

Groundwater Flood Risk Assessment



Example only: May be relevant where there is a low risk or less than low risk of flooding from all sources. For developer use.

Groundwater Flood Risk Assessment (FRA) for above ground development

The advice does not apply to below ground development like soakaways and other surface water infiltration infrastructure such as basins and tanks.

This advice may apply where a proposed development is considered by the applicant to be at **low risk** from groundwater flooding and other sources of flooding, yet the Level 1 SFRA mapping identifies the site within an area identified as 'Groundwater susceptibility to flooding'. In these cases, the applicant's FRA should still assess the risk of flooding from groundwater. The information below should be considered as a guide only, to information the applicant may include in their FRA groundwater flood risk assessment section. It is an example only. The applicant's information **must** be site and development specific for any planning application submitted.

Example Assessment

1) Risk of flooding from surface water mapping (RoFSW)

With reference to the Environment Agency's RoFSW mapping, it can be seen that the mapping does not identify any surface water flow routes across the pre-development site; nor does the mapping identify any significant low spots or depressions that might act to collect surface water runoff. It can reasonably be expected that if groundwater were to emerge within the site, then it would act as surface water and collect in the same flow paths and low spots as identified in the RoFSW mapping. Flood risk from surface water runoff (rainfall) would be more significant at the site than that posed by groundwater emergence. Mapping **does not** identify the site as being at **risk of flooding** (less than low chance of flooding) from surface water and therefore also groundwater.

2) Topographic Survey

With reference to the topographical survey obtained for the site, it can be seen that there are no topographical features (defined flow routes or ponding areas) that would represent a flood risk to the pre-development site, should groundwater emergence occur. It can also be seen that there is a gradient across the site; if groundwater were to emerge then it would disperse from the site. Therefore, the topography of the site **does not** indicate there would be a flood risk (**low risk or less**) if groundwater were to emerge.



3) Proposed development

With reference to the site layout, it can be seen that if groundwater were to emerge it would **not affect the proposed development** (i.e. no risk or very low risk). This is due to the following:

- i. No significant cut/fill operations are proposed.
- ii. Any minor low points or depressions will be filled during general preconstruction site preparation (flattening of the site). Post development, a gradient will run (indicate direction) across the site to aid drainage runoff.
- iii. Formal drainage for surface water will be installed. This will collect any stray surface water.

4) Local Knowledge

The owner informs us that they are unaware of any historical flooding at the site.

5) Groundwater testing (if undertaken)

The results of groundwater testing indicate that the highest groundwater level of (*level*)m below normal ground level was observed in the month/s of (*which month/s*). Thus, groundwater was not shown to emerge at the site. The highest recorded level of groundwater at the site is compatible with the proposed development (with regards to earthworks). Thus, the site is **not considered to be at risk** from groundwater flooding.

6) Third Party Information (if obtained)

A groundwater flood risk map was obtained from (*company*). The figure is attached. It can be seen that the site is **not identified as being at risk** from groundwater flooding.

7) Limitations of Level 1 SFRA Groundwater Layer

The Level 1 SFRA Groundwater Layer is accompanied by a statement on limitations.

'The JBA groundwater data should be used only in combination with other information, for example local data or historical data. It should not be used as sole evidence for any specific flood risk management, land use planning or other decisions at any scale.'

The SFRA has triggered the requirement for a site-specific assessment of the risk of groundwater flooding to the site. This has been undertaken.



8) Conclusion

Considering our assessment above (items 1-7), we conclude:

- i. In the context of paragraph 027 of the PPG (revision 28/08/22), the risk of flooding from groundwater to the **site is low risk (or no identified risk)** (PPG 2022), and
 - ii. In the context of paragraph 175 of the NPPF (Dec 24), the assessment provided above does not detail any evidence that the site is at actual risk of flooding from groundwater. **The built development is not located in an area that would be at risk of flooding from groundwater** (NPPF 2024).
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If a report similar to above is submitted, that is site and development specific, then the LPA may agree with the applicant that the groundwater flood risk to the site and development is **Low risk**, or in an area with no identified risk.

ONLY TO BE USED AS AN EXAMPLE

