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Contract	Swale SFRA update
Client	Swale Borough Council
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Subject	Swale Level 2 Strategic Flood Risk Assessment scoping exercise

1 Introduction

JBA Consulting undertook the Level 1 Strategic Flood Risk Assessment (SFRA) for Swale Borough Council. Following this, 72 sites were identified by Swale Borough Council to potentially be taken forward within the Local Plan.

In order to provide guidance on which of these sites should be taken forward to a Level 2 SFRA, JBA Consulting has undertaken a Level 2 SFRA scoping exercise.

The results of the scoping exercise can be found in Appendix A.

2 Level 2 SFRA site scoping methodology

2.1 Sites provided by Swale Borough Council

As part of the Level 1 SFRA, 636 sites were screened against a suite of available flood risk data to provide a summary of risk to each site. The screening was undertaken using GIS software that computes a range of flood risk metrics based on flood and receptor datasets.

The site screening identified the proportion of the site at fluvial, tidal and surface water flood risk now and in the future. The site screening also identified if the site is located within an area which could be affected by a wet or dry day reservoir breach and if the site was potentially at risk of groundwater flooding.

Swale Borough Council then filtered the sites further based on size and other constraints, reducing the number of sites to potentially be taken forward to the Level 2 SFRA to 72 sites. JBA Consulting were then appointed to scope which of these sites would require an assessment as part of the Level 2 SFRA. As a result of changes to the site boundaries and updated Environment Agency Flood Zones, rescreening of the sites against flood risk data was undertaken in May 2026.

2.2 Data sources

The datasets used and the reasons for their inclusion are outlined below:

- The proportion of the site falling within the **detailed modelled greater than 0.1% River or Sea Annual Exceedance Probability (AEP) plus climate change** extents. For commercial sites, a lifetime of development of 75 years was used, and for residential 100 years.
Where detailed fluvial or tidal modelling was not available, the proportion of the site falling within the **Flood Map for Planning greater than 0.1% AEP plus climate change** extent was assessed. This was required for two sites (SHELAA/012 and SHELAA/044)
This scenario represents the fluvial and tidal future Flood Zone 2 and identifies sites at medium risk in the future.
- The proportion of the allocation within the **surface water greater than 0.1% AEP event**. This represents the proxy for the Upper End, 1% AEP surface water climate change allowance.
- The **risk of flooding from reservoirs** to identify the risk of reservoir flooding to all sites.
- **Potentially at high or medium risk of groundwater flooding**. This dataset uses the JBA Groundwater Flood Map high and medium risk areas. This zone shows areas which are potentially at a higher or medium risk of groundwater flooding than other areas.
- **Is safe access and egress possible**. Identifies sites in which access may be restricted due to flooding in the design events for both fluvial, coastal and surface water flooding.
- **Coastal Change Management Area**: It has been noted if a site sits within the Coastal Change Management Area to assist Swale Borough Council with decision making.
- **MEAS Contribution Zone**: It has also been noted if the site sits in a MEAS Contribution Zone 1 or 2. Again the purpose is to help Swale Borough Council with decision making.

2.3 Sequential approach at a site level

The Environment Agency's Flood Risk assessment guidance¹ was updated in April 2025. The guidance states that *"you may not need a sequential test if development can be laid out so that only elements such as public open space, biodiversity and amenity areas are in areas at risk of any source of current or future flooding."*

¹ Environment Agency (2024) [Flood risk assessment: flood zones 1, 2, 3 and 3b - GOV.UK](https://www.gov.uk/government/publications/flood-risk-assessment-guidance)

Therefore, in cases where the proportion of the allocation at future flood risk from fluvial, tidal or surface water sources is small, a sequential approach at the site level would be appropriate and enable development to be located in locations at low risk of flooding (by avoiding high risk areas that might exist at a particular site). This involves incorporating the less vulnerable aspects of the development (such as public open space, biodiversity and amenity areas) in the areas at risk of flooding. The more vulnerable aspects would be incorporated within areas at lower risk, and a Sequential Test would not be required.

As this is a strategic assessment, the area required for less vulnerable development at each of the allocations is not known. It is therefore appropriate to assume that a “small” proportion of the allocations will be set aside for these purposes. As such, if a “small” proportion of the allocation is at risk, the Sequential and Exception Tests would likely not be required, and therefore a Level 2 Assessment would not be required.

However, there is currently no guidance available to confirm what would be considered a “small” proportion of the site. Through discussions with Swale Borough Council, and based on JBA’s experience, the proportion identified as “small” for Swale Borough Council’s assessment and review has been agreed to be less than 20% of the allocation at risk of flooding from one or more sources.

2.4 Allocation preferability

Using the premise that if a “small” proportion of the allocation is at risk of flooding, a sequential approach at the site level can be undertaken, and the allocation would not require a Level 2 assessment, JBA Consulting were able to categorise allocations based on preferability. The “most preferable” being those allocations which are not predicted to flood (i.e. 0% of the site is at risk from all sources). Allocations where there is a “small” proportion of the site at risk, from one or more sources of flooding, were considered “less preferable”. For those allocations where the proportion of the site at risk is considered too large for the sequential approach at a site level to be undertaken, these were considered the “least preferable”.

The preferability categories and descriptions are outlined in Table 2-1.

Table 2-1: Allocation preferability definition

Category	Description
Most preferable	0% of the allocation is at risk from either surface water, fluvial or tidal sources
Less preferable	Greater than 0% to 20% of the allocation is at risk from either surface water, fluvial or tidal sources
Least preferable	Greater than 20% of the allocation is at risk from either surface water, fluvial or tidal sources

2.5 Reservoir inundation and groundwater flood risk

As noted in the Methodology in Support of Performing the Sequential Test (found in Appendix C of the Level 1 SFRA) the readily available data for groundwater flood risk and reservoir inundation do not provide the same certainty as the fluvial, tidal and surface water flood risk datasets. However, these can be used to identify allocations where further work will be required to address the risk. The allocations impacted were identified as part of the scoping exercise.

2.6 Access and escape

As detailed within Paragraph 047 of the Planning Practice Guidance (Flood Risk and Coastal Change), *“access considerations should include the voluntary and free movement of people during a ‘design flood’, as well as the potential for evacuation before a more extreme flood”*². An assessment of the potential for safe access and escape has been carried out for all 72 allocations using the 1% Fluvial and 0.5% Tidal Annual Exceedance Probability (AEP) plus climate change and the 0.1% AEP surface water mapping.

3 Results

A total of 72 allocations were provided by Swale Borough Council and have been categorised by preferability. The results of the scoping exercise can be found in Appendix A.

The number of allocations identified within each preferability category has been calculated. This was undertaken to assess the number of allocations within each category, if a “small” proportion of the allocation is considered to be 1-20%. The results are outlined in Table 3-1.

Table 3-1: Number of sites within each preferably category

Category	Number of allocations in each category
Most preferable (0% of the allocation at risk)	14
Less preferable (a “small” proportion of the allocation at risk)	33
Least preferable (proportion of the allocation at risk is too large for a sequential approach at the site level to be undertaken)	25

² <https://www.gov.uk/guidance/flood-risk-and-coastal-change#para47>

A total of seven allocations were identified to be located within or partially within the wet or dry day reservoir extent. 19 allocations were noted to be potentially at risk of groundwater flooding. 35 sites were noted as having access restricted due to flood risk.

A total of 10 sites are noted to sit within the CCMA and 28 sites within a MEAS Contribution Zone. There are two sites which are surrounded by the CCMA.

4 Implications for the Level 2 SFRA

The implications of the scoping exercise on the requirements for the Level 2 SFRA are outlined in this section.

4.1 Preferability category and site summaries

Level 2 SFRAs typically consist of a main report, along with a detailed assessment and flood risk site summary for each allocation considered. These site summaries, along with relevant flood risk mapping, are presented as appendices to the main report.

The requirements for each allocation within the Level 2 SFRA will be determined by the preferability category.

No detailed site summary of flood risk will be required for allocations considered “most preferable”.

For allocations considered “less preferable”, no detailed site summary of flood risk will be required. However, these allocations will be listed in the main SFRA report, noting that a small proportion of the allocations are at flood risk, and a sequential approach should be undertaken at the site level. This will include a requirement for developers to place less vulnerable aspects of the development (such as public open space, biodiversity and amenity areas) in the areas at risk of flooding.

A detailed site summary of flood risk will be required for each allocation considered to be “least preferable”.

4.2 Groundwater and reservoir flood risk

Level 2 allocations identified as potentially at risk of groundwater flooding will be listed within the main Level 2 SFRA report. It will be noted that the groundwater flood risk dataset should be interpreted as an initial indicative tool to assess groundwater flood risk at preliminary stages of planning/site allocation. Where mapping indicates a risk of groundwater flooding, a detailed assessment should be undertaken to confirm the risk to the site as part of any planning application, which may require ground investigations. No detailed site summary assessment will be undertaken for groundwater flood risk alone as part of the Level 2 SFRA.

Similarly, Level 2 allocations identified to be within the reservoir extent, will be listed in the main report. Recommendations will be made to address this risk through a detailed flood risk assessment as part of any planning application.

4.3 Safe access and escape

A high-level assessment of safe access and escape for the allocations was undertaken as part of the scoping exercise. This identified possible access locations at each allocation and whether access and escape would be possible based on flood extents. Where the extents predict that safe access and escape may not be possible, further work assessing flood depths and hazard will be provided within the detailed site summary sheets where these are produced. For other allocations where a detailed site summary has not been identified as being required, the constraint will be identified within the main report and recommendations will be made to address this risk through a detailed flood risk assessment as part of any planning application.

There are two sites which are surrounded by the CCMA, making access and egress potentially difficult in the future. This will be addressed in the main Level 2 report.

4.4 Additional modelling

Potential additional modelling requirements have been identified as part of the scoping exercise for the “least preferable” allocations. Any modelling requirements will be identified within the site summary sheets and recommendations will be made to address this through a detailed flood risk assessment as part of any planning application.

5 Summary

A total of 72 allocations were provided by Swale Borough Council to be included in the scoping exercise. The number of allocations to be taken forward to a Level 2 SFRA depends on the definition of a “small” proportion of the allocation. A sequential approach can be undertaken at the site level which involves incorporating the less vulnerable aspects of the development in the areas at risk of flooding. If a “small” proportion of the allocation is at risk, or the allocation is not predicted to be at risk, a detailed assessment at the Level 2 SFRA stage will not be required.

The definition of a “small” proportion of the site was up to 20%. It was identified that 25 sites will require a detailed Level 2 SFRA site summary assessment.

A total of seven allocations were identified to be located within or partially within the wet day reservoir extent. 19 allocations were noted to be potentially at risk of groundwater flooding. 35 sites were noted as having access restricted due to flood risk.

A summary of the implications and number of allocations affected is outlined in Table 5-1. The full scoping exercise can be found in Appendix A.

Table 5-1: Summary of implications of preferability category

Allocation preferability	Implications	Number of sites if 1-20% is considered as a “small” proportion of the site
Most preferable	- No detailed site summary of flood risk will be required. - If there is a risk of groundwater or reservoir flooding or restricted safe access and escape, the allocation will be listed in the main SFRA report and recommendations made for the detailed flood risk assessment. - A general point will also be made in the Level 2 SFRA that safe access and escape should be considered and investigated for all allocations prior to any development.	14
Less preferable	- No detailed site summary of flood risk will be required. - However, these allocations will be listed in the main SFRA report as requiring the sequential approach to be undertaken at the site level. - If there is a risk of groundwater or reservoir flooding or restricted safe access and escape, the allocation will be listed in the main SFRA report and recommendations made for the detailed flood risk assessment. - A general point will also be made in the Level 2 SFRA that safe access and escape should be considered and investigated for all allocations prior to any development.	33
Least preferable	- A detailed site summary of flood risk will be required for each allocation. - Safe access and escape will be assessed in the detailed site summary. - Additional modelling requirements to be considered within a site-specific Flood Risk Assessment will be detailed within the main report.	25

TECHNICAL NOTE



Appendices

A Level 2 SFRA Site Scoping