

Structural Feasibility *Assessment Specification*

What a structural feasibility assessment of an existing roof proposed to carry solar PV should contain, written so it can be quoted directly into a scope of works. Free to adopt, free to quote, no permission needed. It is voluntary, and we certify nobody against it.

Issue 1

AUGUST 2026

Voluntary

NOT A REGULATION

Open

NO REGISTRATION

No scheme

WE CERTIFY NOBODY

WHAT THIS IS

A written specification for the **scope, method and deliverable** of a structural feasibility assessment. Published so that a buyer can specify one, and compare two, without being a structural engineer.

WHAT THIS IS NOT

Not a standard issued by a standards body. Not a requirement of the Microgeneration Certification Scheme. Not a certification scheme, and not a mark anybody can hold.

WHO IT IS FOR

Anyone buying, selling or reviewing this work: installers, EPC contractors, asset managers, funders, insurers and their advisers.

PART 1 · WHY THIS EXISTS

Two assessments can both be *correct* and share almost nothing

From 18 June 2026, MIS 3002 V6.0 requires the structure to be checked before a solar PV array is installed, on installations within the scope of the Microgeneration Certification Scheme. It requires that check to be carried out by a **suitably competent person**, and in the cases named below it requires a qualified structural engineer. What it does not do, in either case, is prescribe the method or state what the resulting document has to contain.

That is a reasonable position for a certification scheme to take, and it leaves a practical gap for everyone downstream. A buyer receiving two documents, both honestly produced, both defensible, has no basis on which to compare them. One may be a site-specific analysis under the Eurocodes. The other may be a desk opinion using generic assumptions. **Nothing on the cover distinguishes them.**

This specification exists to close that gap from the buyer's side. It sets out what to ask for, so that what comes back can be judged.

To be explicit, because it is routinely misstated in both directions: the **universal** check under 5.9.4 may be carried out by a suitably competent person, who need not be a structural engineer. **But MIS 3002 V6.0 does mandate a qualified structural engineer in three named cases.** First, unusual roofs under **5.9.6**, meaning hipped roofs, valley roofs, dormers, parapets, sub-30-degree pitch and roofs showing structural distress. Second, **every flat roof ballasted system under 5.9.13(h), without exception.** Third, non-standard mounting under **5.5.5(b)**. Beyond those cases, applying the engineer standard to *all* commercial work is **our own position**, not a regulatory requirement, and we do not present it as one.

Why the engineer, then, where the standard does not compel one. A mounting system's load data states what the array **demands**. It says nothing about whether this roof, at its actual age, in its actual condition, carrying whatever it has accumulated since it was built, can supply it. Answering that is a structural engineering judgement rather than a lookup, which is why we apply the engineer requirement to our own work and recommend it here.

PART 2 · STATUS AND USE

Status

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| 2.1 | This specification is published by Solar Surveys Ltd and is free to use, quote, adapt and embed in procurement documents without permission, licence fee or notification. |
| 2.2 | It is voluntary . It carries no legal force. Where it conflicts with a regulation, a contract or a standard issued by a standards body, those take precedence and this does not. |
| 2.3 | Solar Surveys Ltd certifies, accredits, approves and audits nobody against this specification. There is no register, no assessor, no membership, no mark and no fee.

This is deliberate. A specification published by a practice that also sells the service should not double as a gate that practice controls. |
| 2.4 | Conformity is self-declared by whoever carries out the assessment, and is a matter between them and their client. |
| 2.5 | Nothing here transfers liability. An assessment carried out by another party remains that party's responsibility whether or not it follows this document. |

PART 3 · SCOPE

What is *in*, and what is not

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| 3.1 | Applies to the structural feasibility assessment of an existing roof proposed to carry a solar PV array. |
| 3.2 | Applies to commercial, industrial, public sector, agricultural and multi-residential buildings. |

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- 3.3 **Does not** cover new build design, where the array is a design input from the outset rather than an addition to a completed structure.
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- 3.4 **Does not** cover electrical design, grid connection, yield modelling, planning or fire strategy. Those are separate disciplines with their own competence requirements.
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- 3.5 **Does not** cover the condition or remaining service life of the roof covering as a waterproofing element, except where that condition governs whether the array can be fixed or supported. *A structurally adequate roof can still be the wrong roof to build on.*
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PART 4 · REQUIRED INPUTS

What must be established *before* assessing

An assessment that begins without these is estimating, not assessing. Where an input cannot be obtained, 4.7 applies.

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- 4.1 **The proposed array.** Module type and dimensions, quantity, layout, orientation, tilt, mounting system, and the fixing or restraint method. An assessment cannot be carried out against an unspecified array.
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- 4.2 **Site location, to sufficient precision to derive site-specific actions, including altitude.**
Ground snow load rises with altitude under the UK National Annex to BS EN 1991-1-3. A national average understates the action at height, and understates it in the unsafe direction.
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- 4.3 **Structural information for the existing roof.** Original design drawings and calculations where they exist. **Where they do not, a physical survey establishing member sizes, spans, centres and the load path.**
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- 4.4 **Roof covering type, approximate age and condition,** including whether it is fragile, and whether it can be walked or loaded for access.
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- 4.5 **Loads the structure already carries** beyond its original design intent: services, plant, ductwork, walkways, safety systems, previous overlays or re-covering.
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- 4.6 **Access and sequencing constraints** that determine how, and whether, the works can physically be carried out.
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Clause 4.5 in one photograph. The flat roof alongside already carries a bank of condensers on a raised frame, none of which was in the original design intent. An array is added to what is there, not to what the drawings show.

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- 4.7 Where a required input cannot be obtained, **the assumption made in its place shall be stated explicitly in the deliverable**, together with what would change if the assumption proved wrong. *An unstated assumption is the most common defect in this work.*
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PART 5 • THE ASSESSMENT

What must be *assessed*, and against what

The standards below are those we apply. They are named so that a buyer can ask which were used, and a reviewer can check. Each one is explained in plain English in the Standards Library.

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- 5.1 **Combinations of actions** in accordance with **BS EN 1990**. The array is assessed in combination with the actions the roof already carries, not in isolation.
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- 5.2 **Imposed actions** in accordance with **BS EN 1991-1-1**, including access and maintenance loading on a roof that will now be visited more often than it was.
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- 5.3 **Snow actions** in accordance with **BS EN 1991-1-3 and its UK National Annex**, derived from the site's own altitude.
- Drifting is considered against parapets, upstands and adjacent higher roofs, and against the array itself, which creates new obstructions for snow to accumulate against.
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- 5.4 **Wind actions** in accordance with **BS EN 1991-1-4 and its UK National Annex**, for the specific site exposure.
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- 5.5 **Array wind uplift** derived using **BRE Digest 489**. Uplift is frequently the governing case, not the added weight.
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- 5.6 **Array dead load stated explicitly, with its build-up.** Modules, mounting system and ballast are separate contributions and should be shown separately rather than as a single figure.
- There is no typical value worth publishing. Ballast is derived, not looked up: it follows from the coefficient of friction of the covering, the site wind actions and uplift, and what the structure beneath can safely carry. Assessed systems run from around 0.2 kN/m² to well above it. State the figure for the system in front of you, as a declared ceiling not to be exceeded, and show how it was arrived at.
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- 5.7 **Where the system is ballasted, the ballast is assessed as a load the structure must carry in the position it will occupy.**
- On a ballasted system the array is held down by weight rather than by penetrating fixings, so the ballast required to resist uplift becomes a governing load. It is not a detail to be resolved on site. MIS 3002 V6.0 clause 5.9.13(e) requires a coefficient of friction of 0.3 unless the material combination has been tested, and 5.9.13(g) requires the calculation to declare the coefficient used. Both belong in the report.
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- 5.8 **The covering and its substrate are assessed for their ability to accept the proposed fixing or restraint method**, independently of whether the frame beneath is adequate.
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- 5.9 Where the installation falls within the scope of the Microgeneration Certification Scheme, **MIS 3002 V6.0** is considered in addition to, not instead of, the above, including whether the roof falls into a case where the standard **mandates** a qualified structural engineer (5.9.6, 5.9.13(h), 5.5.5(b)).
- A flat roof carrying a ballasted array is always such a case. 5.9.13(h) admits no exception.
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- 5.10 Where the roof is found inadequate, **the assessment identifies what would make it adequate**, or states that no proportionate route was identified. *"No" on its own is not a finished assessment.*
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PART 6 · THE DELIVERABLE

What the buyer should *receive*

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- 6.1 A **written report**. Not an email, not a verbal confirmation, not a line on a layout drawing.
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- 6.2 The **named individual** responsible for the engineering conclusion, and **the basis on which they are competent to reach it**, stated plainly enough that a non-engineer can weigh it.
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- 6.3 A **single unambiguous conclusion per roof**, drawn from a defined set of outcomes. See Part 7.
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- 6.4 The **standards applied, by number**, and the array loading used, by value.
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- 6.5 **Limitations, assumptions, and what was not inspected.** Including anything concealed, inaccessible or taken on trust. *This section is the measure of an honest report, and it is the section most often missing.*
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6.6 Where remedial work is required, **what it is, and what it is for**, in enough detail to be priced by somebody who was not on the survey.

6.7 **Date, revision and the array revision it was assessed against.**

An assessment is valid for the array it assessed. If the layout, module or mounting system changes afterwards, the conclusion does not automatically carry across.

PART 7 · OUTCOME CLASSIFICATION

Four outcomes, so that two reports can be *compared*

These are the four we use, and the four the 575-roof dataset is classified against. They are offered here because a shared vocabulary is worth more than a better one nobody uses.

Cleared

Structure adequate for the array as designed. No changes required.

Conditional

Viable with design adjustment. Layout, tilt or ballast arrangement revised. No physical works to the structure.

Remediation

Physical structural works required before installation can proceed.

Rejected

Structure inadequate. No proportionate route to installation identified.

Why the distinction between conditional and remediation matters commercially: the first is absorbed in design and usually costs programme rather than money. The second is a construction cost that has to be funded, priced and sequenced. Reports that collapse both into "*further work required*" leave the buyer unable to tell a fortnight's redesign from a capital item.

PART 8 · USE IN PROCUREMENT

Wording you can *paste*

If this specification is useful to you, the most useful thing to do with it is to require it. The following is free to copy into an enquiry, a scope of works or a tender. It does not name us, and it does not need to.

SUGGESTED CLAUSE

The structural feasibility assessment shall be carried out and reported in accordance with the Structural Feasibility Assessment Specification, Issue 1 (2026), Parts 4, 5 and 6.

The report shall state the standards applied by number, the array dead load used by value, the assumptions made, and any part of the structure not inspected. A single outcome shall be stated per roof in the terms of Part 7 of that specification.

If you are reviewing an assessment rather than buying one, Part 6 is the fastest read. A report that does not name who reached the conclusion (6.2), does not state its limitations (6.5), or does not say which array revision it assessed (6.7) cannot safely be relied on, whatever its conclusion.

PART 9 · CITATION AND LICENCE

Citing this specification

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Solar Surveys Ltd (2026). *Structural Feasibility Assessment Specification, Issue 1*.
Sahir Raihan, Managing Director.
<https://solarsurveys.co.uk/assessment-specification>

Issue 1 is the first published version. If a clause is wrong, unclear, or missing something that matters in practice, tell us and it will be considered for Issue 2. Corrections are more welcome than endorsements. Send a comment.