SOLAR SURVEYS LTD · RESEARCH SERIES · 2026

A FIELD DATASET REPORT

The UK Roof *Plane Report.*

1,568 roof planes on 651 buildings and homes assessed for rooftop solar PV, 1 January to 19 September 2026: what is on the roof, how it is built, and what condition it is in.

EDITION
2026 · FIRST

UNIT OF RECORD
ROOF PLANE

ACCESS
FREE TO READ

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About this report.

Publisher. Solar Surveys Ltd, 24 Potterhill Road, Glasgow G53 5RR, United Kingdom. Registered in Scotland.

Authorship. Researched and written by the structural engineering team at Solar Surveys Ltd under the direction of Sahir Raihan, Managing Director. The dataset was compiled from the practice's own issued structural reports.

Coverage. Every structural roof loading appraisal and structural report issued by Solar Surveys for rooftop solar PV between 1 January and 19 September 2026: 651 buildings and dwellings carrying 1,568 roof planes across Great Britain, with one site in the Republic of Ireland.

What is recorded. For every building and home: use, region, postcode area, roof planes, roof form and pitch, every roof covering, PV fixing method and the verdict. Where the report states them: site altitude, distance to the sea, basic wind velocity, terrain category, peak velocity pressure, ground and roof snow load, PV array load, allowable imposed load and the share of roof capacity used by PV and snow together. For commercial buildings, visible roof condition from the survey photographs.

Relationship to other work. This is a separate study from the *PV Structural Feasibility Dataset 2026*, which reports structural feasibility outcomes for 575 commercial rooftops. The two measure different things and are designed to be read together; Section 10 explains how.

Editorial standard. Engineering-grade language throughout. No client, site, programme or supplier is named. Where a figure rests on judgement rather than calculation, the report says so.

> ANONYMISATION
>
> No client names, addresses, full postcodes, job references or report text are published. Location is given to postcode area and ITL1 region only, and record identifiers are random.

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SECTION 01

Executive summary.

Solar feasibility is usually discussed one building at a time. This report looks at the roof one plane at a time, because that is the level at which a PV array is fixed, loaded and designed. It draws on every structural report the practice issued for rooftop PV between 1 January and 19 September 2026: **1,568 roof planes on 651 buildings and homes**, 553 of them on 145 commercial, public and community buildings and 1,015 on 506 dwellings, most of them in social housing retrofit programmes.

51→96%

Altitude sets the headroom

Median roof capacity used by PV and snow on homes rose from 51% below 50 m to 96% at 150 m and above; on commercial roofs from 61% to 92%.

17%

The array is the smaller load

A typical array adds 0.13 kN/m², about 17% of a home's allowable imposed load and 20% of a commercial roof's. Snow governs.

18%

of commercial roofs used 90% or more of capacity

20 of 112 with a stated utilisation. Faith and community buildings and schools reached it most often, 36% of each.

35%

of commercial buildings had four or more roof planes

553 planes on 145 buildings. Thirty buildings with six or more planes carry 53% of the commercial roof.

60%

of commercial buildings showed a visible condition issue

Across 109 buildings recorded from the survey photographs; 17% moderate or major.

83 vs 51%

Condition tracks the covering

Visible issues on 83% of fibre cement roofs, 93% of felt and every slate roof recorded, against 51% of profiled metal.

75 vs 73%

Capacity says nothing about condition

Roofs with a visible issue used a median 75% of capacity; roofs without, 73%. Both questions have to be answered.

80%

of commercial verdicts: suitable as proposed

Of 135 with a loading verdict; 16% suitable with conditions, 3% part suitable. The verdict is the one issued, after design changes.

SECTION 02

Why the roof plane.

The unit of record decides what a dataset can see. Buildings hide exactly the variation that makes a roof feasible or not.

Datasets on rooftop solar almost always count buildings or roofs. The structural engineer never works at that level. A roof is assessed plane by plane, because each plane has its own pitch, orientation, covering, supporting members and wind zones, and a PV array is fixed to one plane at a time.

Counting by building hides the variation that decides feasibility. A school with a pitched slate range, a felt flat roof over a later extension and a profiled metal sports hall is one building but three different structural problems, and in our record it is eight planes. A terraced house type repeated across an estate is one design problem, and two planes, however many times it is built.

The roof plane is therefore the smallest unit at which structural and covering evidence can be attached honestly. Every record in this dataset is a plane, and every plane can be traced to a building-level record carrying its use, region, covering, form, fixing method and verdict.

“A building is a planning unit. A roof plane is an engineering unit. Solar is designed on the second.”

What a plane is, for counting purposes

- A duopitch roof has two planes; a monopitch or flat roof has one; a hipped rectangular roof has four.
- On attended surveys every plane of every roof on the building is counted, because every roof is inspected.
- Structures a report states form no part of the assessment are excluded.
- Residential house types that differ, including a standard type and its extended variant, are separate records.

SECTION 03

Method.

Every figure in this report traces to an issued structural report. How each one was read is set out here.

Sources

Every structural roof loading appraisal and structural report issued by Solar Surveys for rooftop PV between 1 January and 19 September 2026 was read in full. Each building or home appears once.

Descriptive fields

Roof form, covering and PV fixing method were read from the report text and normalised to fixed categories. Where the text was silent, the covering was taken from the report's photographs, and where neither recorded it the field says so. Each record lists every covering and form the report names, so a building with two coverings carries both.

Engineering fields

Site altitude, distance to the sea, basic wind velocity, terrain category, peak velocity pressure, characteristic ground snow load, design roof snow load, PV array load and allowable imposed load are taken from each report's own calculations to BS EN 1991-1-3 and BS EN 1991-1-4 with the UK National Annexes. They are recorded where the report states them, so coverage differs by field; each table gives its sample size.

> CAPACITY USED
>
> The governing gravity combination of PV load and roof snow load, expressed as a share of the roof's factored allowable imposed load, as calculated in each report. A figure of 70% means the array and the design snow load together use 70% of the load the roof is taken to carry for maintenance and access, leaving 30% headroom. Where a report checked more than one roof type, the governing (highest) figure is recorded.

Verdicts

The verdict is the one stated in the issued report: suitable, suitable with conditions, part suitable or provisional. Roof condition reports, which make no loading verdict, are recorded as such.

Condition

Condition statements in the report text were read sentence by sentence and only observed site conditions kept. The survey photographs in each commercial report were reviewed for covering, corrosion, biological growth, ponding or drainage marks, internal water staining and rooflights, and each building given an overall visible severity on the scale in Appendix A2. "Not seen" means not visible in the photographs, not confirmed absent.

SECTION 04

What the dataset contains.

The dataset is a working record, not a sample of national stock. Its composition is set out first so every later figure can be read in context.

By sector

SECTOR	BUILDINGS	PLANES
Commercial, public and community	145	553
Residential	506	1,015
Total	**651**	**1,568**

Commercial building use

Education	17%
Industrial and manufacturing	16%
Faith and community	10%
Sport and leisure	9%
Office	7%
Logistics and retail	8%
Agricultural, care, health	4%
Other commercial	28%

Share of 145 buildings.

By region (planes)

North East	42%
North West	23%
Yorkshire and The Humber	8%
West Midlands	7%
South East	5%
Scotland	4%
East of England	3%
Other regions	6%

Share of 1,568 planes. Commercial work is spread across every English region, Scotland and Wales; residential work is concentrated in the North East and North West.

Roof form (buildings)

FORM	COMMERCIAL	RESIDENTIAL
Duopitch or gable	82%	97%
Flat	43%	2%
Monopitch	37%	<1%
Hipped	29%	16%

Share of buildings where the form is stated; a building can carry several forms.

Mixed terraced and post-war housing, photographed by drone on survey. Residential records are dominated by programmes of this kind.

SECTION 05

How many planes a roof really has.

One building in five holds more than half of the commercial roof.

The average commercial building in the dataset carried 3.8 roof planes, and the distribution is heavily skewed. Most commercial buildings are simple, a few are very complex, and the complex ones hold most of the roof.

PLANES ON THE BUILDING	COMMERCIAL BUILDINGS	SHARE
1	23	16%
2	66	46%
3 to 5	26	18%
6 to 9	20	14%
10 or more	10	7%

Thirty buildings with six or more planes are 21% of the commercial sample but carry 295 of its 553 planes, 53% of the commercial roof in the dataset. The two largest carried 28 planes each: a historic mill complex and a multi-range commercial site.

By building use

USE	BUILDINGS	PLANES	PLANES PER BUILDING	LARGEST
Industrial and manufacturing	23	104	4.5	28
Office	10	35	3.5	11
Education	25	82	3.3	8
Logistics and warehousing	6	20	3.3	6
Retail	6	19	3.2	7
Sport and leisure	13	36	2.8	4
Faith and community	15	41	2.7	6
Agricultural	4	7	1.8	2

WHY IT MATTERS

A scope, quotation or desktop screen that treats a commercial building as one roof assesses, on average, about a quarter of the structure the array will actually sit on. On the most complex fifth of buildings it assesses less than a sixth. The plane count is the simplest leading indicator of assessment effort that this dataset offers.

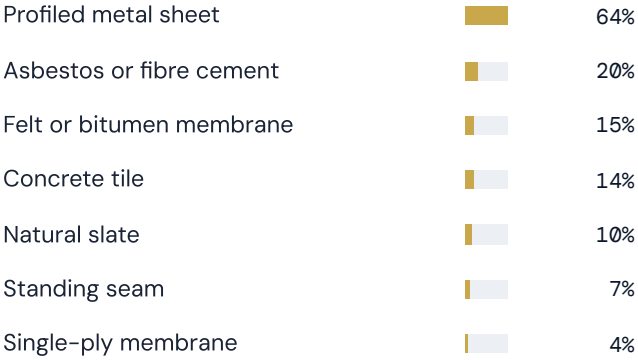
SECTION 06

Coverings.

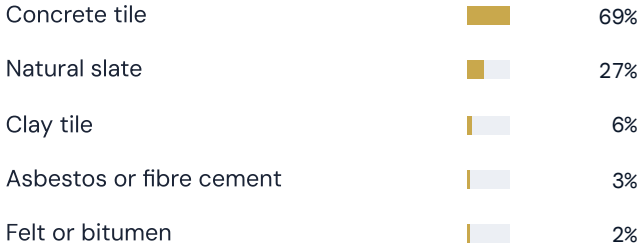
Six coverings account for almost every plane. Three in ten commercial buildings carry more than one.

The covering decides how an array is fixed, what dead load the roof already carries, and whether the roof can be walked on at all. It is recorded for every building and home in the dataset.

Commercial (113 buildings with an identified covering)



Residential (488 homes)



The roof is rarely one construction

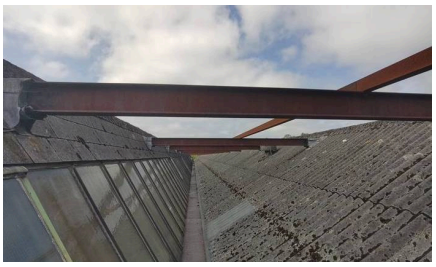
42 of 145 commercial buildings (29%) carried two or more distinct coverings, and 71 (49%) more than one roof form. The combinations are characteristic of the building types: schools pairing pitched slate or tile ranges with felt flat roofs over later extensions; industrial estates pairing profiled metal with older fibre cement ranges; community buildings pairing concrete tile with felt.

CONCRETE PLAIN TILE

SLATE

STANDING SEAM

PROFILED METAL SHEET



CORRUGATED FIBRE CEMENT

FELT FLAT ROOF

For the design of a PV installation, each covering is a different fixing, a different self-weight and a different access regime. A building-level record that names one covering, typically the dominant one, loses the variation that most often changes the design.

SECTION 07

Loading and capacity.

The array and the snow it carries, as a share of what the roof can take.

Capacity used is the question a roof loading appraisal exists to answer: how much of the load the roof is taken to carry would the array and the design snow load use together. Across the dataset the answer clusters well below the limit, but a material minority of roofs run close to it.

CAPACITY USED	COMMERCIAL (112)	HOMES (483)
Under 50%	6%	19%
50 to 69%	41%	36%
70 to 89%	35%	32%
90% and above	18%	12%
Median	**71%**	**67%**
Interquartile range	61 to 87%	53 to 78%

Twenty commercial buildings (18%) and 59 homes (12%) used 90% or more of their capacity. They were still suitable, but with little headroom for anything the design did not anticipate: a heavier module, a change of mounting system, or drift the layout had not allowed for.

The array is the smaller load

The median PV array load was 0.13 kN/m² on both commercial roofs and homes, including mounting. Against the allowable imposed load that is about 20% on a commercial roof (typically 0.60 kN/m²) and 17% on a home (typically 0.75 kN/m²). The remainder of the capacity used is snow. The array is rarely what takes a roof to its limit; the snow that settles on it is.

ALLOWABLE IMPOSED LOAD	COMMERCIAL	HOMES
0.60 kN/m²	109 (92%)	8 (2%)
0.75 kN/m²	5 (4%)	435 (90%)
Other values	5 (4%)	41 (8%)

By building use and structure (commercial)

	BUILDINGS	MEDIAN USED	AT 90% OR MORE
Faith and community	11	85%	36%
Education	22	79%	36%
Sport and leisure	8	79%	0%
Industrial and manufacturing	17	68%	12%
Timber trusses	21	82%	29%
Steel purlins	76	69%	13%
Steel trusses	7	60%	0%

Community buildings and schools ran closest to capacity. Both are dominated by older pitched roofs on timber structure, which carry less headroom than the steel-purlin roofs of industrial and logistics buildings.

By covering

COVERING	COMMERCIAL MEDIAN	HOMES MEDIAN
Concrete tile	83% (14)	67% (327)
Natural slate	83% (10)	70% (132)
Felt or bitumen membrane	80% (16)	53% (10)
Asbestos or fibre cement	71% (15)	82% (13)
Profiled metal sheet	66% (63)	–
Clay tile	–	54% (29)

Array size

Where stated, the median commercial array was 62 kWp and 110 modules (interquartile range 50 to 170 kWp). The median home carried eight modules.

SECTION 08

Snow, wind and altitude.

The site-specific actions behind every capacity figure.

The site actions in each report are derived for the specific site: snow to BS EN 1991-1-3 and wind to BS EN 1991-1-4, each with the UK National Annex. They explain most of the variation in capacity used.

Snow rises with altitude, and takes the headroom with it

SITE ALTITUDE	HOMES: ROOF SNOW	HOMES: CAPACITY USED	COMMERCIAL: ROOF SNOW	COMMERCIAL: CAPACITY USED
Below 50 m	0.35 kN/m²	51%	0.34 kN/m²	61%
50 to 99 m	0.42 kN/m²	61%	0.38 kN/m²	69%
100 to 149 m	0.56 kN/m²	76%	0.45 kN/m²	85%
150 m and above	0.81 kN/m²	96%	0.56 kN/m²	92%

Medians. Homes: 119, 180, 141 and 59 records by band; commercial: 42, 36, 10 and 15.

The UK National Annex builds altitude directly into the characteristic ground snow load, which rises by roughly 0.19 kN/m² for every 100 m of elevation above 100 m, on top of the zone value. Across the dataset, the median home above 150 m used 96% of its capacity against 51% below 50 m. No other field in the dataset moves capacity used as strongly. A feasibility screen that applies a national-average snow load, or omits the altitude term, errs in one direction only: towards optimism, on the sites with least headroom to spare.

Snow

MEDIAN	COMMERCIAL	HOMES
Site altitude	61 m	83 m
Ground snow, s_k	0.45 kN/m²	0.54 kN/m²
Design roof snow	0.40 kN/m²	0.47 kN/m²

Wind

MEDIAN	COMMERCIAL	HOMES
Basic wind velocity	22.2 m/s	23.5 m/s
Peak velocity pressure	0.75 kN/m²	0.80 kN/m²
Distance to sea	58 km	19 km
Town terrain	60%	82%

Wind governs the fixing and the edge set-backs rather than the gravity check. Peak velocity pressure ranged from 0.35 to 1.18 kN/m² across the dataset; it is the reason most conditional verdicts attach set-backs from roof edges, corners and parapets under the zones of BRE Digest 489.

Roof pitch

The median commercial roof was pitched at 20°, and 27% were below 10°, flat or near-flat. The median home was pitched at 35°, and 78% were at 35° or steeper. Pitch changes the snow shape coefficient, the wind zones and the fixing, which is why it is recorded for every plane where the report states it.

SECTION 09

Condition.

Condition tracks the covering. Slate, felt and fibre cement show visible issues far more often than modern metal.

Of 109 commercial buildings (473 roof planes) recorded from their survey photographs, 65 (60%) showed a visible roof condition issue and 19 (17%) a moderate or major one. The more useful result is how sharply the rate varies by covering.

COVERING	BUILDINGS	ANY VISIBLE ISSUE	MODERATE OR MAJOR	BIOLOGICAL GROWTH
Natural slate	10	100%	50%	100%
Felt or bitumen membrane	14	93%	50%	71%
Asbestos or fibre cement	23	83%	30%	65%
Concrete tile	14	71%	21%	64%
Single-ply membrane	8	62%	12%	38%
Profiled metal sheet	63	51%	10%	25%
Standing seam	8	38%	0%	25%

A building with two coverings appears in both rows. Recorded from the survey photographs; not a condition survey.

Three patterns

Older materials carry older roofs. Natural slate and fibre cement are, in this commercial sample, overwhelmingly the coverings of older buildings: historic mills, Victorian schools and pre-1980 industrial ranges. All three buildings graded major carried fibre cement or slate, and each showed corrosion or deterioration of the supporting steel or timber in the photographs.

Flat roofs fail at the drainage. Seven of the nine buildings with visible ponding or drainage marks carried felt or bitumen membranes. On felt flat roofs the defect that matters for PV is rarely the membrane surface; it is water held against it.

Modern metal is mostly clean. Profiled metal and standing seam showed the lowest rates of every indicator except rooflights. Where corrosion was visible it was localised rather than general.

Rooflights

Rooflights were present on 74 of the 109 buildings (68%). They are fragile surfaces, they fix where an array cannot be placed, and they govern safe access for survey and installation alike.

Capacity and condition are independent

Roofs with a visible condition issue used a median 75% of their capacity; roofs without one used 73%. The loading check and the condition of the covering answer different questions, and neither predicts the other.

Text and photographs

Condition findings stated in the report text were confirmed on 30 commercial buildings, most often corrosion. The photographs show a visible issue on 65. Reports record condition in the text where it bears on the structural verdict; the photographs record everything the camera saw. Research that relies on report text alone will understate roof condition by roughly half.

SECTION 10

Verdicts and pass rates.

What the reports concluded, and why a high suitable rate does not mean the assessment was a formality.

VERDICT STATED IN THE REPORT	COMMERCIAL	SHARE*	HOMES	SHARE*
Suitable	108	80%	497	99%
Suitable with conditions	22	16%	3	1%
Part suitable	4	3%	2	<1%
Provisional	1	1%	0	0%
Roof condition report (no loading verdict)	10	–	0	–

* Share of records with a loading verdict: 135 commercial, 502 homes.

Conditions attached to a suitable verdict were, in almost every case, placement rather than structure: set-backs from roof edges and parapets under the wind zones of BRE Digest 489, exclusion zones for snow drift against steps in the roof, clearance around rooflights, and repairs to the roof envelope before installation. Part-suitable verdicts approved some roofs of a building and excluded others.

How this relates to the 575-roof study

The *PV Structural Feasibility Dataset 2026* reports that 35% of 575 commercial rooftops assessed between 2024 and 2026 needed engineering intervention before PV could proceed. The figures here are not in conflict with it, because they measure different things.

- **The 575-roof study classifies the path to installation.** A roof whose array was redesigned, whose ballast was reconfigured or which was rejected before a report issued counts as an intervention.
- **This dataset records the verdict in the issued report.** By the time a report issues, the layout has usually been revised to the form the roof can carry. A design adjustment made during the assessment appears here as a suitable verdict, often with conditions.
- **The periods and populations differ.** This dataset covers 1 January to 19 September 2026 and includes housing; the 575-roof study covers commercial roofs from 2024 to 2026.

> READING THE TWO TOGETHER
>
> The share of issued reports that say “suitable” is not the share of roofs that were suitable as first proposed. The gap between the two is the value of the assessment.

SECTION 11

Housing programmes.

Repetitive in form, local in material and in headroom.

Residential records come overwhelmingly from social housing retrofit programmes. The stock is repetitive in form, and surprisingly local in material and in headroom.

498 of 506 dwellings (98%) had two roof planes and 97% of those with a stated form were duopitch or gable. Timber trussed rafters were recorded on 98% of homes with a stated structure and cut timber roofs of rafters and purlins on 5%; the cut roofs ran closer to capacity (median 81% against 67%). Roof hooks were the fixing method on 96% of homes where a method was stated.

Covering and headroom by postcode area

POSTCODE AREA	HOMES	CONCRETE TILE	NATURAL SLATE	MEDIAN CAPACITY USED	AT 90% OR MORE
SR	107	94%	6%	59%	2%
DH	102	89%	11%	76%	8%
PR	101	57%	22%	55%	2%
DL	50	92%	8%	96%	87%
NE	46	2%	93%	76%	0%
M	32	59%	34%	49%	0%

Within a single region the covering changes from one postcode area to the next: homes in the NE area were 93% natural slate, and in the neighbouring SR area 94% concrete tile. Headroom varies as sharply. The median home in the DL area used 96% of its capacity, and 87% of homes there were at or above 90%, against 59% and 2% in SR. The difference is altitude, not construction: the roofs are much alike, the snow they carry is not.

Why each house type is its own record

Programmes are assessed by house type, and a type and its variant, for example the same house with a larger rear projection, are separate records. A change in plan changes the roof: its span, its hips and valleys, and the planes available for an array.

Colliery-era terraced streets. Repetition makes programme-scale assessment efficient; local variation in covering and altitude is why it still has to be done house type by house type, and area by area.

SECTION 12

Discussion.

What the plane-level record changes about how rooftop solar is screened, scoped and delivered.

Snow and altitude, not the array, decide the headroom

A typical PV array adds about 0.13 kN/m², a sixth of a home's allowable imposed load. What moves a roof towards its limit is the snow the array sits under, and snow rises with altitude. The median home above 150 m used 96% of its capacity; below 50 m, 51%. Feasibility work that applies a generic snow load, or omits the altitude correction, is systematically optimistic on exactly the sites with least headroom.

The roof is a set of planes, not a single surface

Commercial roofs are heterogeneous in plane count, covering and form. The median commercial building is simple, but the roof area is concentrated in the complex ones, and those are the buildings where a building-level screen is least reliable. Any method that scores a commercial roof once is working with the least informative unit available.

Covering is a proxy for age, and age for condition

Slate, felt and fibre cement show visible issues far more often than modern profiled metal and standing seam. The covering is not the cause in itself; it marks the age of the roof and the history of its maintenance. Very few reports record a roof's age or remaining service life, so at portfolio scale the covering is the most reliable indicator of both that is available.

Capacity and condition are separate questions

Condition did not predict capacity used, and capacity used did not predict condition. A pass on the loading check is not evidence that the covering will outlast the array, and a sound covering is not evidence of structural headroom. A complete appraisal answers both.

Flat roofs concentrate risk at the drainage

61 commercial buildings had flat roofs; 42 of their reports named a fixing method, and 37 of those named a ballasted system. Ballast is a permanent dead load, and flat felt roofs were where ponding was most often visible. That combination is the one most deserving of site verification.

Housing programmes reward sampling, and punish assumption

Two planes and one form describe almost every home, and that regularity is what makes programme-scale appraisal efficient. The postcode-area variation in covering and in headroom is the reason the sample has to be drawn from the right streets, the right types and the right altitude.

SECTION 13

Recommendations.

Practical consequences, by audience.

For installers and EPC contractors

- Derive snow load for the site, with its altitude. Treat any roof above 100 m as a case where the capacity margin needs checking before layout is fixed.
- Scope and price commercial assessments by roof plane, not by building. Identify every covering on the building before layout; three in ten commercial buildings carry more than one.
- Treat felt flat roofs proposed for ballast as site-verification cases, with drainage recorded before the ballast layout is fixed.

For asset owners and portfolio managers

- Use covering as a first screen for condition, and altitude as a first screen for capacity. Prioritise slate, felt and fibre cement roofs for condition survey, and high-altitude sites for structural checks, ahead of PV procurement.
- Expect schools and community buildings to run closest to capacity, and record rooflights at portfolio level.

For housing providers and framework contractors

- Assess by house type and variant, and draw samples by postcode area and altitude as well as by type.
- Confirm the covering before specifying the fixing. Slate and concrete tile call for different hardware.

For researchers and policy analysts

- Use the roof plane as the unit of record where the question is about installation, loading or fixing, and carry altitude through any national estimate of rooftop capacity.
- Where condition is the question, use the photographs as well as the text.
- Cite this dataset together with the 575-roof study when discussing feasibility outcomes; one records issued verdicts, the other the path to them.

SECTION 14

Limitations.

Stated because a dataset without them is not usable evidence.

- **Selection.** These are roofs someone intended to put solar on, drawn from one practice's workload. They are not a random sample of UK buildings.
- **Geography.** Residential records are concentrated in the North East and North West of England. Commercial records are spread more widely but are not weighted to the national stock.
- **Coverage by field.** Engineering values are recorded where the report states them. Each table gives its sample size.
- **Capacity used** is the governing figure from each report's own calculation, against the allowable imposed load that report adopted. It is not a re-analysis.
- **Age and service life** are rarely stated in the source reports and are not analysed.
- **Condition** is visible condition from the survey photographs. It is not a condition survey and records only what the photographs show.
- **Verdicts** are those in the issued report, after any design changes agreed during the assessment.
- **Period.** 1 January to 19 September 2026. Figures will be revised as the dataset is extended.

SECTION A

Appendix.

A1. Field definitions

FIELD	DEFINITION
Sector	Commercial (including public and community buildings) or residential.
Building use	Broad use class from the report and photographs; dwelling for all residential records.
Region, postcode area	ITL1 region and postcode area letters of the site. No finer location is published.
Roof planes	Number of planes assessed, counted under the rules in Section 02.
Roof form, pitch	Forms the report names, and the roof pitch in degrees where stated.
Covering	Every covering the report names or its photographs show.
PV fixing	Fixing methods the report names: roof hook, clamp or rail on sheet, ballasted, slate plate, in-roof.
Altitude, distance to sea	Site altitude above sea level and distance to the sea, as used in the report's wind and snow derivation.
Ground and roof snow	Characteristic ground snow load s_k, and the governing design roof snow load.
Peak velocity pressure	q_p from the report's wind calculation to BS EN 1991-1-4.
PV load	Array load including mounting, per unit roof area.
Allowable imposed load	The imposed roof load the report takes the existing roof to carry.
Capacity used	Governing PV plus snow combination as a share of the factored allowable imposed load.
Verdict	The conclusion stated in the issued report.

A2. Visible severity scale

GRADE	MEANING
None seen	No condition issue visible in the photographs.
Minor	Cosmetic or maintenance items: localised moss, staining, debris in gutters.
Moderate	Defects likely to need attention before or alongside a PV installation: extensive ponding, damaged sheets, patched coverings, internal water staining.
Major	Defects affecting structural adequacy or requiring remedial works: corroded or deteriorated supporting members, failed coverings.

A3. Standards referenced by the source reports

BS EN 1990 with UK National Annex (basis of design); BS EN 1991-1-1 (imposed loads); BS EN 1991-1-3 (snow); BS EN 1991-1-4 (wind); BS EN 1995-1-1 (timber); BS EN 1993-1-1 (steel); BRE Digest 489 (wind loads on roof-mounted PV); MCS MIS 3002 and MCS 012.

USE THIS REPORT

Cite it, *with attribution.*

The full record behind this report, every building and home filterable by use, region, covering, form, pitch, altitude, capacity used and verdict, is published at solarsurveys.co.uk/roof-plane-dataset-2026.

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Solar Surveys Ltd (2026). *The UK Roof Plane Report 2026: 1,568 roof planes assessed for solar PV, 1 January to 19 September 2026.* First edition. DOI: 10.5281/zenodo.22850513. solarsurveys.co.uk/roof-plane-dataset-2026