

Introduction

- 1 The key to successful remediation of defects which give rise to water ingress is correct diagnosis of the problem(s). This Technical Note outlines key procedures, to provide a guide to less experienced investigators on how to undertake such work successfully on façade and slope glazing systems with extensive reported water leakage.

Collection of records

- 2 At the outset, if available, obtain:
 - O&M manuals;
 - Relevant Architect's drawings and specification(s);
 - BIM / 3D models of building and façade system(s);
 - Relevant subcontractor's as-built drawings, wind related calculations, and materials product data relating to the systems concerned;
 - System suppliers' fabrication and installation guidance;
 - Relevant weathertightness test reports available for the system(s) used;
 - Records of leakage reported to date;
 - If the building manager or user(s) have not been keeping such records, endeavour to set up for them a system for recording details of any future leaks (dates, global position on building (elevation, level, bay), localised points at which leakage is apparent (e.g. joints in framing, gaskets, window sills, soffits etc), approximate volume of water, weather conditions at the time and in the preceding 3 days, and photographs;
 - Details of any repairs or on-site water testing previously undertaken, including general maintenance and glass replacement records.

Desktop study

- 3 Endeavour to establish from the information available how the facade and/or slope glazing systems were constructed as this can help focus attention on potential causes of leakage. Thus, establish whether the installation includes:
 - Site-assembled stick-system framing;
 - Factory-assembled unitised framing;
 - Horizontal ribbons of windows interspersed with horizontal spandrels;
 - Windows (and possibly doors) in openings (e.g. in brickwork or rainscreen cladding);
 - Mixed façade types, systems and/or elements;
 - The involvement of more than one subcontractor, resulting in interfaces between different works packages;
 - Roofing:
 - Rooflights, roof penetrations, upstands, fall protection etc.