



Unique, market leading data for property professionals to understand groundwater flood risk. Combining comprehensive data on geology, permeability and historic groundwater levels, it advances data insight to reveal potential susceptibility to groundwater emergence rather than specific risk.

## What is a SD50 Report?

The definitive groundwater flood risk map data with unparalleled detail for clearer decisions. GW5 incorporates the new 5m Digital Terrain Model (DTM) for enhanced resolution at an individual property level. With the latest LIDAR data from the Environment Agency, it reveals the complex relationship between terrain and “ponding” of groundwater.

Address level insight delivers better insurance premium risk calculation, legal due diligence in property transactions and smarter resilience planning.

## What are the benefits?

- A range of groundwater flood risk data products to suit information and format needs
- Market leading 5m resolution groundwater data delivers unsurpassed clarity at a property specific level
- Developers and local authorities can screen sites and portfolios for risks as part of cost appraisals, scheme design and planning requirements
- Land owners and solicitors gain a full assessment of issues ahead of completion or project start

## What is Groundwater Flooding?

Groundwater flooding occurs when sub-surface water emerges from the ground at the surface or into Made Ground and structures. This may be as a result of persistent rainfall that recharges aquifers until they are full; or may be as a result of high river levels, or tides, driving water through near-surface deposits. Groundwater flooding is characterised by:

- Water flows to the surface or into basements, services ducts and other subsurface infrastructure rising up through floors or directly from the ground. This may be seen as diffuse seepage from the ground, as emergence of new springs or as an increase in spring flows
- Flooding may last a long time compared to surface water flooding, from weeks to months. Hence the amount of damage that is caused to property may be substantially higher. Likewise closures of access routes, roads, railways etc. may be prolonged
- Flooding may occur with a delay following periods of high rainfall rather than immediately during storms
- Emergent groundwater tends to be clear and relatively clean compared to muddy fluvial flood waters, but potential contamination by sewers and brownfield sites poses additional hazards
- Groundwater flooding or a shallow water table prevents rainfall infiltration and increases the risk of surface water flooding. This means that many surface floods are actually driven by groundwater conditions. But consideration of surface water in isolation and lack of evidence for groundwater conditions leads to incorrect analysis of overall causes

