwelling.</p>
<p>Delivery content:</p> <p>The aim of this learning outcome is to provide learners with the knowledge and skills to identify the construction type, heritage values and significance of a dwelling.</p> <p>The learner must be able to:</p> <ul style="list-style-type: none"> • identify the construction type(s) of the dwelling including older and traditional buildings. • identify what heritage values and significance of the dwelling embodies • identify opportunities to enhance the heritage values and significance of the dwelling. • identify the heritage values and significance of a building, reference annex E of PAS 2035:2023
<p>3. Be able to establish the severity of any potential construction defects.</p>
<p>Delivery content:</p> <p>The aim of this learning outcome is to provide learners with the knowledge and skills to be able to identify and establish the severity of any potential construction defects within a dwelling and when further surveys are required.</p> <p>The learner must be able to:</p> <ul style="list-style-type: none"> • define defects. • identify the location and severity of any defects in external roofs, chimneys, rainwater goods and disposal systems, soffits, and fascias. • identify the location and severity of any internal defects in roofs. • identify the location and severity of any external wall defects. • identify the location and severity of any floor defects. • identify potential obstacles to retrofitting installations. • conduct an inspection for moisture in dwellings.
<p>4. Be able to conduct assessments of the existing services in a dwelling.</p>
<p>Delivery content:</p>

The aim of this learning outcome is to provide learners with the knowledge and skills to be able to conduct assessments of the existing services in a dwelling.

The learner must be able to:

conduct assessments of the **existing services**.

Scope of Training

The Scope of Training identifies areas that must be covered during the delivery of this unit. This is the minimum that is expected but tutors are expected to include other areas, knowledge of which will benefit their learners, based on location, types of work available and from the tutors own professional experience.

Requirements

Best practice

- British Standards (BS40104 Assessment of dwellings for retrofit, when published).
- RICS Home Survey Standard
- RIBA Building Condition Surveys (2016)

General approach

- Use of photographs
- Basic principles of examining a dwelling

Deterioration of building fabric

- Inherent material defects
- Poor material selection, e.g., use of incompatible materials resulting in moisture accumulation, including use of non-permeable materials and/or 'damp proofing' methods on traditional construction.
- Physical processes, e.g., shrinkage, expansion, erosion, freeze and thaw cycles, wetting and drying cycles
- Chemical processes, e.g., corrosion, salt crystallisation
- Organic growth, fungal attack, and insect infestation
- Excess loading and structural movement.
- Lack of adequate or appropriate repair and/or maintenance

Construction type

- Building construction development and regional variation
- Traditional (Buildings constructed with a permeable construction that both absorbs moisture and readily allows moisture to evaporate. Examples include those built with solid earthen or masonry constructions, using lime render or mortar or pre-1919 timber-framed external walls with any infill or early cavity walls.
- Modern (post-1919 cavity walls, non-standard constructions – prefabricated interwar post-war and modern, modern framing techniques, mass concrete or glass, SIPs etc, modern strawbale ect.)

	<ul style="list-style-type: none"> • Metal framed • Timber framed • Pre-cast concrete • In-situ concrete
Defects	<ul style="list-style-type: none"> • Requiring repair to be enacted before any retrofit work can proceed • Where repair is recommended but not an essential prerequisite to retrofit but should be carried out as part of the broader scheme of works as/when access is possible.
Internal defects in roofs	<ul style="list-style-type: none"> • Poor ventilation to roof space resulting in condensation and mould growth • Damaged, poorly laid, or inappropriate insulation, e.g., evidence within habitable spaces of thermal bridging (condensation/mould growth), moisture accumulation/ingress, or sprayed foam insulation that does not meet best practice • Condition of roof timbers, e.g., signs of excess loading, decay, fungal attack, or insect infestation • Signs of water ingress through defective covering or abutments
Severity of any external wall defects	<ul style="list-style-type: none"> • Cause and effects/signs to look out for: <ul style="list-style-type: none"> ▪ Cracks and structural movement ▪ Cracks caused by sub-soil and foundation defects ▪ Cracks around window openings • Rendering defects, including the use of inappropriate materials on traditionally constructed buildings • Poor pointing and weathering details; inadequate eave and verge over hangs, lack of or undersized weathering or drip details, including the use of inappropriate materials on traditionally constructed buildings • Undersized or ineffective rainwater goods and drainage systems • Missing, inconsistent or bridged DPC in modern construction, or later inappropriate introduction in traditionally constructed buildings • How all the above result in water penetration
Defects - floors	<ul style="list-style-type: none"> • Missing, inconsistent or bridged DPM in modern construction, or later inappropriate introduction in traditionally constructed buildings • Poor ventilation to floor void space resulting in condensation and mould growth, timber decay, fungal attack, or insect infestation.
Potential obstacles	<ul style="list-style-type: none"> • External fixtures and fittings, including ventilation grilles and flues • Internal fixtures and fittings • Abutments and party wall structures • Windows and doors • Condition of building elements • Elevated external ground levels or inadequate/ineffective drainage • Cavity wall issues, including HTT, early/ narrow cavities, wall tie failure

	<ul style="list-style-type: none"> • Works required prior to retrofit, e.g., repair and maintenance, time for passive drying of fabric, roof strengthening needed for PV panels • Site boundaries
Inspect for moisture	<ul style="list-style-type: none"> • BS5250 Management of moisture in buildings • Investigation of moisture and its effects on traditional buildings: Principles and competencies. Joint position statement (2022) • UKCMB - UK Centre for Moisture in Buildings • Stains mould or /mildew on walls, ceilings and floors, exposed timber or building elements, musty smell, efflorescence, masonry chipping, crusting or powdery build-up as signs of condensation, moisture accumulation, salt contamination and freeze/thaw effect. • Signs of timber decay, fungal attack, or insect infestation • Use of techniques and types of devices used to locate and measure moisture
Existing services	<ul style="list-style-type: none"> • Space heating, ventilation, and air conditioning (HVAC) inc. fuel type/location • Hot and cold-water systems • Lighting internal, external, and emergency • Electrical Power systems, distribution boards and switch gear • Fire detection and sounding • Security Systems and alarms • Drainage, plumbing and sewer systems • Renewable or low carbon technology installations • Age, condition, capacity, testing and inspection reports, hazards, repair and maintenance needs or issues, statutory compliance, system upgrade requirements, opportunities, or constraints. Condition Surveys and Investigations - Historic England