Structural Assessment Specification, Issue 1

What an assessment of an existing building by Lead Group establishes, in what order, against which standards, and what we need at enquiry.

1. PURPOSE AND SCOPE

This specification sets out what a structural assessment of an existing building prepared by Lead Group establishes and the order in which it is done. It applies to roof loading appraisals where plant, oversheeting, a walkway or a new use is proposed; to change of use appraisals; to condition assessments of frames, floors, walls and roofs; and to the structural part of a pre-purchase or due diligence report. It does not cover the design of new structures, which follows the relevant Eurocode directly, or RAAC, which has its own procedure.

It is published for three readers: the client, so the scope is agreed before the fee is; the checking engineer, who signs the report and needs to see that each item was addressed; and anyone relying on the report later, who needs to know what was established and on what basis.

2. WHAT THE ASSESSMENT ESTABLISHES

#	ITEM	WHAT IS ESTABLISHED	STANDARD APPLIED
1	What is there	Structural form, materials, member sizes, connections, bearings and restraint, by survey and measurement, from drawings where they exist, and by opening up where the structure cannot otherwise be seen. Coverage stated as a proportion of the structure; areas not seen recorded as not seen.	Measured survey; drawings treated as evidence of intent, not of what was built
2	The existing load	Self-weight from what is actually there, including finishes, services and later additions. Imposed loads for the present use, including Category H roof loads. Snow, including drift cases at taller structures, parapets and obstructions. Wind, with the UK roof pressure coefficients.	BS EN 1991-1-1 and NA (Annex A, Table NA.7); BS EN 1991-1-3 and NA (Annex B); BS EN 1991-1-4:2005+A1:2010 and NA (Tables NA.5 to NA.8); PD 6688-1-4:2009
3	The proposed change	The added or altered load as the client defines it and as we interpret it: point loads at fixings, dynamic effects of plant, altered wind behaviour of a changed covering, imposed load of new access. Where the proposal is not fixed, the envelope checked is stated.	As item 2; BRE Digest 489 (2014) for roof-mounted equipment
4	The governing case	Combinations with drift as an accidental action and the design working life stated. The governing combination for each element identified and explained.	BS EN 1990 and NA (Tables NA.A1.1, NA.A1.2, NA.2.1)
5	The margin	Utilisation of each critical element against the current Eurocode, with the resistance basis stated. Where designed to an earlier code, that code recorded and, where useful, the original margin reported as a separate statement. The two are never merged.	BS EN 1992, 1993, 1995, 1996 and NAs as the structure requires; withdrawn codes to record the original basis only
6	Condition and its effect	Corrosion, section loss, deflection, cracking, decay, water ingress and previous alteration, recorded where found and carried into capacity as a reduction where they affect it.	Survey; material Eurocodes for the reduced section

Items 7 to 9 continue on page 2.

#	ITEM	WHAT IS ESTABLISHED	STANDARD APPLIED
7	Assumptions and limitations	Every assumption that affects the result in one place: strengths assumed, restraint assumed, areas not surveyed, information taken from others. The limitations are the boundary of reliance.	
8	Conclusion, in two statements	(a) Whether the structure meets current code demand for the proposed use, element by element. (b) Whether it is safe in its current use. Kept separate: not meeting current code demand does not mean unsafe.	
9	What follows	Where the margin is short: reduce or relocate the load, strengthen specific members, change the fixing or mounting approach, or monitor. Strengthening design quoted separately. Where nothing is needed, stated in writing.	

3. HOW FINDINGS ARE STATED

Every figure carries its unit and its source. Every standard is cited with its part, year, amendment and National Annex. Calculations are issued as readable working, not as software printouts, so a checker or a building control officer can follow the reasoning. Photographs are referenced to a plan. The report is checked and signed before issue, and the checker's role is stated in it.

Fees are fixed and agreed before work starts, with the scope, the deliverables and a realistic timescale confirmed in the fee proposal. The output is a report, with calculations and such drawings as the job needs; where design follows, it is issued as a full design and drawing package.

4. WHAT WE NEED AT ENQUIRY

1. The address, a description of the building and its present use.
2. Any drawings, previous reports or calculations, however old.
3. Photographs of the structure where the ceiling or roof space can be seen, and of the roof covering.
4. The proposed change, as precisely as it is known: what is being added, where, and how heavy.
5. Who owns the building, who is instructing us, and whether anyone else will rely on the report.
6. Access arrangements and any constraints on opening up.
7. The date by which the finding is needed.

From that we confirm the scope against this specification, say what can be established remotely and what needs a visit, and issue a fixed fee. Enquiries: contact@leadgroup.uk or 020 3432 4186.

5. STANDARDS REFERENCED

- BS EN 1990:2002 and NA to BS EN 1990:2002: combinations, partial factors, design working life.
- BS EN 1991-1-1:2002 and its UK National Annex: densities, self-weight, imposed loads, including Table NA.7 roof loads.
- BS EN 1991-1-3:2003 and its UK National Annex: snow, including Annex B drifts as accidental actions (NA.2.5, NA.2.21, NA.2.22).
- BS EN 1991-1-4:2005+A1:2010, NA to BS EN 1991-1-4:2005+A1:2010 and PD 6688-1-4:2009: wind, with roof coefficients from Tables NA.5 to NA.8 (NA.2.28).
- BRE Digest 489 (2014): wind loads on roof-mounted equipment.
- BS EN 1992-1-1, BS EN 1993-1-1 (with 1993-1-3 and 1993-1-8), BS EN 1995-1-1 and BS EN 1996-1-1 with their UK National Annexes, as the structure requires.
- Withdrawn British Standards (BS 6399, BS 5950, BS 8110, BS 5628, BS 5268) only to record the basis of an original design.

6. ISSUE RECORD

ISSUE	DATE	CHANGE
1	November 2026	First issue. Published at leadgroup.uk/structural-assessment-specification.

This specification is reviewed when a standard it cites is amended or withdrawn, and the issue number changes when its content does. The web page shows the issue in force. This document describes method; it is not a design and does not replace an assessment prepared for a specific structure.