

## Engineering Final Report

This report sets out in concise terms the nature of the evidence collected and the consultant's conclusions and recommendations

### Policyholder, Property & Event Details

|                                |                                                                                                     |                                          |                                                                                   |                                                     |
|--------------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------|
| <b>Policyholder</b>            |                                                                                                     | <b>Date of Discovery</b>                 | 04/09/2025                                                                        |                                                     |
| <b>Risk Address</b>            | 1 Hartwood Gardens,<br>Waterlooville,<br><br>PO8 8RA                                                | <b>Our Ref</b>                           | IFS-ESU-SUB-25-0122071                                                            |                                                     |
| <b>Location of Damage</b>      | Single attached garage to the left of the main house                                                | <b>Date Affected Area(s) Constructed</b> | 2005<br><small>Addition/Conservatory</small>                                      | 2005<br><small>Main House/Original Building</small> |
| <b>Nature of Damage</b>        | Stepped diagonal cracking through the brickwork, distortion to the up-and-over garage door frame    | <b>Property Type</b>                     | Detached House                                                                    |                                                     |
| <b>Crack Widths</b>            | Cat 2, 1mm to 5mm - slight.                                                                         | <b>Indicated Mechanism of Movement</b>   | Rotational and downward movement to the rear and right compared to the main house |                                                     |
| <b>Occupiers' Observations</b> | Initially found the garage door difficult to operate and then noticed the cracking to the brickwork | <b>BRE Classification</b>                | Category 2                                                                        |                                                     |
| <b>Comments</b>                | See below                                                                                           |                                          |                                                                                   |                                                     |
|                                | <b>Previous Relevant Movement</b><br>N/A                                                            |                                          |                                                                                   |                                                     |

### Site Investigation & Monitoring Evidence

|                                             |                                                                                                                                                                                                                                                                          |                                            |                              |                            |            |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|------------------------------|----------------------------|------------|
| <b>Examination by Building Professional</b> | <input type="checkbox"/> Yes                                                                                                                                                                                                                                             | Richard Bryant BSc (Hons) MRICS            |                              |                            |            |
| <b>Arboriculture Assessment</b>             | <input type="checkbox"/> Yes                                                                                                                                                                                                                                             | <b>Report Ref(s):</b>                      | SA256755                     | <b>Date(s)</b>             | 24/10/2025 |
| <b>Geotechnical TP/BH Logs &amp; Pens</b>   | <input type="checkbox"/> Yes                                                                                                                                                                                                                                             | <b>Report Ref(s):</b>                      | C83563G36544                 | <b>Date(s)</b>             | 13/11/2025 |
| <b>Soil Laboratory Testing</b>              | <input type="checkbox"/> Yes                                                                                                                                                                                                                                             | <b>Ref:</b>                                | L29721                       | <b>Plasticity</b>          | High       |
|                                             |                                                                                                                                                                                                                                                                          | <b>Desiccated?</b>                         | <input type="checkbox"/> Yes | <b>Date(s)</b>             | 08/12/2025 |
| <b>Root Analysis</b>                        | <input type="checkbox"/> Yes                                                                                                                                                                                                                                             | <b>Report Ref(s):</b>                      | R62470                       | <b>Date(s)</b>             | 19/11/2025 |
|                                             |                                                                                                                                                                                                                                                                          | Ash roots                                  |                              |                            |            |
| <b>Drainage Survey</b>                      | <input type="checkbox"/> No                                                                                                                                                                                                                                              | <b>Ref(s):</b>                             | N/A                          | <b>Date(s)</b>             | N/A        |
|                                             |                                                                                                                                                                                                                                                                          | Drains are not within influential distance |                              |                            |            |
| <b>Heave Risk after Tree Removal</b>        | <input type="checkbox"/> Low/None                                                                                                                                                                                                                                        | <b>Assessed By</b>                         | Richard Bryant               | BSc (Hons) MRICS           |            |
| <b>Building Monitoring</b>                  | <input type="checkbox"/> Level                                                                                                                                                                                                                                           | <b>Crack Width (+/- mm)</b>                | N/A                          | <b>Level/Dist (+/- mm)</b> | 15 to 17mm |
|                                             |                                                                                                                                                                                                                                                                          | <b>Date of last reading</b>                | 12/08/2026                   |                            |            |
| <b>Monitoring Confirms</b>                  | Excessive seasonal movement exacerbated by implicated vegetation                                                                                                                                                                                                         |                                            |                              |                            |            |
| <b>Supporting Comments</b>                  | We have obtained all necessary evidence to confirm causality, demonstrate property damage and implicate the outlined vegetation without a reasonable doubt. Seasonal movement can only be caused by the effect of moisture extraction and rehydration within Clay soils. |                                            |                              |                            |            |

### Mitigation Actions / Scope of Repair

|                                                                                                                                               |                                                                                                                                                                                                                                                                        |                                                        |     |                                            |     |                                         |     |                      |     |                                                     |             |                                                          |                              |                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----|--------------------------------------------|-----|-----------------------------------------|-----|----------------------|-----|-----------------------------------------------------|-------------|----------------------------------------------------------|------------------------------|------------------------------------------|
| <b>Previous Mitigation?</b>                                                                                                                   | <input type="checkbox"/> No                                                                                                                                                                                                                                            | <b>Ownership</b>                                       |     | <b>Species</b>                             |     | <b>Label</b>                            |     | <b>Action</b>        |     | <b>Date Completed</b>                               |             | <b>Date Drain Repairs Completed / Defects Confirmed:</b> | No                           | Drainage not within influencing distance |
|                                                                                                                                               |                                                                                                                                                                                                                                                                        |                                                        |     |                                            |     |                                         |     |                      |     |                                                     |             |                                                          | <input type="checkbox"/> Yes | Ongoing Seasonal Movement?               |
| <b>If Effective Mitigation is REFUSED or Is a Root Barrier Possible?</b><br><small>(All Estimated &amp; Subject to Feasibility Study)</small> | <input type="checkbox"/> No                                                                                                                                                                                                                                            | <b>Location</b>                                        | N/A | <b>Estimated Depth (m)</b>                 | N/A | <b>Length (m)</b>                       | N/A | <b>Estimate</b>      | N/A | <b>'Stabilisation' costs (excl. Superstructure)</b> | £ 95,040.00 |                                                          |                              |                                          |
|                                                                                                                                               |                                                                                                                                                                                                                                                                        | <small>Ownership of land for potential install</small> |     | <small>Depth of Deepest Root +0.5m</small> |     | <small>Across Zone of Influence</small> |     | <small>+ VAT</small> |     |                                                     |             |                                                          |                              |                                          |
| <b>Mitigation Statement</b>                                                                                                                   | Should the effective mitigation be refused, we will have no other option but to stabilise the garage with a scheme of traditional mass concrete underpinning (stabilisation), and pursue the local authority for a recovery of these significant costs as noted above. |                                                        |     |                                            |     |                                         |     |                      |     |                                                     |             |                                                          |                              |                                          |

### Conclusion & Recommendations

**Building/Construction:**  
The affected building is a 4 bedroom detached house of traditional construction (circa 2005) with external cavity walls and pitched tiled roof. A single garage is attached to the left of the main house.

**Circumstances & Damage:**  
The damage was first noticed in September 2025 when the insured found the garage door not operating efficiently. Cracking through the brickwork of the garage has developed and has continued to worsen. The foundations of the garage are to the depth of 0.7 meters and was constructed as part of the original development.

**Site Investigations & Monitoring:**  
Foundations to the garage were measured at 700mm below ground level (BGL). This is below the depth of naturally occurring moisture evaporation and as such any influence on soil moisture content can only be caused by the seasonal effects of vegetation. Shrinkable, high plasticity Clay soils were encountered, and Penetrometer testing below foundation depth confirmed these soils to hold an adequate bearing capacity. Ash roots were found to the depth of 1.8 meters.

Monitoring has evidenced ongoing seasonal movement within the range of 18mm.

**Conclusion:**  
Our investigations have confirmed that the cause of the property damage is clay shrinkage subsidence. Causal vegetation has been identified as the neighbours Ash tree (T3) and the insured's Scots Pine (T4) in the Arboriculturist report mentioned above. These trees are located within influencing distance of the areas of damage and geotechnical investigations have confirmed the Ash roots penetrate underneath the affected foundations, no Roots from the Scot's pine were retrieved however the tree is only 2 meters from the rear of the garage.

In order to prevent any further and progressive damage to the garage we now require the statutory protection for both trees to be lifted so the trees can be removed. As experts in subsidence, we have outlined what will resolve the issue in our Arboriculturist report (noted above). If this is not forthcoming we will have no other option but to stabilise the garage using a traditional underpinning scheme and pursue a recovery of these costs from you by legal means.