



Matt's **PlanScope**

A C H A R T E R E D S U R V E Y O R ' S T O O L K I T

The UK Crack Assessment Toolkit

A Complete Diagnostic Guide

Identify the crack, understand the cause, monitor change
— in under 30 minutes.

A S S E S S

Identify the crack

M O N I T O R

Track over time

A C T

Decide next steps

18 diagrams · Traffic-light triage · Real-world scenarios · Monitoring system

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Stop guessing. Start diagnosing.

Most crack guides tell you what cracks are. This toolkit tells you what each crack means, what to do about it, and when to call a Chartered Surveyor or Structural Engineer — using the same logic a chartered surveyor would apply on site.

It is written for homeowners, buyers, landlords and tenants who need answers fast — whether you are looking at a crack right now, preparing for a sale or purchase, or specifying remedial work.

In the next 30 minutes, you will:

- Run a traffic-light triage on the crack you are looking at
- Identify the type and pattern using 18 reference diagrams
- Understand the underlying cause — thermal, settlement, lintel, subsidence
- Set up a simple monitoring system to detect progression
- Apply real-world cost guidance and decide when to escalate
- Avoid common misdiagnosis that can cost hundreds, or thousands, in unnecessary work

WHAT TO DO TODAY

If you are looking at a crack right now: turn to Section 02 — Quick Assessment and run the traffic-light triage. A two-minute check against width, length and pattern will tell you more about what you're seeing than another month of worrying about it.

ABOUT THE AUTHOR

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Matt Bright is a Chartered Building Surveyor and Member of the Royal Institution of Chartered Surveyors. This guide is based on typical residential inspection experience covering cracking, movement, defect diagnosis and pre-purchase surveys across the UK.



“Most cracks aren’t a structural emergency — but a few are. The skill is knowing which is which, and when to escalate. This toolkit is the diagnostic process used in residential inspections — distilled into something anyone can use at home.”

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Final Summary · Disclaimer

01 Understanding Cracking

The three factors — and why most worry is misplaced

Cracking is one of the most common concerns identified in residential property — and one of the most consistently misread. Most cracks are minor and relate to normal building movement. A few are not. The skill is in telling them apart.

A chartered surveyor assesses cracking using three factors:

- **Type and pattern** — where the crack runs and what shape it follows
- **Width** — measured at the widest point, in millimetres
- **Movement** — is it stable, or progressively widening?

A crack that is wide is not automatically structural. A crack that is hairline is not automatically harmless. Read the three factors together — never one in isolation.

THE PRACTICAL RULE

A crack under 1 mm wide that has not changed in 6 months is rarely a structural concern. A crack that is widening, regardless of width today, always warrants further attention. Movement — not size — is what tells you what is happening.

Why cracks form in the first place

Buildings move. Daily and seasonal temperature changes, drying shrinkage in young buildings, slow consolidation of fill material, soil moisture cycles in clay subsoils, and ordinary live-load deflection all generate small movements within the structure. Cracking is most often the visible result of those movements meeting a brittle finish — plaster, mortar or paint.

Where movement exceeds the elastic capacity of the surrounding fabric, the crack propagates through structural elements rather than just decoration. That is the threshold at which the conversation typically moves from monitoring to investigation.

SURVEYOR'S INSIGHT

On inspection, harmless hairline cracks are typically observed being treated as emergencies far more often than active movement is found being ignored. The most useful thing a homeowner can do, by some distance, is start a simple monitoring record — a phone photo, a date and a measurement — the moment a crack is noticed. Three months later, that record will tell you what the crack is doing better than any expert could on a single visit.

02 Quick Assessment — Traffic-Light Triage

Two minutes. Three checks. One decision.

Before reading further, run this triage on the crack in front of you. It is the same first-pass assessment a chartered surveyor performs in the first thirty seconds of any inspection.

Indicator	GREEN — Cosmetic	AMBER — Watch	RED — Investigate
Width	Under 1 mm A credit card edge fits in flush	1–5 mm A 5p coin edge sits inside it	Over 5 mm Two or more coins fit inside; the gap is visible from across the room
Length	Short Confined to a single bay or panel	Medium Crosses one structural element	Long Runs floor-to-ceiling, or across multiple courses of brickwork
Pattern	Random / hairline Plaster shrinkage, drying or paint	Vertical / diagonal Often thermal or settlement-related	Stepped / horizontal / displaced Suggests structural movement
Movement	Stable No change over months	Slow Visibly widening over weeks	Active Widening week to week, or doors/windows now sticking that did not before
Action	Redecorate when convenient Optional monitoring	Start a monitoring log Photograph and measure monthly	Seek professional advice Chartered Surveyor or Structural Engineer

Q U I C K C H E C K — 2 M I N U T E S

Score each row above. If you tick GREEN on every row, the crack is almost certainly cosmetic and does not require professional involvement. If you tick AMBER on any row, start a monitoring log (Section 12) before deciding. If you tick RED on any row — even one — the crack warrants further investigation.

C O M M O N M I S T A K E

Treating one bad day for a crack as the whole story. Cracks open and close with temperature, humidity and even daily heating cycles. A single observation is rarely diagnostic. Three readings, two weeks apart, reveals movement that a single visit cannot.

03 Pre-Inspection Checklist

What to take, what to measure, what to record

A crack assessment is mostly observation — but it is observation supported by the right tools. The list below is what fits in a coat pocket and turns a guess into a diagnosis.

Tools — small, cheap, transformative

- Crack-width gauge or steel rule with 0.1 mm divisions (free PDF gauges are widely available; £4–10 for plastic)
- Steel tape measure for crack length and any out-of-plumb readings
- Spirit level or smartphone level app for floor slope and wall plumb
- Torch — raking light reveals shadows that head-on light hides
- Smartphone camera with date stamp enabled
- Notebook or notes app — location, time, weather, temperature
- Optional: digital telltale or paper telltale strips for monitoring (Section 12)

What to record at the first visit

- Property address, date and time
- Outdoor temperature and recent weather (heatwaves and droughts cause clay shrinkage)
- Internal temperature and approximate humidity, where possible
- Location of crack — elevation, room, height from floor, position relative to openings, lintels and corners
- Width at widest point and three additional points along its length
- Length — confined to one bay, or running across multiple elements?
- Pattern — vertical, diagonal, stepped, horizontal, displaced, multiple
- Whether the crack appears on both sides of a wall
- Secondary symptoms — sticking doors or windows, sloping floors, bowing walls, gaps between skirtings or coving and adjoining surfaces
- Recent works — extensions, removed trees, drain repairs, basement excavation nearby

Photographs — do this once, do it properly

- A wide shot showing the crack in context (room, elevation, position)
- A medium shot showing the full length of the crack
- Close-ups at the widest point with a coin or scale rule for reference
- Date and time visible on the phone screen in at least one shot
- Repeat from the same angle on each subsequent visit

S U R V E Y O R ' S I N S I G H T

A single dated photograph with a coin in shot is more useful than ten close-ups without scale. Buyers, solicitors and insurers all want context first; detail second. Build the record so a stranger can understand the crack from the photographs alone.

04 Cracks by Width

The single most useful number — and the one most often missed

Width is the most quoted measurement in cracking, and the most often misread. Use the bands below as a starting point, not a verdict — always read width alongside pattern, length and movement.

Width band	Severity (BRE Digest 251)	What it usually means	What to do
<0.1 mm	Negligible (Cat. 0)	Hairline. Plaster shrinkage, drying or paintwork.	No action. Decorate when convenient.
0.1–1 mm	Very slight (Cat. 1)	Minor. Thermal movement, minor settlement, mortar shrinkage.	Monitor. Decorate when stable.
1–5 mm	Slight (Cat. 2)	Common. Light cracks affecting external brickwork or internal finishes. Often filling-and-decorating only.	Monitor over 6 months. Investigate if widening or pattern is structural (stepped, horizontal, displaced).
5–15 mm	Moderate (Cat. 3)	Notable. Doors and windows may stick. Brickwork repointing typically needed.	Seek professional advice. Investigate cause.
15–25 mm	Severe (Cat. 4)	Significant structural movement. Doors and windows out of square. Brickwork may need replacing in sections.	Professional assessment essential. Likely structural engineer involvement.
Over 25 mm	Very severe (Cat. 5)	Major movement. Risk to structural integrity. Stability concerns.	Immediate professional inspection. Insurance involvement likely.

T H E P R A C T I C A L R U L E

The BRE Digest 251 categories above are indicative — they describe what is typically true, not what is always true. A 0.5 mm hairline that runs in a stepped pattern across an external wall above a tree is more concerning than a 4 mm vertical crack along an extension junction. Width tells you the size of today's symptom; pattern and movement tell you the cause.

C O M M O N M I S T A K E

Quoting a width without saying where it was measured. Cracks taper. The widest point is what matters — measured with a gauge, in good light, at a known location you can re-measure six months later.

05 Cosmetic & Low-Risk Cracking

Common, predictable, mostly harmless

Most cracks fall here. Recognise them, monitor briefly, and redecorate when convenient. Moving past these confidently is one of the most useful skills a homeowner can develop — it saves money and worry in equal measure.

Plaster / Finish Cracks

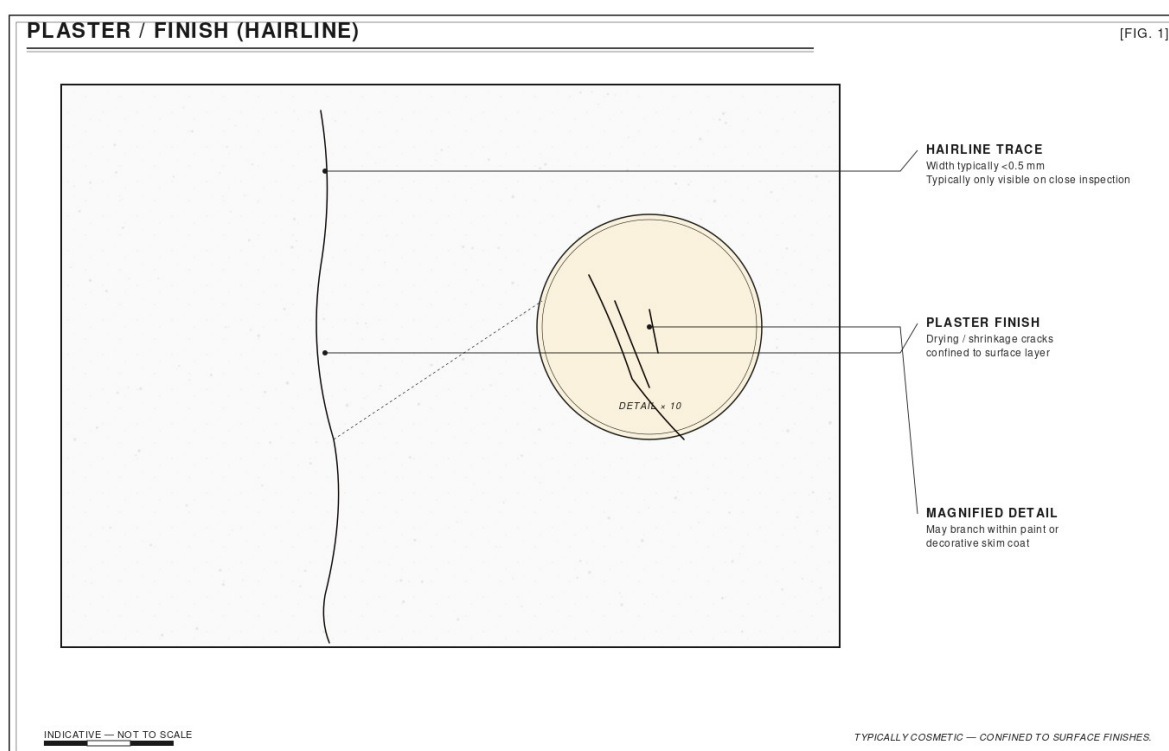


Fig. 1 — Hairline plaster cracking with magnified detail.

What this means: Hairline cracks in plaster or decoration are extremely common. Drying shrinkage, minor thermal movement, or settlement of plasterboard joints are typical causes. The crack is confined to surface finishes and does not extend into the structure.

What to do: Monitor for change. If stable across two seasons, fill and redecorate as part of normal maintenance. No professional involvement required.

Vertical Cracks

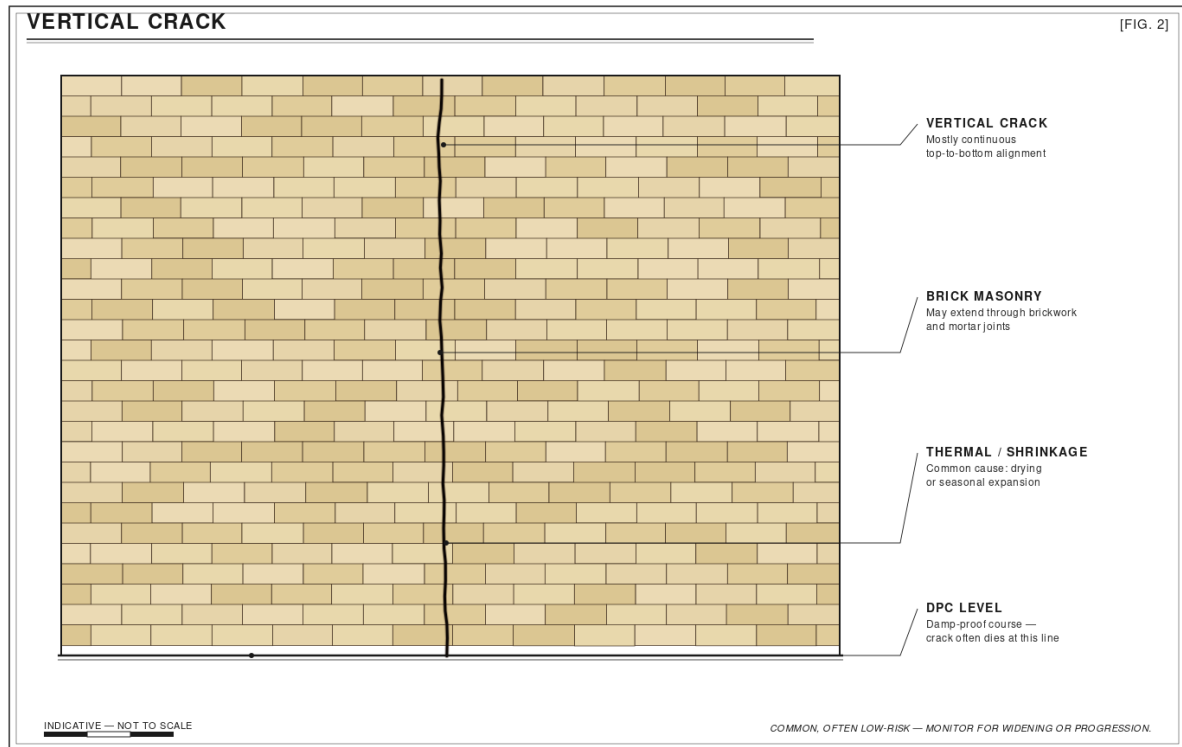


Fig. 2 — Vertical cracking through brickwork.

What this means: Vertical cracks often follow perpendicular brick joints and typically reflect thermal expansion, drying shrinkage or minor settlement. Common at wall-to-wall junctions and above or below openings.

What to do: Monitor over 6 months. Investigate further if the crack widens, mirrors on both faces of the wall, or is associated with sticking doors or windows.

Ceiling Cracks

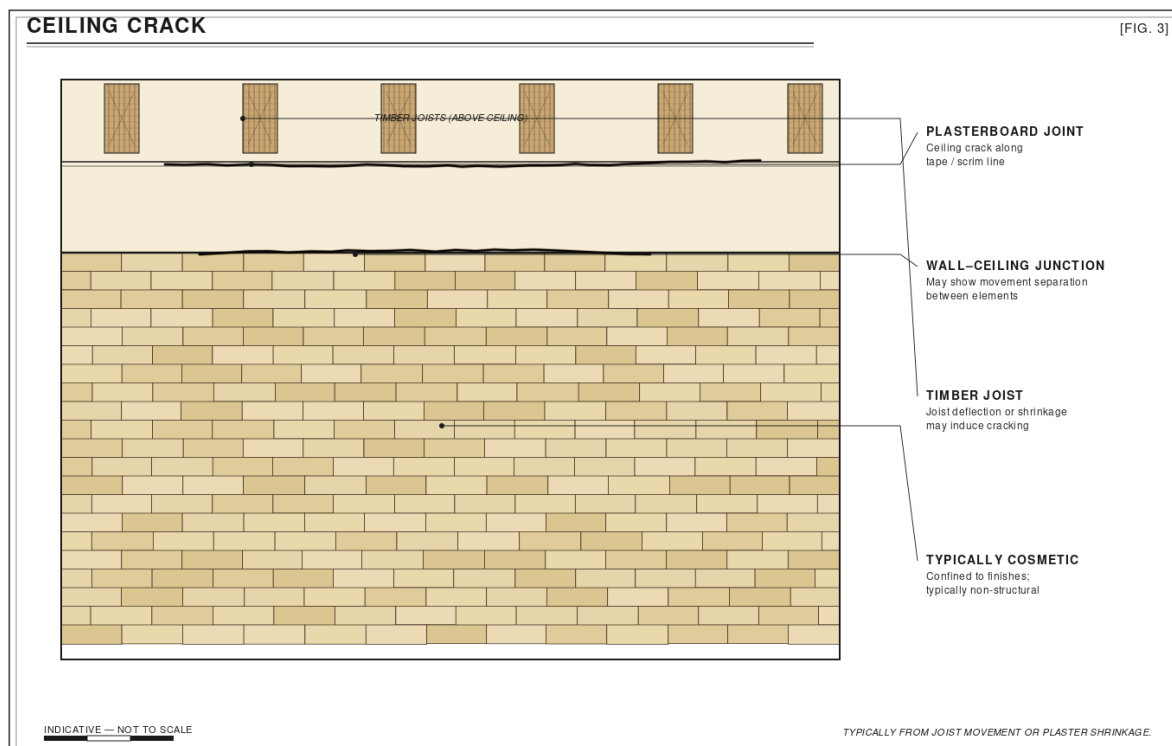


Fig. 3 — Plasterboard joint and wall-to-ceiling junction cracks.

What this means: Ceiling cracks typically follow plasterboard joints or wall-to-ceiling junctions. Common causes are normal seasonal movement and minor floor deflection above. The crack is in the finish, not the structure above.

What to do: Fill and redecorate once stable. Investigate further if accompanied by sagging, staining (water ingress) or noticeable bouncing of the floor above.

Extension Junction Cracks

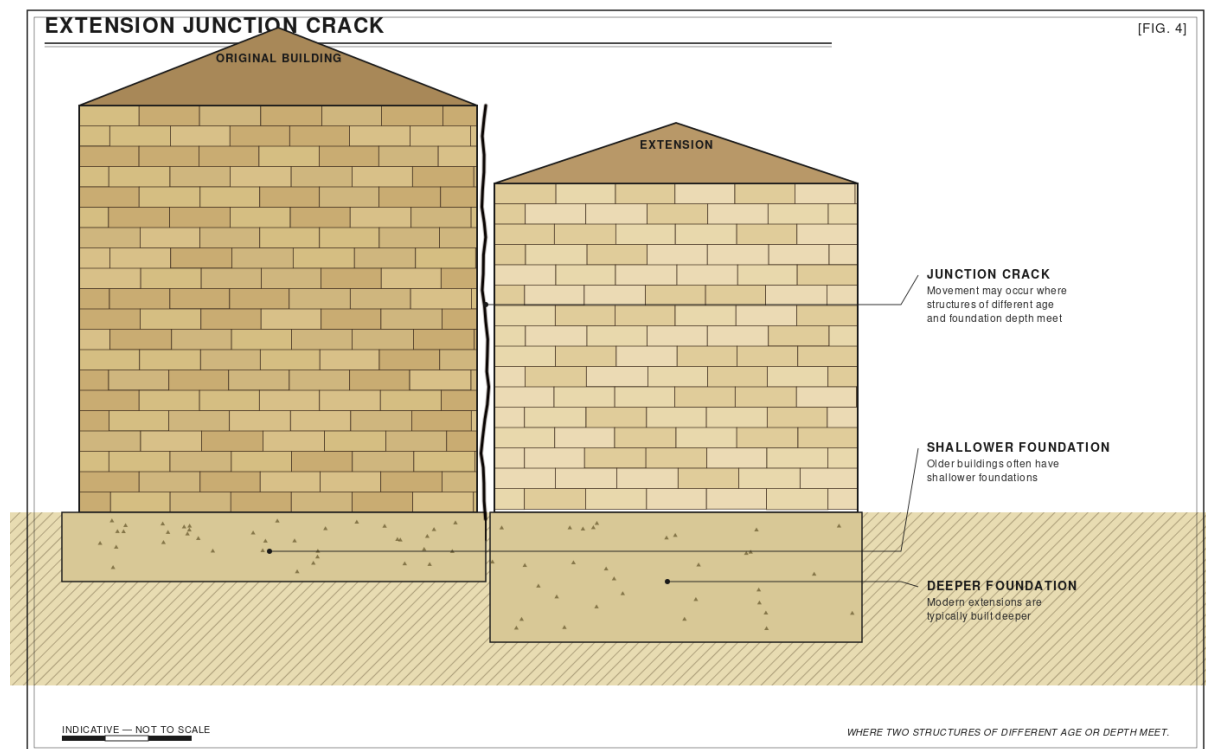


Fig. 4 — Vertical crack at extension-to-original junction.

What this means: Cracks at the junction between an extension and the original building are common because the two structures often have different ages, foundation depths, and rates of thermal and moisture movement. Vertical cracking at the junction is normally a movement-of-fabric issue, not a structural failure.

What to do: Monitor for widening. Where cracking is consistent, a flexible mastic joint at the junction often resolves the appearance. Further assessment is recommended if cracking is progressive or associated with movement of either building.

SURVEYOR'S INSIGHT

Many of the cracks in this section are commonly described as "structural" by buyers seeing them for the first time. They almost never are. A vertical crack at an extension junction that has been there for fifteen years and not changed is, quite simply, the building accommodating itself. Document, monitor for one season, and the answer is usually clear.

06 Movement-Related Cracking

Patterns that tell you the cause

These cracks tell a story. Pattern is the diagnostic clue — a stepped crack means something different from a horizontal one, and a diagonal from an opening corner means something different again. Read them together with width, length and movement.

Stepped Cracks

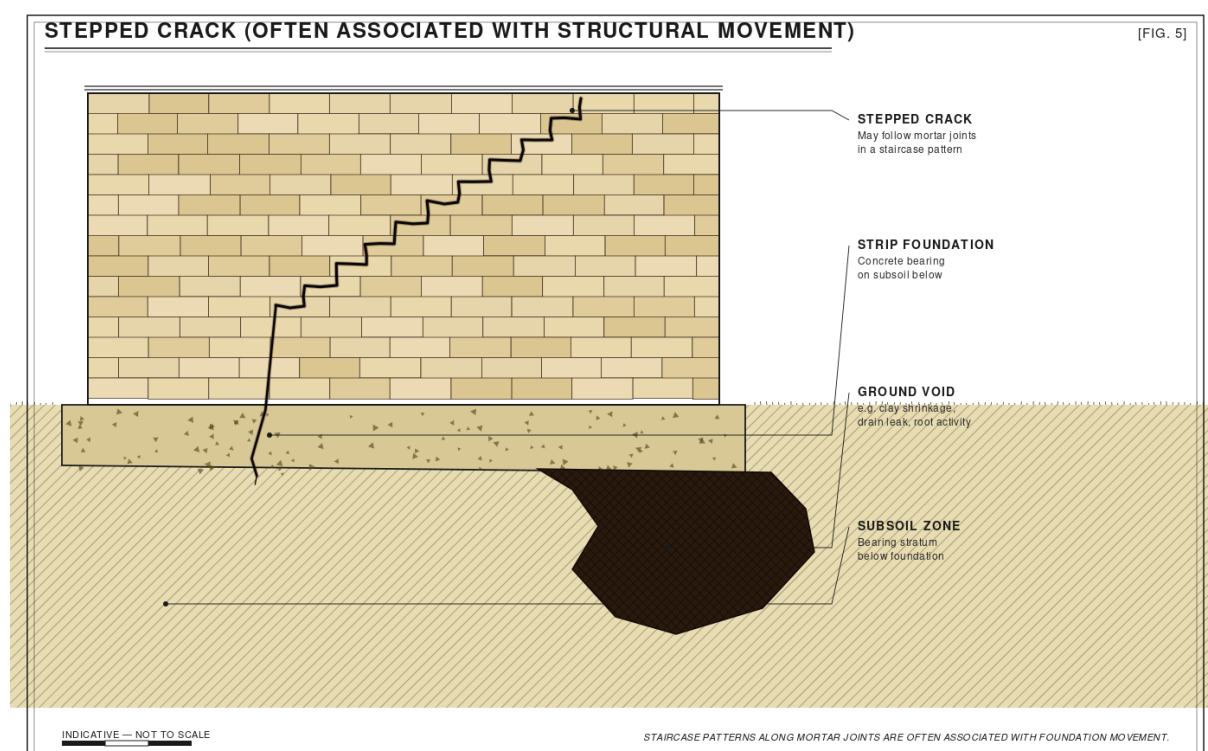


Fig. 5 — Stepped cracking pattern across masonry.

What this means: Stepped cracks follow mortar joints in a staircase pattern across brickwork. The pattern strongly suggests structural movement — most often associated with foundation movement, clay shrinkage, drainage failure or root activity beneath the affected section.

What to do: Monitor carefully. Seek professional advice where the crack exceeds approximately 5 mm at its widest point, where it widens visibly over weeks, or where it is associated with secondary symptoms such as sticking doors or sloping floors.

Diagonal Cracks Around Openings

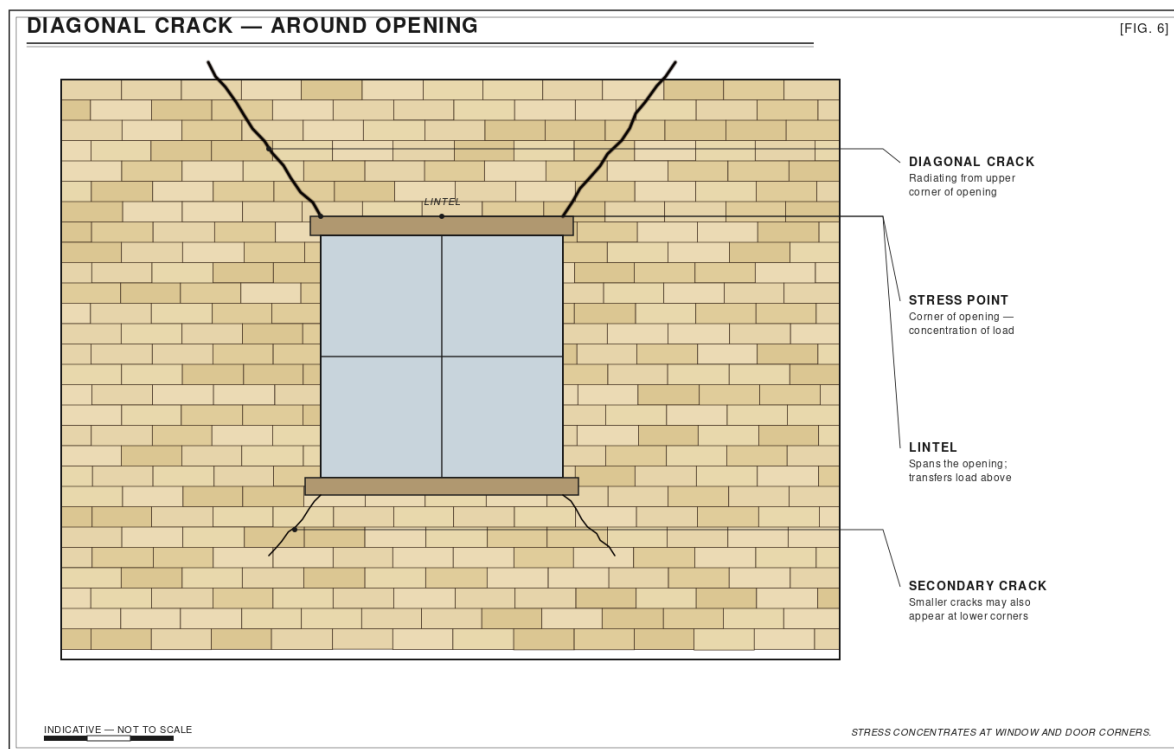


Fig. 6 — Diagonal cracks from opening corners.

What this means: Diagonal cracks radiating from the corners of windows and doors are typical stress-concentration cracks. They may indicate localised settlement, lintel deflection, or simply seasonal movement around a stress-prone area.

What to do: Monitor and assess in the context of other symptoms — particularly sticking openings, racked frames, or cracks visible from outside in the same area.

Lintel Cracks

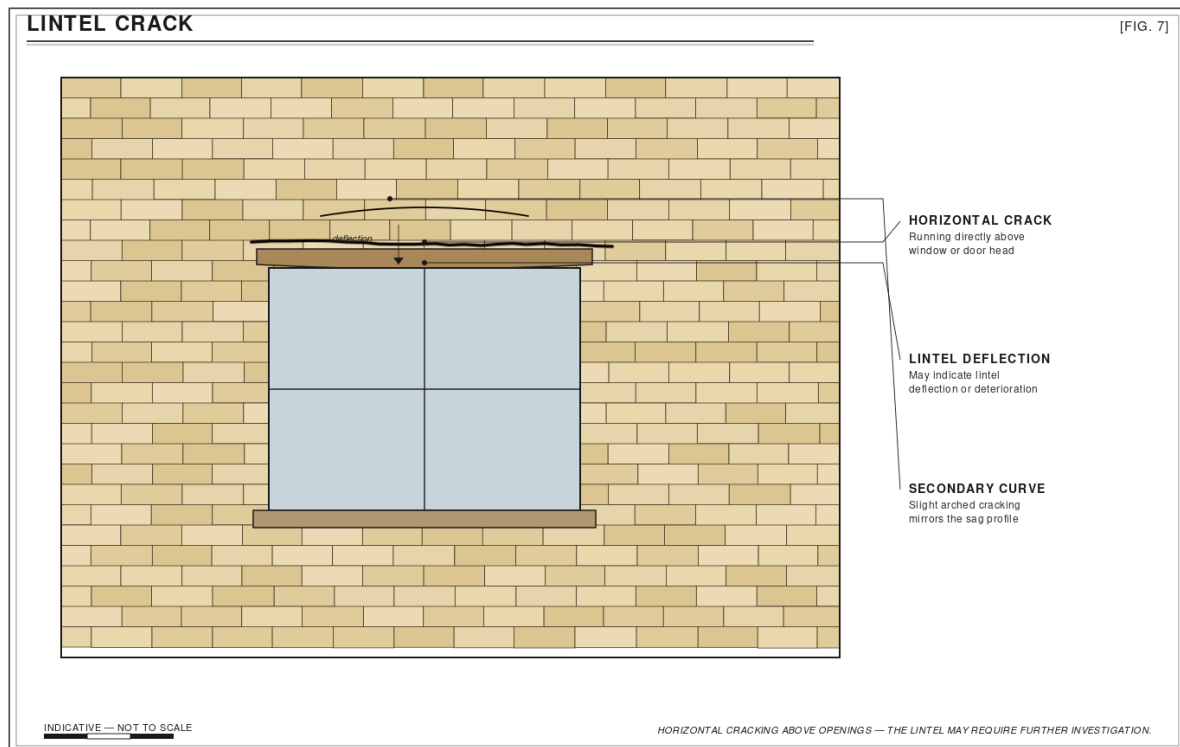


Fig. 7 — Cracking pattern associated with lintel deflection.

What this means: Horizontal cracking at the level of a lintel — the structural element bridging the top of an opening — may indicate lintel deflection, deterioration, or missing/inadequate lintel. Older properties with timber lintels, or cavity walls with corroded steel lintels, are particularly susceptible.

What to do: Further assessment is recommended where cracking is pronounced, progressive or associated with movement of brickwork above the opening. Lintel replacement or strengthening is a defined structural repair, often warranting a structural engineer's involvement.

Bay Window Cracks

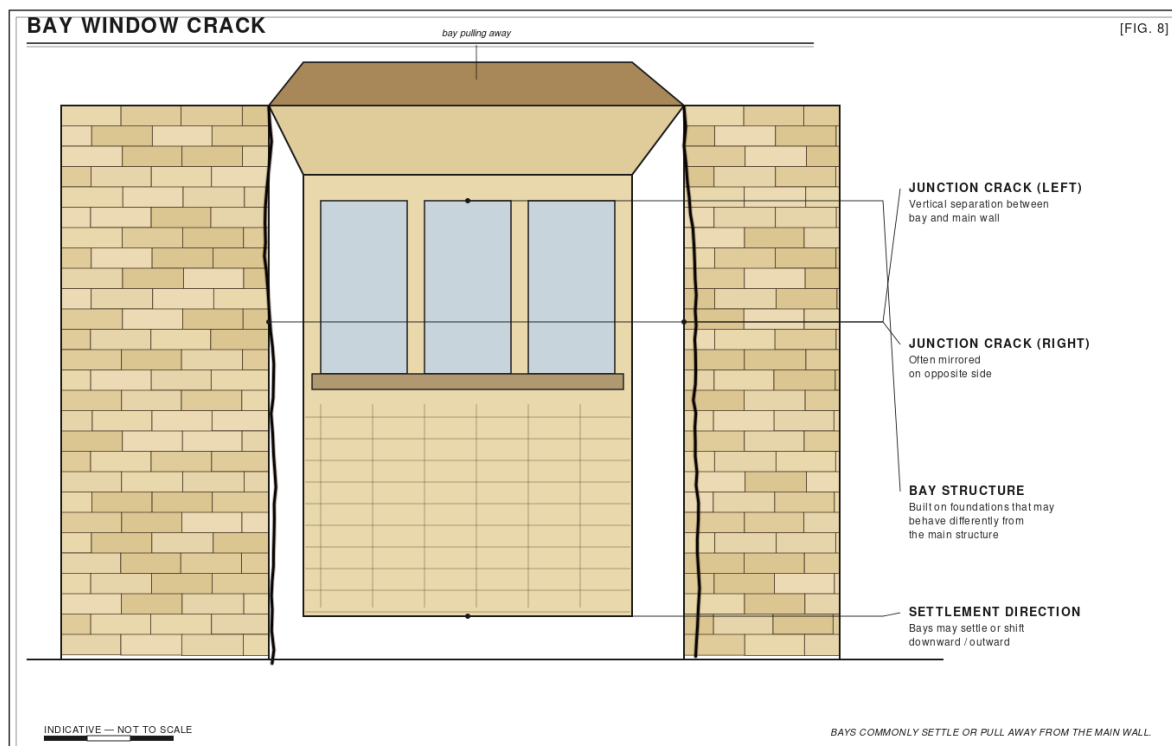


Fig. 8 — Bay-to-main-wall junction cracking.

What this means: Bay windows are often founded on shallower footings than the main wall, and can move independently. Vertical cracking at the bay-to-wall junction is common and is rarely structurally significant on its own.

What to do: Monitor for progression. Seek professional advice where cracking is widening or is associated with bay-floor movement. A flexible mastic joint may be acceptable as a long-term solution where movement is minor.

THE PRACTICAL RULE

A stepped crack in the bottom corner of an external wall, on the same elevation as a mature tree on a clay subsoil, is a classic combination. Even a hairline that fits this pattern warrants monitoring for at least one full summer. Pattern + context tells you what width alone cannot.

07 Higher-Risk Indicators

Patterns that warrant professional investigation

The cracks in this section are not necessarily worse — width still matters — but the pattern is one that tends to mean something specific. Treat any of these as a prompt to escalate, not panic.

Horizontal Cracks (External Walls)

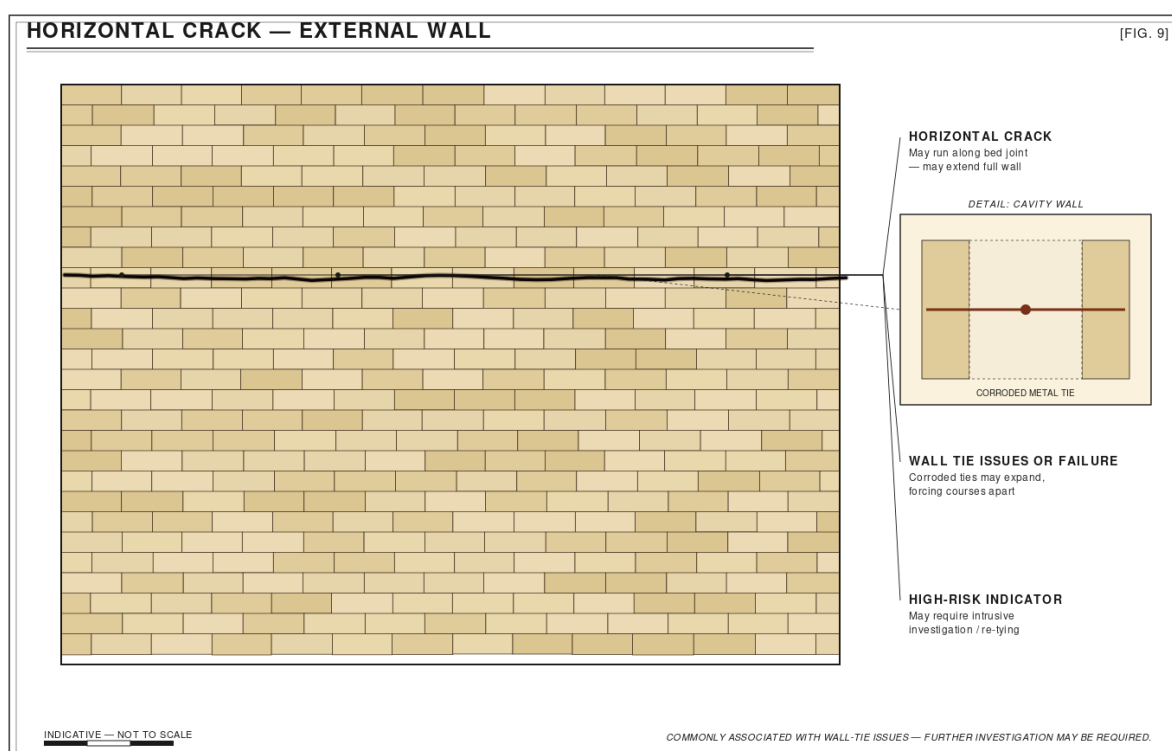


Fig. 9 — Horizontal cracking along bed joints.

What this means: Horizontal cracking along bed joints in external brickwork is often associated with cavity wall tie corrosion. As galvanised steel ties rust, they expand within the bed joint, lifting the masonry above. The cracking is usually regular — a single course every 4 to 6 courses up the elevation.

What to do: Further investigation is required — an endoscope inspection of the cavity by a tie specialist, or a structural engineer's opinion. Tie replacement is a defined remedial process and is often supported by structural warranty insurance.

Tapered Cracks

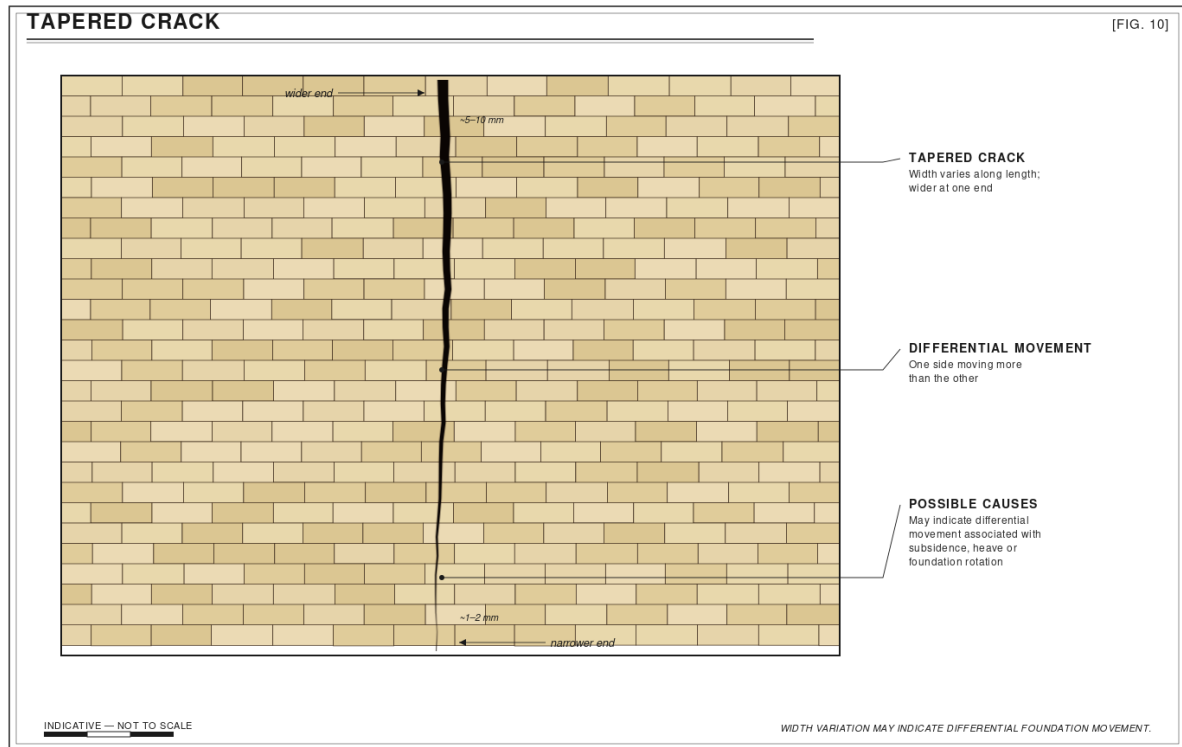


Fig. 10 — Tapered crack widening downward.

What this means: Cracks that vary in width along their length — narrow at one end, wide at the other — indicate uneven movement. Differential settlement, subsidence and heave all produce tapered cracks; the direction of taper helps suggest which.

What to do: Monitor carefully and seek professional advice if the crack is progressive. Photograph at the widest point with a scale and repeat from the same angle every month.

Cracks on Both Sides of Wall

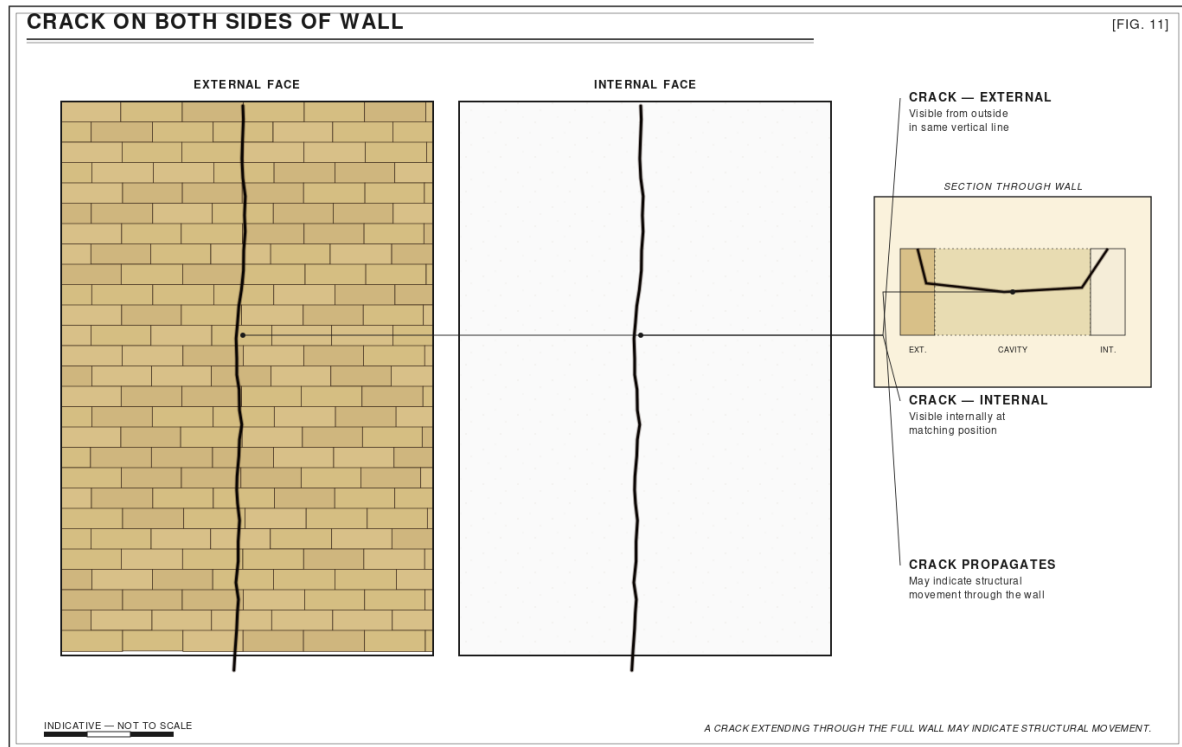


Fig. 11 — Crack visible on both faces of a wall.

What this means: A crack visible internally and externally in the same position is a through-wall crack — the masonry has parted on both faces. This indicates structural movement rather than finish-only cracking.

What to do: Professional assessment is recommended. Through-wall cracks are a defined structural symptom; pattern, width and movement all need to be assessed alongside cause.

Cracks with Displacement

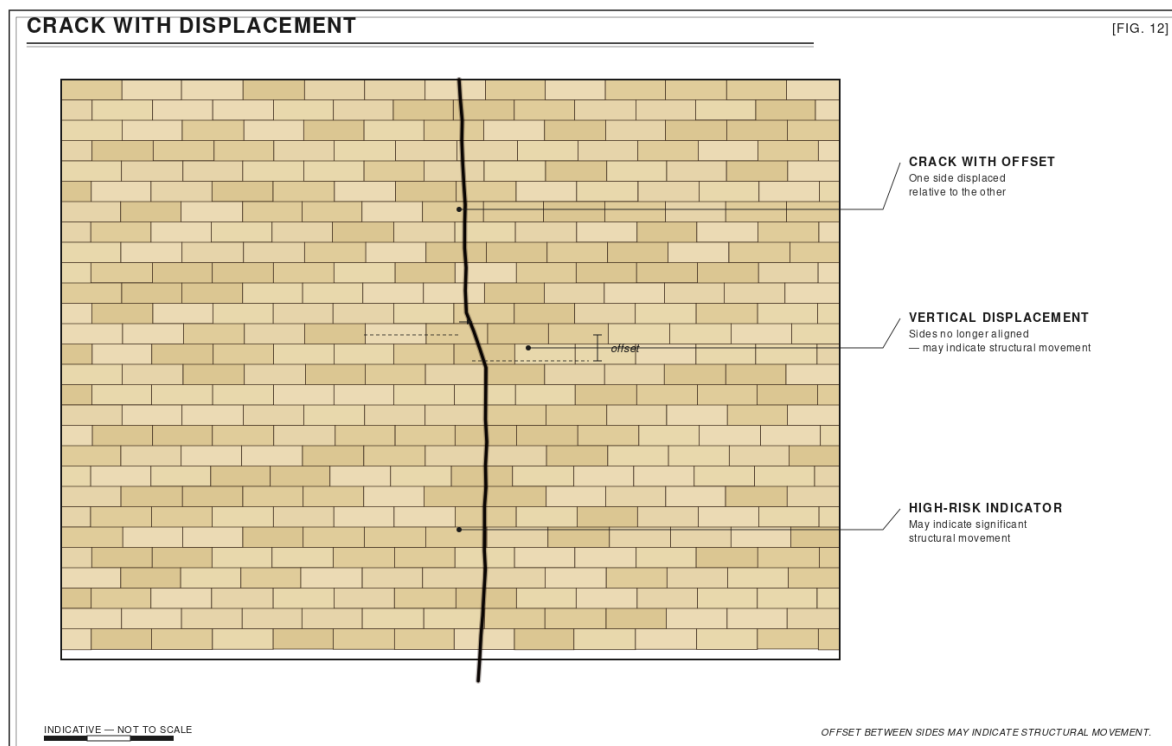


Fig. 12 — Offset masonry across a crack.

What this means: A crack where one side of the masonry is offset from the other — the surface no longer aligns across the crack — indicates significant structural movement. The two sides have moved relative to one another, not just opened up.

What to do: Further investigation is required. Displacement is a strong structural indicator; it should be photographed, measured and reported to a structural engineer or chartered surveyor.

IMPORTANT

None of the patterns in this section means the building is unsafe today. They mean the cause has moved beyond “routine fabric movement” — and the appropriate next step is professional assessment, not panic. Most properties exhibiting these patterns are repaired, not demolished.

08 Secondary Indicators of Movement

The clues outside the crack itself

Cracks rarely move alone. The supporting evidence — sticking doors, sloping floors, bowing walls, gaps appearing along skirtings — often tells you more than the crack itself. A 2 mm crack with a sloping floor is a different conversation from a 2 mm crack with no other symptoms.

Sticking Doors and Windows

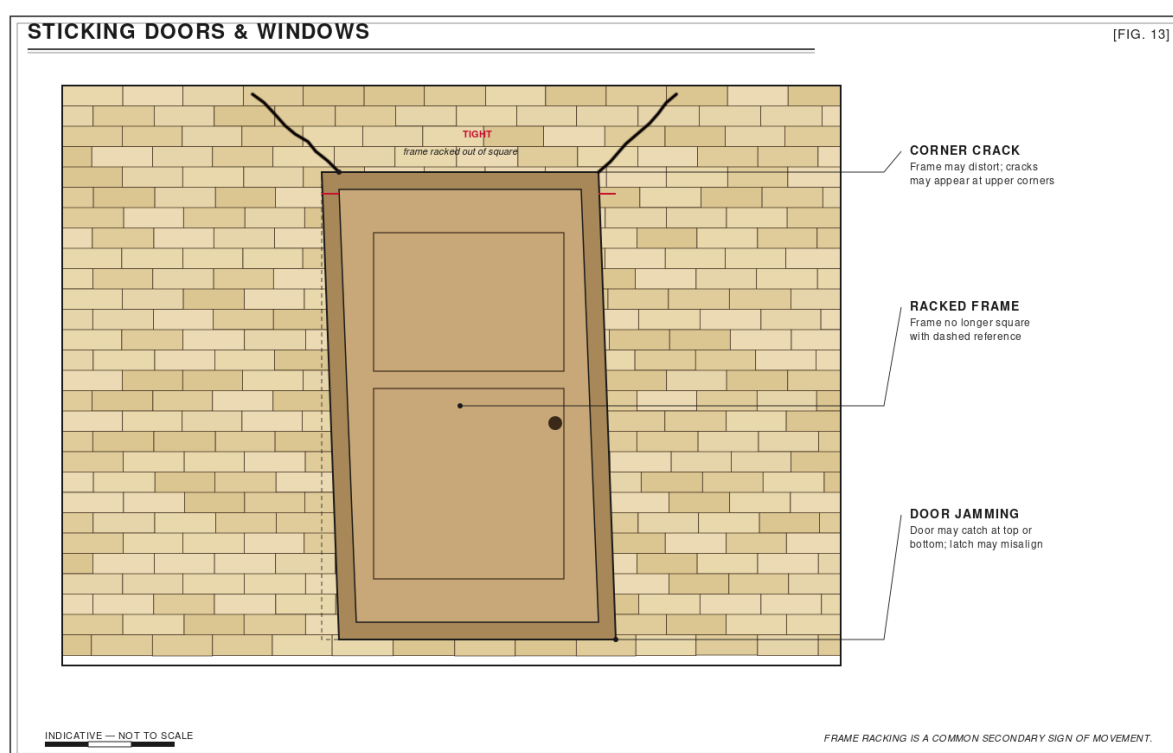


Fig. 13 — Racked door frame and associated diagonal crack.

What this means: Doors and windows that bind on their jambs or thresholds, or no longer latch correctly, indicate that the surrounding opening has racked — gone out of square. New stickiness in a door that previously worked correctly is a meaningful diagnostic signal.

What to do: Note the affected opening, the date the issue began, and any associated cracking. Read alongside other movement indicators — it is rarely diagnostic alone, but is useful corroborating evidence.

Sloping Floors

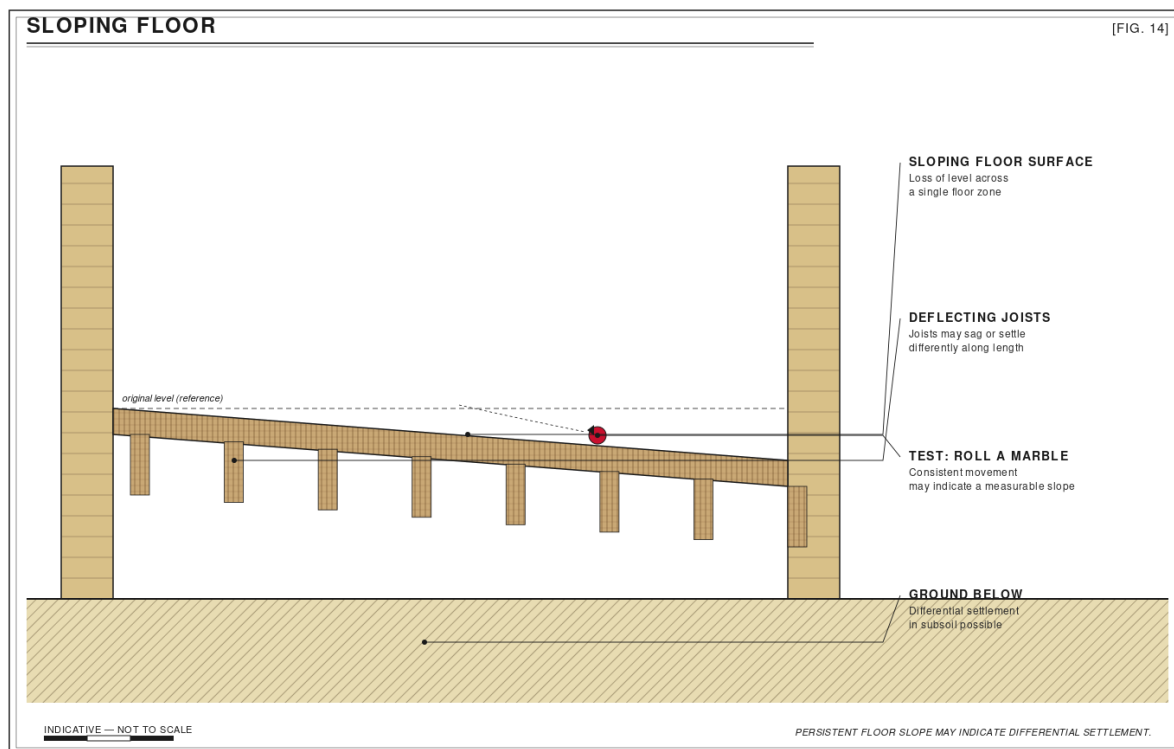


Fig. 14 — Floor slope and joist context.

What this means: Floors that fall noticeably to one side may indicate joist sag (often benign in older properties) or differential settlement of the supporting structure (less benign). The pattern of slope — across the room, only one corner, or only one side — helps suggest cause.

What to do: Measure the slope with a long spirit level or a marble. Persistent or worsening slope warrants professional advice. A one-off measurement is rarely diagnostic; document and re-measure six months later.

Bulging or Bowing Walls

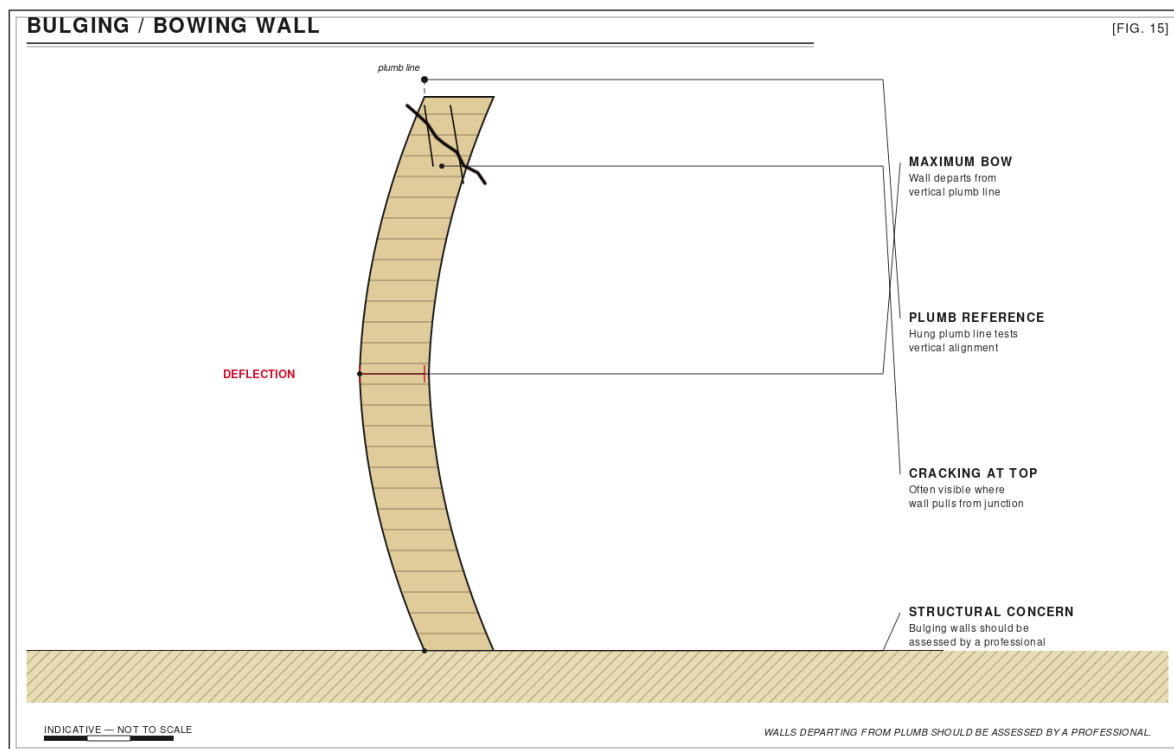


Fig. 15 — Wall bowing relative to plumb.

What this means: Walls that bow out of vertical alignment are a recognised structural concern. Causes include wall tie corrosion, lateral pressure from internal floors or roofs (“roof spread”), or long-term creep of older masonry. A bow exceeding around 25 mm is generally considered significant.

What to do: Professional assessment is recommended. The plumb of the wall should be measured at multiple heights and locations — a single reading is not enough. Tie replacement or buttressing may be required.

Multiple Cracks in One Area

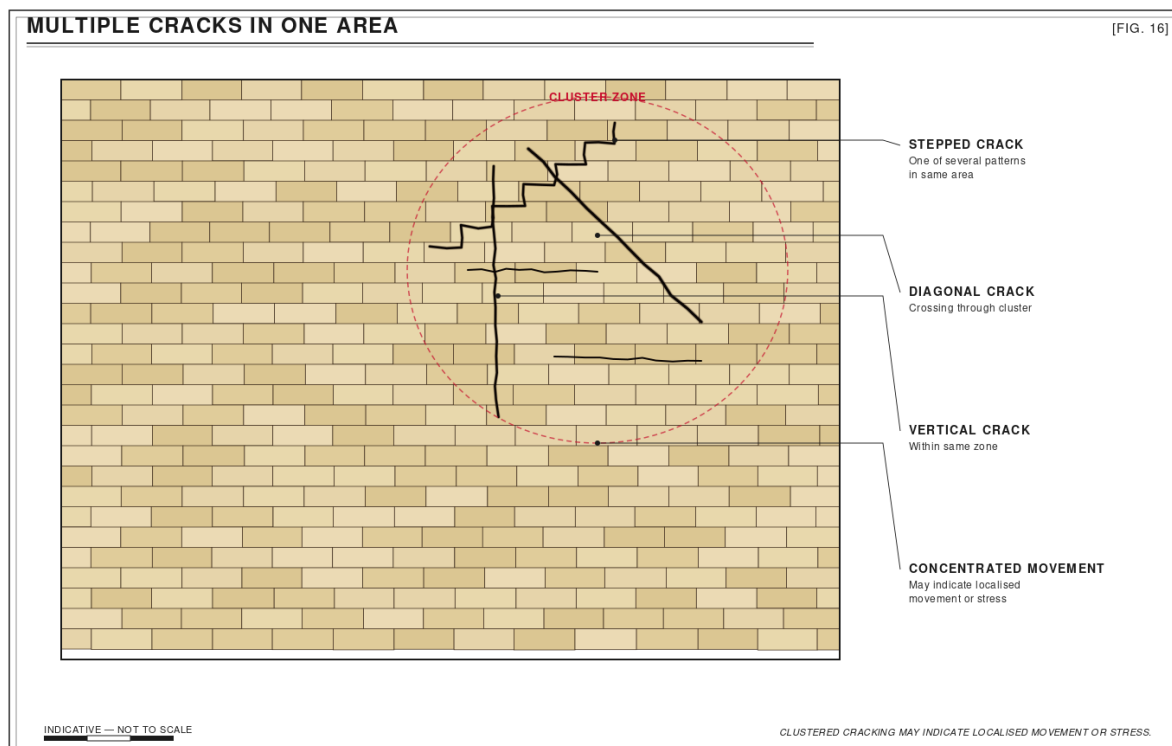


Fig. 16 — Cluster of cracks indicating a localised movement source.

What this means: Clusters of cracks in one zone of an elevation are more significant than isolated defects. Multiple types in proximity — stepped, diagonal, horizontal — often point to a single underlying movement source.

What to do: Photograph the cluster as a whole, not just the worst crack. Further investigation is recommended. The extent and pattern of clustering helps focus a structural engineer's investigation.

SURVEYOR'S INSIGHT

On any inspection where structural movement is suspected, as much attention should be paid to skirtings, coving and architraves as to the cracks themselves. Where these are pulling away from adjacent surfaces, opening up triangular gaps, or where doors that worked yesterday no longer close — that is the active movement story. The cracks are the visible record of it.

09 Foundation Movement Context

Subsidence and heave — what they look like

Subsidence and heave are the two scenarios most homeowners worry about — and the two most often misdiagnosed by people without a structural background. The diagrams below show the textbook pattern of each. Most properties exhibiting subsidence or heave can be successfully treated with insurance support and targeted remedial work.

Subsidence

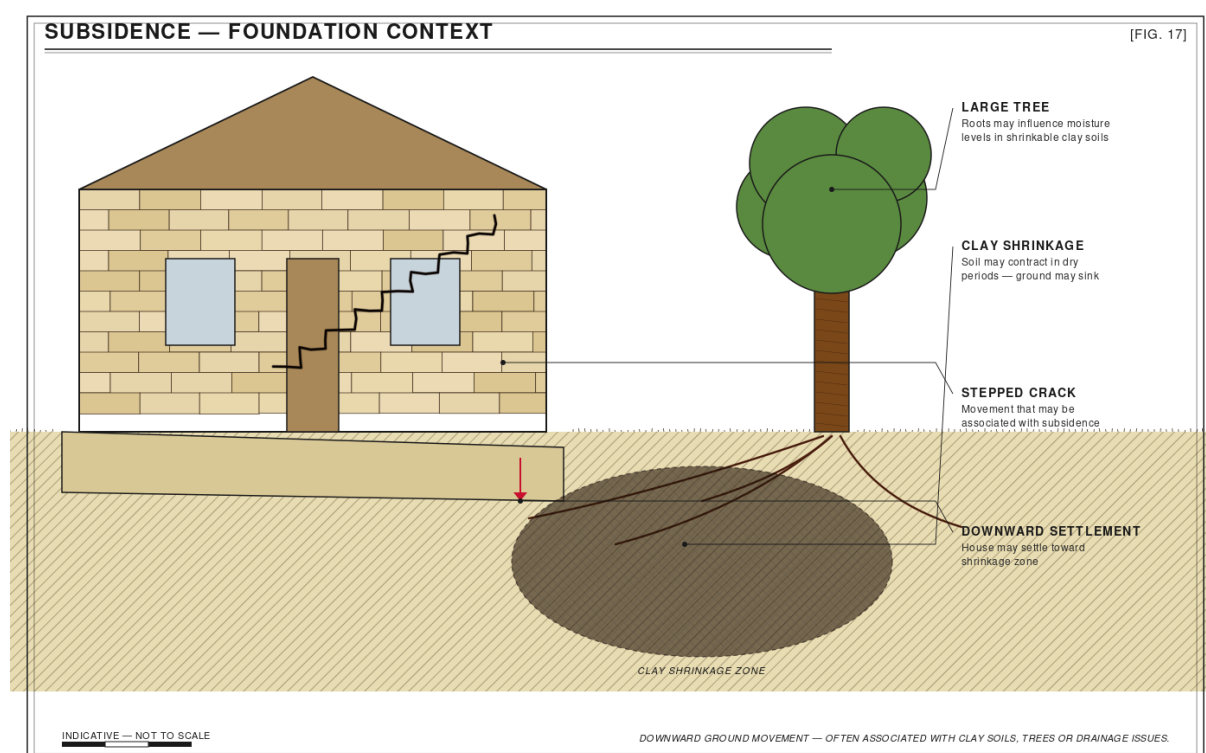


Fig. 17 — Subsidence: downward movement of foundation typically associated with clay shrinkage, trees or drainage.

Subsidence is downward movement of the ground beneath part of a building. The most common UK causes are seasonal clay shrinkage during dry summers (often associated with mature trees on clay subsoils), water leakage from defective drains undermining a foundation, and — less commonly — ground collapse over old workings.

Typical symptoms: stepped cracking on external brickwork (particularly at corners and around openings), tapered cracks widening downward, sticking doors and windows, sloping floors. Pattern usually concentrated on one elevation or one corner of the building.

What this means: May be associated with clay soils, mature trees, drainage failure or, rarely, ground collapse.

What to do: If suspected, contact your buildings insurer first — most UK home policies cover subsidence investigation under “escape of water” or “subsidence” peril. The insurer

will usually instruct a chartered loss adjuster, who will commission monitoring and a structural engineer's opinion before any work is recommended.

Heave

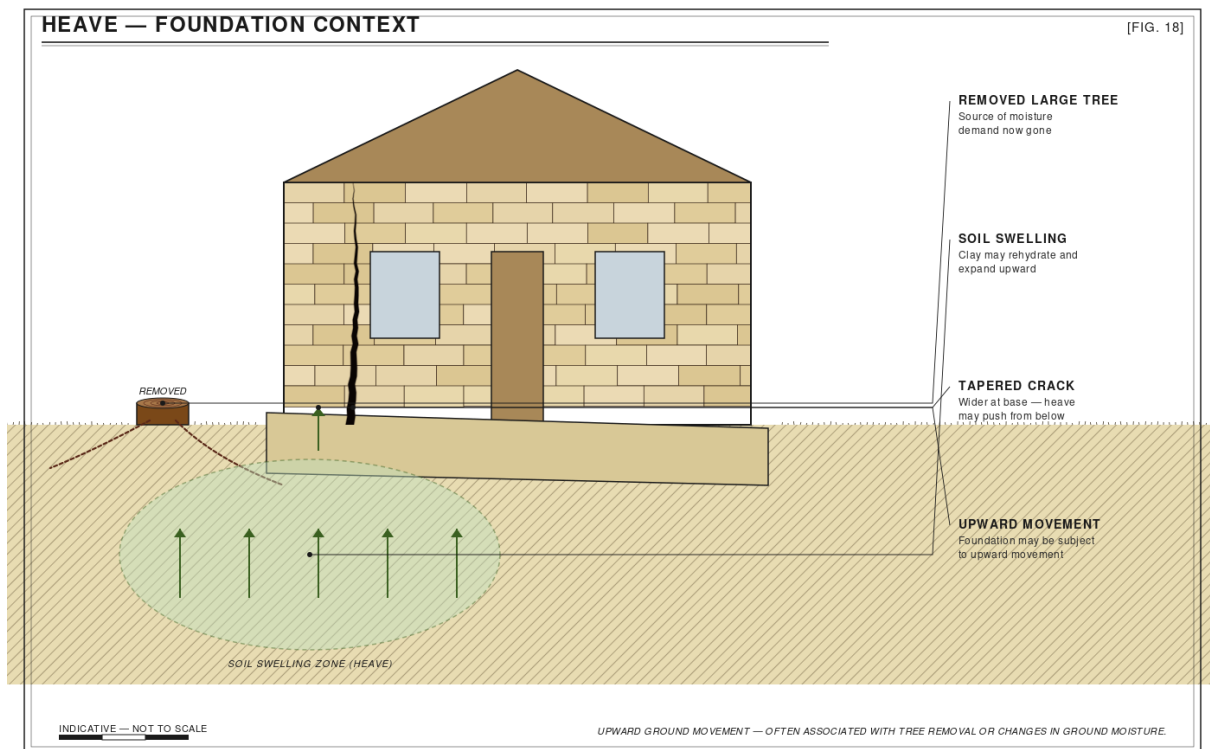


Fig. 18 — Heave: upward movement of foundation typically following tree removal or moisture changes.

Heave is upward movement of the ground. It is most often associated with the removal of a mature tree from clay soils — the soil rehydrates over years and swells, lifting the foundation it is in contact with. Less commonly, heave can follow drainage changes that locally raise the water table.

Typical symptoms: cracks widening upward (the inverse of subsidence taper), gaps opening between frames and adjacent walls, internal door bottoms rubbing on floors that have been pushed up. Heave generally proceeds more slowly than subsidence and may take 5 to 15 years to fully express.

What this means: May occur following tree removal, drainage changes or other moisture-balance shifts in a clay soil.

What to do: Professional assessment is recommended. Heave is harder to treat than subsidence; underpinning may be inappropriate. A structural engineer with experience of heave should be engaged before specifying any remedial work.

COMMON MISTAKE

Treating any wide stepped crack as “subsidence” and any wide upward-tapering crack as “heave”. Pattern is suggestive, not conclusive. Diagnosis requires soil context, monitoring, and often a level survey — work for an engineer, not a guidebook.

10 Real-World Scenarios

Four cases typically observed on inspection

Scenario 1 — Extension movement crack

What it looks like: A clean vertical crack, typically 1–3 mm wide, running floor-to-ceiling at the junction between an extension (often a kitchen or rear addition) and the original house. Visible internally, often visible externally in the same position. May open and close seasonally.

What it means: The two structures are moving differently. Extensions usually have shallower or modern raft foundations, different masonry, and a different thermal mass to the original building. Some movement at the junction is expected. Where it is consistent over years and not progressive, it is a fabric-of-buildings issue, not a foundation problem.

What to do: Monitor for one year through summer and winter. If the crack is not progressively widening, fill and redecorate — ideally with a flexible mastic joint at the junction, finished to match the surrounding wall. Re-cracking after one season is normal; specify the joint to be flexible from the outset and maintenance becomes minimal.

Scenario 2 — Tree-related subsidence

What it looks like: A stepped crack starting at low level on an external wall, often at a corner, on the elevation closest to a mature tree. The crack widens downward (tapered). Doors near the affected corner stick. Floor slopes toward the affected corner. Symptoms visibly worsen during dry summers.

What it means: The tree is drawing moisture from a clay subsoil during the growing season. The clay shrinks, the foundation in contact with it descends, and the building cracks. The longer the tree has been there — and the closer to the building — the larger the affected zone.

What to do: Do not remove the tree without professional advice — sudden tree removal can cause heave, which is harder to treat than the subsidence you started with. Notify your buildings insurer; subsidence is a defined peril on most UK policies. The insurer will commission monitoring (typically a year of telltale or precise level readings) before recommending an approach. Treatment options range from root-pruning the tree, to underpinning the affected section, to no work at all if movement is found to be stable.

PRACTICAL RULE

On clay subsoils, a tree planted within a distance equal to its mature height is sometimes considered an influencing factor. NHBC and BRE guidance differs by species (oaks and willows have a wider influence than smaller species). If unsure, a chartered surveyor or arboriculturist can advise.

Scenario 3 — Lintel failure

What it looks like: A horizontal crack at the level of a window or door head, sometimes with diagonal cracks rising from the top corners of the opening. The crack may be wider in the middle than at the ends — a classic deflection pattern. Older properties with timber or stone lintels, and post-1960s properties with mild-steel lintels, are particularly susceptible.

What it means: The lintel is no longer fully supporting the load above the opening. Causes include lintel corrosion (steel), decay (timber), undersizing for the actual load, or removal of internal support that was previously sharing the load.

What to do: Lintel issues warrant a structural engineer's opinion. Replacement is a defined remedial process — typically temporary support of the masonry above (acrow props), removal of the failed lintel, installation of a new lintel sized for the load, and brickwork made-good. Costs vary widely with access; expect £400–1,500 per opening for a straightforward residential lintel replacement, more where significant masonry disturbance is needed.

Scenario 4 — Differential settlement

What it looks like: A diagonal crack on an external wall, often radiating from one corner of the building. May be associated with a sloping floor on that side, sticking doors at the affected end, and visible distortion of openings. Often appears on extensions or properties that have been altered (e.g. a chimney removed without adequate compensation in the foundation).

What it means: Different parts of the foundation are settling at different rates. New build (extension) on shallower foundations next to older fabric on deeper ones; or older fabric on inadequate foundations next to repaired modern foundations. The differential, not the absolute settlement, is what causes cracking.

What to do: Where movement is recent and ongoing, professional assessment is required. Where movement appears to have stabilised (often the case in older alterations), monitoring is the appropriate first step. Differential settlement is sometimes corrected with underpinning of the affected section; sometimes accepted and the building made-good around it.

11 Common Misdiagnosis

The mistakes that cost money in both directions

Misdiagnosis 1 — Cosmetic treated as structural

A vertical hairline above a doorway gets escalated to a structural engineer; a 1 mm shrinkage crack along an extension junction triggers a panic call to a builder. The result is unnecessary professional fees, unnecessary worry, and sometimes unnecessary repair work that introduces new problems (e.g. rigid pointing in an area that genuinely needs to flex).

How to avoid it: Run the Section 02 traffic-light triage first. If everything is GREEN, document and monitor. Most cosmetic cracks declare themselves within a single season of monitoring.

Misdiagnosis 2 — Structural treated as cosmetic

The opposite mistake — and the one that costs more. A stepped crack on the corner of a house near a mature tree gets papered over and forgotten. A horizontal crack on an external wall gets dismissed as “natural movement” for years. By the time the symptoms become impossible to ignore, the underlying issue has progressed; what could have been a £2,000 wall-tie programme is now a £15,000 structural repair.

How to avoid it: Trust the pattern. Stepped, horizontal, displaced, tapered, through-wall — these patterns earn professional attention regardless of how thin the crack is. The cost of a one-hour surveyor’s opinion is dwarfed by the cost of late-stage structural repair.

Misdiagnosis 3 — The wrong crack is monitored

A homeowner spots a crack in the spare bedroom and starts a careful monitoring log. The crack stays stable for a year. They are reassured. Meanwhile, a stepped crack on the external corner — the actual problem — progresses unnoticed. The lesson: cracks are most useful when read alongside secondary symptoms (Section 08), and external elevations need the same scrutiny as internal ones.

Misdiagnosis 4 — The wrong professional is engaged

A homeowner with suspected subsidence engages a builder to underpin the property. No insurer notified. No structural engineer’s assessment commissioned. The works proceed; later, the building is over-underpinned (creating a fixed point that future movement now cracks against), the insurance position is jeopardised because the cause was never properly diagnosed, and the homeowner is left with a property that is harder to insure.

How to avoid it: For suspected subsidence, the buildings insurer comes first. For suspected lintel or wall-tie issues, a chartered surveyor or structural engineer comes first. A builder is rarely the first call when structural movement is suspected.

S U R V E Y O R ' S I N S I G H T

The hardest cracks to assess are not the dramatic ones. They are the patient ones — the 0.5 mm stepped crack on a north-east corner that has been there for years and has just started to widen. Where there is any sense that a crack is doing something different than it used to, that is worth a professional opinion. The change is the diagnostic signal, not the absolute width.

12 Monitoring System

The simplest way to know whether a crack is moving

Monitoring is the single most useful diagnostic tool available to a non-specialist. A monitored crack reveals its own diagnosis over time. The system below is used in residential inspections — simple, defensible, and accessible to anyone with a phone.

What you need

- Smartphone with date/time stamp on photographs
- Crack-width gauge (free PDF; or £4–10 plastic)
- Steel rule for length
- Permanent marker or pencil for reference points
- Optional: paper telltale strips (~£3 each) or digital telltales (£20–40) for higher-confidence monitoring

Setting up the monitoring

At the first observation, photograph the crack at three distances:

- Wide — showing the crack in the context of the wall and room
- Medium — showing the full length of the crack
- Close-up — at the widest point, with a coin or scale rule for reference

Mark two small reference points on the wall, one each side of the crack at its widest point. A pencil dot is enough; a small pencil cross on each side is better. Measure the distance between the dots with a steel rule. This is your baseline width.

Record:

- Date and time
- Outdoor temperature and recent weather (heatwave, prolonged rain, drought)
- Width measurement
- Any associated symptoms (sticking doors, floor slope, gaps)

Re-measurement intervals

Suspected cause	Interval	Total monitoring period
Cosmetic / drying shrinkage	Every 3 months	6–12 months
Thermal / seasonal movement	Every season + heatwave/drought	12 months minimum
Suspected subsidence (clay, trees)	Monthly through summer; quarterly otherwise	12 months minimum

Active widening seen	Weekly initially, then escalate	Engage professional immediately
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When to escalate

- Width increases by more than 1 mm between visits, or by 2 mm over the monitoring period
- Crack lengthens, branches, or new associated cracks appear
- Doors or windows that previously worked correctly start sticking
- Floor slope becomes measurable, or measurably worse
- Skirtings, coving or architraves pull away from adjacent surfaces
- Any of the patterns in Section 07 are present

QUICK CHECK — PAPER TELLTALE

Where a clear pass/fail is preferable, a paper telltale strip is the simplest reliable method. Two transparent plastic strips overlap across the crack, with millimetre crosshairs. Movement of one side relative to the other shows up immediately. Sold individually for around £3; reads to about 0.5 mm of accuracy. For higher precision, digital telltales record temperature, humidity and crack movement for several months on a single battery.

13 Cost & Insurance Guidance

What things cost — and when insurance gets involved

The figures below are indicative UK ranges as of typical 2024–2026 pricing for residential properties. Costs vary widely with access, region and the standard of finish required. Always get at least two written quotes before committing to structural work.

Cosmetic / minor repair

Work	Indicative cost (UK)	Notes
Fill and redecorate one room (DIY)	£40–£100	Filler, sandpaper, paint
Fill and redecorate one room (decorator)	£300–£600	Per room, materials included
Repoint external brickwork — small section	£200–£600	Per panel; bricklayer/repair specialist
Flexible mastic joint at extension junction	£80–£250	Materials and labour, per junction
Crack stitching (helical bars in mortar joints)	£80–£200 / metre	Materials inclusive; bigger jobs cheaper per metre

Structural repair

Work	Indicative cost (UK)	Notes
Lintel replacement — single opening	£400–£1,500	More for stone or large openings
Wall tie replacement — average house	£1,500–£4,000	Per elevation; sometimes covered by warranty insurance
Underpinning — affected section	£10,000–£30,000+	Per affected corner; often insurer-led
Structural engineer's opinion	£400–£1,200	Depending on scope; site visit + report
Chartered Building Surveyor full survey	£600–£1,500	RICS Level 3 home survey indicative
Soil/site investigation	£800–£3,500	Typically commissioned by engineer

When insurance gets involved

Most UK buildings insurance policies cover subsidence, heave and landslip as standard or as a named peril. Excess for these claims is typically £1,000 — substantially higher than for other claims (often £100–£250). The cover normally includes:

- Investigation of the cause (monitoring, level survey, soil investigation)
- Engagement of a loss adjuster and structural engineer
- Remedial works — underpinning, tree management, drainage repair
- Reinstatement of damaged finishes

Cover does not normally extend to: cracks demonstrably caused by thermal movement, drying shrinkage or normal settlement; new build defects within the developer's warranty period (NHBC or equivalent should be approached first); or properties on which subsidence has been notified previously and remediated unsuccessfully.

I M P O R T A N T

Notify your insurer before commissioning your own structural assessment if subsidence or heave is suspected. Once an insurer is involved, they take responsibility for the diagnostic process; commissioning your own engineer first can complicate the claim. For lintel, wall tie or thermal cracking issues — which are not normally insurer-led — it is appropriate to commission a chartered surveyor or structural engineer directly.

C O M M O N M I S T A K E

Treating the high subsidence excess as a reason not to claim. The cover is what makes investigation, monitoring and remedial work proportionate; without it, the homeowner pays for the engineering and the underpinning and the reinstatement, which is rarely cheaper than the excess.

14 When to Seek Professional Advice

Red flags and which professional to call

Red flags — escalate now

- Crack width over 5 mm, or any crack visibly widening week-on-week
- Stepped, horizontal, displaced or through-wall cracking on an external elevation
- Tapered cracks — either widening downward (subsidence pattern) or upward (heave pattern)
- Doors or windows that have begun sticking where they previously worked correctly
- Sloping floors — measurable with a long spirit level or marble
- Walls bowing more than 25 mm out of plumb at any point
- Multiple cracks clustering in one zone of one elevation
- Cracking accompanied by drainage failures, recently removed trees, or recent excavation work nearby

Which professional, and when

Situation	Who to call
Suspected subsidence or heave (clay subsoil, mature trees, sticking doors, sloping floors)	Buildings insurer first — they will typically appoint a loss adjuster and a structural engineer. Do not commission works independently before notifying the insurer.
Lintel deflection, wall tie failure, masonry distortion	Chartered Surveyor (RICS) or Structural Engineer (IStructE / ICE) directly. Two written quotes before commissioning works.
Pre-purchase: cracks observed on a property you are buying	RICS Level 3 (Building) Survey, with the surveyor specifically asked to comment on observed cracking. If significant, follow with a structural engineer's opinion before exchange.
Cracks reported by a tenant in a let property	Inspect within a reasonable time. Document. If structural movement is suspected, commission a chartered surveyor's opinion. Notify insurer if subsidence/heave is suspected.
New build cracks during the warranty period	NHBC or equivalent warranty provider first. The developer's defect liability may apply.

Cracks in a listed building	Conservation-accredited Chartered Surveyor or Structural Engineer. Local authority Conservation Officer may need to be involved before remedial work.
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T H E P R A C T I C A L R U L E

A one-hour Chartered Surveyor's opinion is rarely the wrong answer when uncertainty exists. The cost is proportionate, the assessment is independent, and the resulting written advice is something insurers, lenders and buyers all recognise and use. It is the cheapest way to remove uncertainty.

15 Surveyor's Final Checklist

A single page to take with you on inspection

Print this page and walk it room by room. A ticked box is a defensible position.

Before you start

- Crack-width gauge or steel rule
- Spirit level (long) or smartphone level app
- Torch
- Smartphone with date/time stamp enabled
- Notebook or notes app for measurements and observations
- Coin or scale rule for photo reference

Each crack — record this

- Location: room, elevation, height, position relative to openings/lintels/corners
- Width at widest point and at three points along its length
- Length and pattern (vertical, diagonal, stepped, horizontal, displaced)
- Visible on both sides of the wall? Yes / No
- Photographs: wide, medium, close-up at widest point with scale
- Date, time, outdoor temperature, recent weather

Whole property — check this

- Doors and windows — any sticking, racked frames, latches not engaging
- Floors — any noticeable slope; test with spirit level or marble
- Skirtings, coving, architraves — any pulling away from adjacent surfaces
- Walls — visible bowing or out-of-plumb when sighted along
- External elevations — cracking corresponds to internal observations
- Drainage — visible defects, damp patches, blocked or running gulleys
- Trees — species and approximate height of any within 1.5 × mature height of building
- Recent works — extensions, removed trees, drains, basement, neighbour's works

Decision

- All GREEN on triage — redecorate when convenient
- Any AMBER — start a monitoring log; review in three months
- Any RED — seek professional advice; notify insurer if subsidence/heave is suspected

WHAT TO DO TODAY

Choose the worst crack on the property and run the full record above. Photograph it three times — wide, medium, close-up with scale — and write the numbers down. That single record, repeated in three months, is the start of every professional crack assessment.

The rule, in one sentence.

Read width, pattern and movement together — never one alone.
Most cracks are minor. The ones that matter are the ones that change.

I D E N T I F Y <i>Type, width, pattern</i>	M O N I T O R <i>Photograph and measure</i>	A C T <i>Decide — with evidence</i>
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If you follow this process — identify, monitor and act — you replace guesswork with evidence. That is what resolves cracking concerns.

A short note on scope

This toolkit provides general guidance based on professional surveying principles. It is written for homeowners, buyers, landlords and tenants as a practical education tool and does not replace:

- A full building survey by a Chartered Surveyor (RICS Level 2 or 3)
- A structural engineer's opinion where structural movement is suspected
- Insurer-led assessment where subsidence, heave or landslip is suspected
- Specialist investigation for cavity wall ties, lintels, drainage or trees

No reliance should be placed on this guide as a substitute for a professional inspection of a specific property. Every property is different, and definitive diagnosis requires inspection on site.

Language throughout this toolkit is indicative: words such as “typically”, “may”, “suggests” and “often” are used because cracking diagnosis is a probabilistic exercise informed by context. Indicative cost figures are based on typical UK pricing as of 2024–2026 and will vary with region, access and standard of finish.

Any references to RICS, BRE, NHBC and statutory frameworks are summarised for context only and are not legal or professional advice.

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