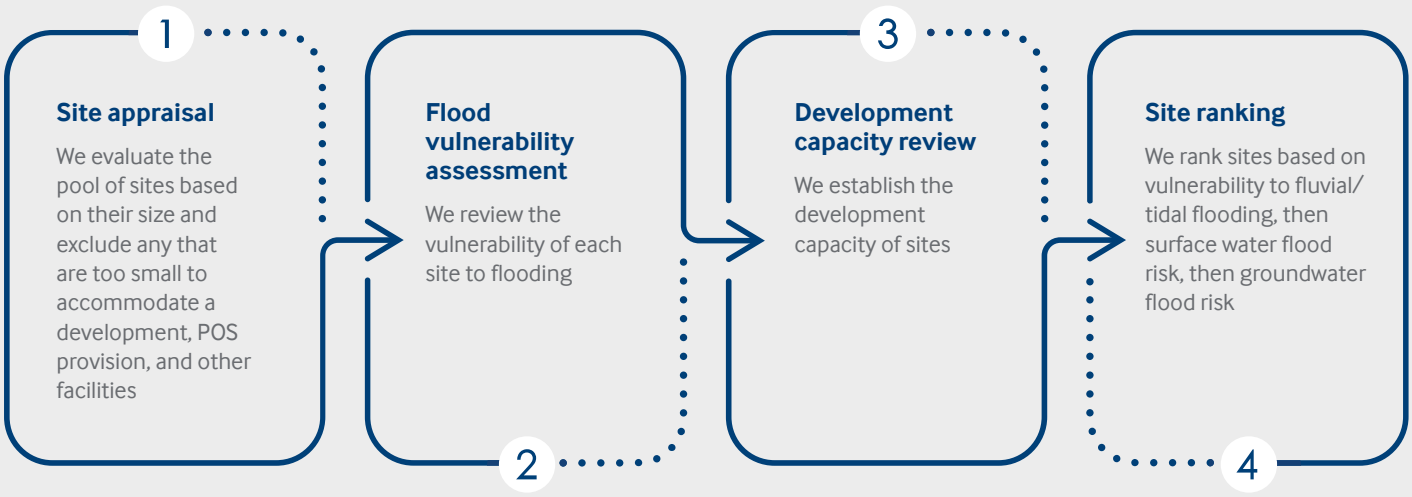
An introduction to
SEQUENTIAL TESTING

A sequential test is a crucial step in a flood risk assessment, designed to ensure that development is steered away from high-risk flooding areas. The process is complex and local authorities impose strict requirements that developers must meet to ensure their site is safe for development.

With so much to consider, we've produced an overview of our sequential test process including useful information to help you understand the challenges ahead.

Our staged approach

Our sequential test is carried out in four stages:



Determining flooding vulnerability

To complete our flood vulnerability assessments and determine how vulnerable each site is to flooding, we collect the following data:

- Area and percentage of site covered by Flood Zones 1, 2, 3a & 3b
- Presence of dry islands
- Climate change impact on fluvial flood risk
- Probability and percentage of site subject to surface water flooding (low, medium, high)
- Risk of reservoir flooding
- Potential for groundwater flooding
- Groundwater source protection zone

Considerations

- The presence of dry Islands: Important for safe access and escape routes
- The impact of climate change: Use the most comprehensive and up-to-date modelling available
- Tidal flood risk: Consider land raising as potential mitigation
- Reservoir Flooding: Considered residual risk, not significantly relied upon for ranking
- Sewage Flooding: Not used to distinguish between tied sites due to data limitations

How do we rank sites?

Our sequential test process provides our clients with a short list of sites ranked against flood risk. We compare and rank sites by:

1

Fluvial/tidal flood risk

- Sites in Flood Zone 1 are considered equal
- Ranked by percentage in 1% AEP surface water extent

2

Surface water flood risk

- Use Environment Agency's RoFSW mapping
- Consider 3.3% AEP or less area for initial ranking
- Further rank by 1% AEP surface water flood extent

3

Tiebreakers

- For equal rankings, we consider:
  - Percentage at risk from surface water flooding
  - Percentage at risk from groundwater flooding
- Alphabetical order by site name as final tiebreaker

Could your site be exempt?

Your project may not need a sequential test if it is one of the following:

- A household development like a residential extension, conservatory or loft conversion
- A small non-domestic extension with a footprint of less than 250m2
- A change of use (except changes of use to a caravan, camping or chalet site, or to a mobile home or park home)
- A development on a site already allocated in the development plan through the sequential test and:
  - Proposal is consistent with the site's allocated use
  - There have been no significant changes to the known level of flood risk to the site, now or in the future, which would be affected by the outcome of the test.

Glossary of terms

POS – Public Open Space
AEP – Annual Event Probability
RoFSW – Risk of Flooding from Surface Water

> Sequential testing is complex but you don't have to tackle it alone. We're here to help

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