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Swale Level 2 Strategic Flood Risk Assessment

Final

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This report describes work commissioned by Anna Stonor, on behalf of Swale Borough Council, by an instruction dated 10 June 2026. Jackson Pawley, Krishna Dhanani, Ffion Wilson and Ed Hartwell of JBA Consulting carried out this work.

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The conclusions and recommendations contained in this Report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested and that such information is accurate. Information obtained by JBA has not been independently verified by JBA, unless otherwise stated in the Report.

Unless otherwise stated in this Report, the assessments made assume that the sites and facilities will continue to be used for their current purpose without significant changes.

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Abbreviations

AEP	Annual Exceedance Probability
AIMS	Asset Information Management System
BGS	British Geological Survey
CC	Climate Change
CCTV	Closed Circuit Television
EA	Environment Agency
FAA	Flood Alert Area
FMfP	Flood Map For Planning
FRA	Flood Risk Assessment
FWA	Flood Warning Area
GIS	Geographical Information System
JBA	Jeremy Benn Associates
KCC	Kent County Council
LiDAR	Light Detection And Ranging
LLFA	Lead Local Flood Authority
LPA	Local Planning Authority
mAOD	metres Above Ordnance Datum
NaFRA2	National Flood Risk Assessment 2
NPPF	National Planning Policy Framework
OS	Ordnance Survey
PPG	Planning Practice Guidance
RBD	River Basin District
RMA	Risk Management Authority
SBC	Swale Borough Council
SFRA	Strategic Flood Risk Assessment
SuDS	Sustainable Drainage Systems
SW	Southern Water

Definitions

1D model: One-dimensional hydraulic model, typically representing a watercourse and structures within the channel (for example bridges and culverts).

2D model: Two-dimensional hydraulic model, typically representing the floodplain flows.

Annual Exceedance Probability: The probability (expressed as a percentage) of a flood event occurring in any given year.

Brownfield: A previously developed parcel of land.

Climate change: Long term variations in global temperature and weather patterns caused by natural and human actions.

Design flood: A flood event of a given annual flood probability, which is generally taken as: fluvial (river) flooding likely to occur with a 1% annual probability (a 1 in 100 chance each year), or surface water flooding likely to occur with a 1% annual probability (a 1 in 100 chance each year), plus an appropriate allowance for climate change, against which the suitability of a proposed development is assessed and mitigation measures, if any, are designed.

Dry island: Land which may not be at risk of flooding itself but is surrounded by flood risk and therefore may become cut off during a flood event.

Flood defence: Infrastructure used to protect an area against floods such as floodwalls and embankments; they are designed to a specific standard of protection (design standard).

Green infrastructure: A network of natural environmental components and green spaces that intersperse and connect the urban centres, suburbs, and urban fringe.

Greenfield: An undeveloped parcel of land.

Lead Local Flood Authority: The unitary authority for the area or if there is no unitary authority, the county council for the area.

Local Planning Authority (LPA): The local government body which is responsible by law to exercise planning functions for a particular area.

Main river: A watercourse shown as such on the statutory main river map held by the Environment Agency. They are usually the larger rivers and streams. The Environment Agency has permissive powers (not duties) to carry out maintenance and improvement works on main rivers.

Major development: Defined in the National Planning Policy Framework as a housing development where 10 or more homes will be provided, or the site has an area of 0.5 hectares or more, or as a non-residential development with additional floorspace of 1,000m² or more, or a site of 1 hectare or more, or as otherwise provided in the Town and Country Planning (Development Management Procedure) (England) Order 2015 (gov.uk).

Natural Flood Management: Techniques that work with nature to reduce the risk of flooding for communities.

Ordinary watercourse: Any river, stream, ditch, drain, cut, dyke, sluice, sewer (other than a public sewer) and passage through which water flows but which does not form part of a main river. The local authority or internal drainage board has permissive powers (not duties) on ordinary watercourses.

Permissive powers: Authorities have the power to undertake flood risk management activities, but not a duty to do so. This will depend on priorities in flood risk management.

Return period: An estimate of the interval of time between events of a certain intensity or size, in this instance it refers to flood events. It is a statistical measurement denoting the average recurrence interval over an extended period of time.

Riparian owner: A riparian landowner, in a water context, owns land or property, next to a river, stream or ditch.

Risk: In flood risk management, risk is defined as a product of the probability or likelihood of a flood occurring, and the consequence of the flood.

Risk Management Authority: The Environment Agency, Lead Local Flood Authorities, District and Borough Councils in an area where there is no unitary authority, Coast Protection Authorities in coastal areas, Water and sewerage companies, Internal Drainage Boards, and Highways authorities.

Standard of Protection (SoP): Defences are provided to reduce the risk of flooding (typically from a river, sea or surface water). A Standard of Protection is usually described in terms of an AEP flood event. For example, a flood embankment could be described as providing a 1% AEP Standard of Protection

Stakeholder: A person or organisation affected by the problem or solution or interested in the problem or solution. They can be individuals or organisations, includes the public and communities.

Sustainable Drainage Systems: Sustainable Drainage Systems are methods of management practices and control structures that are designed to drain surface water in a more sustainable manner than some conventional techniques, such as grates, gullies, and channels.

Windfall site: A site which becomes available for development unexpectedly and therefore not included as allocated land in a planning authority's local plan.

Executive Summary

Introduction and context

This Level 2 Strategic Flood Risk Assessment (SFRA) document was prepared with the purpose of providing part of the evidence base for emerging Local Plan 2027-2042 for Swale Borough Council (SBC). It follows on from the Level 1 SFRA produced in July 2026 and should be read in conjunction.

The primary purpose of the Level 2 SFRA is to provide an appropriate understanding of the level of flood risk affecting development included in the updated Local Plan. The assessment takes into account all sources of flooding and considers other factors affecting flood risk such as residual risk. The information provided as part of the Level 2 SFRA enables Swale Borough Council to apply the Exception Test to sites in accordance with the National Planning Policy Framework (NPPF).

SFRA objectives

The Government's Planning Practice Guidance (PPG) on Flood Risk and Coastal Change advocates a tiered approach to risk assessment involving Level 1 and Level 2 SFRAs.

After completing the Level 1 SFRA and the 'Call for Sites' process, the Swale Borough Council have undertaken the Sequential Test and have shortlisted sites which cannot be relocated outside of flood risk areas due to additional planning factors. The Level 2 assessment aims to build on identified risks from the Level 1 SFRA in order to provide a greater understanding of fluvial, surface water, groundwater, sewer, and reservoir related flooding risks to these shortlisted sites. From this, Swale Borough Council and developers can make more informed decisions regarding future development. The Level 2 assessment also identifies sites requiring further risk analysis at the site-specific Flood Risk Assessment (FRA) stage.

Summary of Level 2 SFRA

Within the Level 1 SFRA a total of 636 potential site allocations were provided by Swale Borough Council, as Local Planning Authority (LPA), and were screened against all sources of flooding risk, with a percentage coverage for each flood risk dataset calculated.

Swale Borough Council subsequently refined the long list to 72 sites that were considered potential allocations within the Local Plan. JBA then undertook a more detailed scoping assessment of these sites to determine whether they required inclusion in the Level 2 SFRA. Each site was assigned a 'least preferable', 'less preferable', or 'most preferable' rating based on its relative level of flood risk.

'Least preferable' sites were identified where more than 20% of the site was at risk from either surface water, fluvial or tidal sources. 'Least preferable' sites had significant obstacles or challenges for development which would need consideration if taken forward.

The implications were:

- A detailed site summary of flood risk will be required for each allocation within the Level 2 SFRA.
- 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.

A total of 25 sites were identified as 'least preferable'.

'Less preferable' sites were identified to have between 0% and 20% of the site at risk from either surface water, fluvial or tidal sources. 'Less preferable' sites were flagged for further consideration by planners and developers, but it is likely to be possible to address the flood risk constraints at planning application stage. The implications were:

- No detailed site summary of flood risk will be required within the Level 2 SFRA.
- However, these allocations will be listed in the main Level 2 SFRA report as requiring the sequential approach to be undertaken at the site level.
- 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.

The remaining sites were classified as 'most preferable' sites, which were identified to have 0% of the allocation at risk from either surface water, fluvial or tidal sources. However, it is noted 'most preferable' sites may still require an FRA and drainage strategy, depending on the size and location of the site. The implications were:

- No detailed site summary of flood risk will be required within the Level 2 SFRA.
- 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.

Of the 72 sites in the scoping, the results were as follows:

- 25 'least preferable' sites
- 33 'less preferable' sites
- 14 'most preferable' sites

Of the 25 'least preferable' sites, 22 were taken through to the Level 2 SFRA stage by Swale Borough Council. SHELAA/217 and SLA18/207 are the same site but the proposed land uses are residential and employment respectively. Therefore, two detailed assessments have been prepared for this site.

Detailed Level 2 Assessments were prepared for the following sites:

- SHELAA/143 - Land south of Little Groves - Policy HOA9
- REG3197 - Land at Marshlands Farm - Policy EMA6
- CFS24 - Ridham Dock - Policy EMA1
- SHELAA/220 - West of Rushenden Road - Policy Regen 3d

- SHELAA/323 - Sheppey Beach Villas - Policy HOA10
- SHELAA/223 - The Foundary - Policy Regen 3e
- SHELAA/418 - Land at West Minster off of Brielle Way - Policy HOA03
- SHELAA/432 - The Peartree - Policy HOA17d
- SHELAA/435 - Three Lakes Park. - Policy HOA17a
- SHELAA/436 - 15 The Laurels - Policy HOA17e
- SHELAA/433 - Jack Russell Place - Policy HOA17k
- SHELAA/258 - Bell House - Policy Regen 2a
- SHELAA/421 - Land at Brielle Way - Policy HOA04
- SHELAA/306 - Land at Forge Lane - Policy HOA14
- SHELAA/351 - The Classic Cinema, High Street- Policy Regen 2c
- SHELAA/217 and SLA18/207- South of Queenborough Creek - Policy Regen 3b
- SHELAA/346 - Digswell, Lower Hartlip Road - Policy HOA16c
- SHELAA/368 - Amethyst Horticulture, Land at Newington Nurseries - Policy HOA11A
- SHELAA/216 - Land at West Street - Policy Regen 3a
- SHELAA/142 & R10 - Newington Industrial Estate - Policy EMA7
- CFS2024/129 - Smeed Dean Works - Policy EMA3
- SHELAA/218 - Former Istil site Rushenden Road/Thomsett Way - Policy Regen 3c

The detailed Level 2 assessments for the 'Least preferable' sites and accompanying mapping can be found in Appendix A.

The following points summarise the Level 2 assessment for the 22 sites considered 'least preferable'. Refer to the detailed site sheets for site specific requirements for development to consider flood risk mitigation

- **Flood Zone 3b** A total of six sites are located in Flood Zone 3b**:**
  - CFS2024/129 - Smeed Dean Works - Policy EMA3
  - CFS24 - Ridham Dock - Policy EMA1
  - SHELAA/216 - Land at West Street - Policy Regen 3a
  - SHELAA/217 and SLA18/207 - South of Queenborough Creek - Policy Regen 3b
  - SHELAA/220 - West of Rushenden Road - Policy Regen 3d
  - SHELAA/323 - Sheppey Beach Villas - Policy HOA10
- **Surface water flood risk** - Surface water tends to follow topographic flow routes, for example, along watercourses or isolated pockets of ponding where there are topographic depressions. Development can proceed, providing the recommendations and guidance set out in the detailed assessments are considered, and the areas of greatest surface water flood risk are avoided, or flood resilience and resistance measures should be implemented, where appropriate. All the sites are predicted to flood in the present day 3.3% AEP (1 in 30-year) event except:

- CFS2024/129 - Smeed Dean Works - Policy EMA3
- SHELAA/418 - Land at West Minster off of Brielle Way - Policy HOA03
- SHELAA/433 - Jack Russell Place - Policy HOA17k
- SHELAA/436 - 15 The Laurels - Policy HOA17e

- **Flood Warning Areas (FWAs)** - For proposed development within existing EA FWAs, developers should consult the EA to ensure that adequate flood warning procedures and evacuation processes are in place and that Risk Management Authorities (RMAs) are not put under any additional burden. The following sites are located within existing EA FWAs:
  - CFS2024/129 - Smeed Dean Works - Policy EMA3
  - CFS24 - Ridham Dock - Policy EMA1
  - SHELAA/143 - Land south of Little Groves - Policy HOA9
  - SHELAA/216 - Land at West Street - Policy Regen 3a
  - SHELAA/217 and SLA18/207- South of Queenborough Creek - Policy Regen 3b
  - SHELAA/218 - Former Istil site Rushenden Road/Thomsett Way - Policy Regen 3c
  - SHELAA/220 - West of Rushenden Road - Policy Regen 3d
  - SHELAA/223 - The Foundary - Policy Regen 3e
  - SHELAA/323 - Sheppey Beach Villas - Policy HOA10
  - SHELAA/418 - Land at West Minster off of Brielle Way - Policy HOA03
  - SHELAA/421 - Land at Brielle Way - Policy HOA04
  - SHELAA/435 - Three Lakes Park. - Policy HOA17a
- **Access and escape routes** - All the sites have potential access and escape route issues as a result of fluvial, tidal and/or surface water flooding of the surrounding roads. Consideration should be made as to how safe access and escape routes can be provided during flood events, both for people and emergency vehicles. Consideration should also be given to the nature of the risk, for example whether the flooding forms a flow path or bisects the site meaning access across the site from one side to another may be compromised.
- **Climate change** - Fluvial, tidal and surface water climate change mapping indicates that flood extents are predicted to increase. As a result, the depths, velocities, and hazard of flooding may also increase. The significance of the increase will depend on the topography of the site, the proximity to watercourses or the sea, and the climate change percentage allowance used. Site-specific FRAs should confirm the impact of climate change using latest guidance. It is recommended that Swale Borough Council work with other RMAs to review the long-term sustainability of existing and new development in these areas when developing climate change plans and strategies for the borough.
- **Historic flooding** - 11 of the 22 sites taken forward for assessment within the Level 2 SFRA fall within areas that have historically flooded from fluvial and tidal sources, as indicated by the EA Historic Flood Map dataset. Further historic flood data was provided by Kent County Council (KCC) as the Lead Local Flood

Authority (LLFA), who provided a database of recorded flood incidents. This indicates that 13 of the 22 sites were within 100m of a record flood incident.

- **Sewer flooding** - Sewer flooding was assessed within the detailed site assessments using information from the historic sewer flooding database made available by Southern Water. Site developers should consult with Southern Water or Thames Water (depending on the site location) in all cases to ensure development will be safe from flooding and to ensure the development is integrated into plans for managing sewer capacity risks across the area.
- **Groundwater flooding** - Groundwater flood risk is mostly negligible throughout Swale Borough, with just a few areas of known groundwater emergence risk. The JBA Groundwater emergence map was used to screen the sites and attribute risk to a site of groundwater emergence. A total of 2 sites were identified as moderate risk, where groundwater levels within the site are between 0.025m and 0.5m below the ground surface during a 1% AEP (1 in 100-year) groundwater flood event. An appropriate assessment of the groundwater regime for a site should be carried out at the site-specific FRA stage. These sites are:
  - CFS2024/142 & R10 - Newington Industrial Estate
  - SHELAA/346 - Digswell
- **Reservoir flooding** - There is one site assessed within the detailed site assessments that are shown to be at risk of reservoir flooding:
  - CFS24 - Ridham Dock - Policy EMA1

  The level and standard of inspection and maintenance required under the Reservoirs Act means that the risk of flooding from reservoirs is very low. However, there is a residual risk of a reservoir breach, and this risk should be considered in any site-specific FRA.
- **SuDS** - A strategic assessment was conducted of SuDS options using regional datasets. A detailed site-specific assessment of suitable SuDS techniques would need to be undertaken at site-specific level to understand which SuDS option would be best.
- **Sites considered unsuitable for development** - the following sites have been identified as unsuitable for development:
  - SHELAA/435 - Three Lakes Park - Policy HOA17a - due to the proposed development being 'highly vulnerable' in an area with a significant tidal and surface water flood risk
  - SHELAA/436 - 15 The Laurels - Policy HOA17e - due to the proposed development being residential and being located in the Coastal Change Management Area (CCMA) Erosion Zone 2. According to Local Plan's CCMA Policy C6, permanent new residential developments are not appropriate within the CCMA.

Recommendations

Section 8 sets out the recommendations based on the findings of this Level 2 SFRA. This includes recommendations for applying the Exception Test, where required, requirements

for developers in developing the Local Plan allocations, and guidance for windfall sites and development of sites not included within the Local Plan

1 Introduction

1.1 Purpose of the Strategic Flood Risk Assessment

Annex F1 of the National Planning Policy Framework (NPPF) (2026) (gov.uk) states that 'In order to manage development in ways which minimise the risk of flooding to people and property, development plans should:

- Be informed by an up-to-date strategic flood risk assessment which considers current and future flood risk from all sources, including cumulative impacts in, or affecting, areas susceptible to flooding; and
- Take account of advice from the Environment Agency and other relevant flood risk management authorities, such as Lead Local Flood Authorities and internal drainage boards, about levels of risk, options for mitigation, and the implications for development in the plan area'.

1.2 Levels of SFRA

The Planning Practice Guidance (PPG) Flood risk and coastal change (gov.uk) advocates a staged approach to risk assessment and identifies two levels of a Strategic Flood Risk Assessment (SFRA):

- A Level 1 assessment, which all Local Planning Authorities (LPAs) are required to undertake. Where potential site allocations are at low flood risk and where development pressures are low a Level 1 assessment is likely to be sufficient, without the LPA progressing to a more detailed Level 2 assessment. The Level 1 assessment should be of sufficient detail to enable application of the Sequential Test, to inform the allocation of development to areas of lower flood risk.
- A Level 2 assessment is required where land outside flood risk areas cannot appropriately accommodate all necessary development, creating the need to apply the NPPF's Exception Test, or if an LPA believes it may receive high numbers of applications in flood risk areas on sites not identified in the Local Plan. In these circumstances the assessment should consider the detailed nature of the flood characteristics within a Flood Zone and assessment of all sources of flooding.

This SFRA report fulfils the requirements for a Level 2 assessment of development sites identified for potential allocation within Swale and has been prepared in accordance with the NPPF (2026) and PPG (2024).

This report should be read alongside the Swale Borough Council Level 1 SFRA and builds upon information presented within the Level 1 SFRA.

1.3 SFRA objectives

The objectives of this Level 2 SFRA are to:

1. Provide individual flood risk analysis for site options using the latest available flood risk data, thereby assisting the Council in applying the Exception Test, where required, to their proposed site options in preparation of their Local Plan.
2. Using the available data, provide information and comprehensive mapping presenting flood risk from all sources for the site.
3. Provide high level recommendations for making sites safe throughout their lifetime.
4. Take into account most recent policy and legislation in the NPPF, PPG, EA SFRA Guidance, and LLFA SuDS guidance.

1.4 Consultation

SFRAs should be prepared in consultation with other RMAs.

As part of the Level 2 SFRA, the following organisations have been consulted for data requests:

- Swale Borough Council (SBC)
- Kent County Council (KCC)
- Environment Agency (EA)
- Southern Water (SW)

As part of the Level 2 SFRA, the North Kent Marshes Water Level Management Board was consulted as an RMA.

1.5 How to use this report

Table 1-1 below outlines the contents of this report and details how different users can apply this information.

Table 1-1: Outline of the contents of each section of this report.

Section	Contents	How to use
1. Introduction	Outlines the purpose and objectives of the Level 2 SFRA.	For general information and context.
2. Policy and strategy for flood risk management	Includes information on the implications of recent changes to planning and flood risk policies and legislation and signposts to relevant sections of the Level 1 SFRA.	Users should refer to this section and the relevant sections of the Level 1 SFRA for any relevant policy which may underpin strategic or site-specific assessments.
3. Sequential and Exception Tests	Signposts to relevant sections of the Level 1 SFRA for information on the Sequential	Users should refer to this section and the relevant sections of the Level 1 SFRA to understand and follow the steps required for

Section	Contents	How to use
	and Exception Tests.	applying the Sequential and Exception Tests.
4. Information used in the Level 2 SFRA	Summarises the data used in the Level 2 detailed site assessments and mapping.	Users should refer to this section in conjunction with the detailed site assessments and mapping (Appendix A) to understand the data presented.
5. Level 2 Assessment Methodology	Summarises the sites taken forward to a Level 2 assessment and the outputs produced for each of these sites.	Users should refer to this section in conjunction with the detailed site assessments and mapping (Appendix A) to understand the data presented.
6. Flood risk management requirements for developers	Identifies the scope of the assessments that must be submitted in Flood Risk Assessments (FRAs) supporting applications for new development. Refers to relevant sections in the Level 1 SFRA for mitigation guidance.	Developers should use this section alongside the relevant sections of the Level 1 SFRA to understand requirements for FRAs, which conditions/guidance documents should be followed, and information on flood mitigation options.
7. Surface water management and SuDS	Signposts to relevant sections of the Level 1 SFRA for information on the management of surface water including types of SuDS, SuDS policy and guidance, and SuDS constraints.	Developers should use this section alongside the relevant sections of the Level 1 SFRA to understand what national, regional, and local SuDS standards are applicable.
8. Recommendations	Summarises the results and conclusions of the Level 2 assessment, and signposts to the Level 1 SFRA for planning policy recommendations.	Developers and planners should use this section to see a summary of the Level 2 assessment and understand the key messages from the detailed site assessments. Developers should refer to the Level 1 SFRA recommendations when considering requirements for site-specific assessments.
Appendix A: Detailed site assessments and mapping	Provides a detailed summary of flood risk for sites requiring a more detailed assessment, which considers flood risk, emergency planning, climate change, broadscale assessment of possible SuDS, Exception Test requirements, and	Planners should use this appendix to inform the application of the Sequential and Exception Tests, as relevant. Developers should use these assessments to understand flood risk, access and escape route requirements, climate change, SuDS, and FRA requirements for

Section	Contents	How to use
	requirements for site-specific FRAs. Mapping of the flood risk at each of the sites afforded a detailed site assessment is presented. Includes depth, velocity and hazard information for fluvial and surface water flood risk where available, alongside climate change risk.	site-specific assessments.
Appendix B: Data sources used in this SFRA	Summarises the data used in the Level 2 detailed site assessments and mapping.	Users should refer to this section to understand the data used and where this data can be obtained.
Appendix C: Flood Risk in Less Preferable Sites	Summarises the flood risk, reason of exclusion from the Level 2 SFRA and recommendations for each less preferable site.	Users should refer to this section to understand which sites have been identified as 'less preferable'. These sites have not been included as detailed site assessments but may need an FRA to support a planning application.

1.6 SFRA study area

Swale Borough is located in north Kent, in the south-east of England, covering an area of approximately 370km² and an estimated population of over 151,700[1]. There are 39 parishes and 2 unparished areas within the Local Plan area. The largest settlement is the town of Sittingbourne, and other sizeable towns include Faversham, Sheerness and Queenborough.

Swale Borough is located within Kent County Council's administrative area and is bordered by four other local authorities:

- Medway Council
- Maidstone Borough Council
- Ashford Borough Council
- Canterbury City Council

The Swale and the River Medway tidal channels are the largest water features within the Local Plan area. The Swale runs through the centre of the Local Plan borough, separating the Isle of Sheppey from the mainland, with several watercourses joining which drain the land to the north and south. The River Medway runs along the northwest border of Swale Borough. There are also two smaller principal watercourses draining the north of the Isle of Sheppey.

1 Office of National Statistics (2021) Swale population change, Census 2021 – ONS

2 Policy and strategy for flood risk management

The flood risk management roles and responsibilities for different organisations and relevant legislation, policy and strategy are detailed within Section 2 of the Swale Borough Council Level 1 SFRA.

This contains details on:

- Key legislation for flood and water management.
- Key national, regional, and local policy documents and strategies.
- Roles and responsibilities for flood risk management in Swale.

However, since the publication of the Level 1 SFRA, the NPPF has been updated on 17 August 2026. Overall, the key principles underpinning the assessment and management of flood risk through the planning process remain largely unchanged. However, the revised Framework provides greater clarity on the application of the Sequential Test, strengthens the status of flood risk policy by incorporating important guidance into the NPPF itself, and introduces a clearer structure for flood risk, drainage and coastal change policy.

The overarching approach to applying the Sequential Test, assessing flood risk and directing development to areas at lowest risk remains unchanged.

3 Sequential and Exception Tests

Information on planning policy for flood risk management is detailed in Section 2 of the Swale Borough Council Level 1 SFRA. Users should consider this section within the Level 1 SFRA to understand national planning policy guidance and how to evidence that a proposed development will pass the Sequential Test, and if necessary, the Exception Tests.

Section 4 of the Swale Borough Council Level 1 SFRA contains detail on:

- the NPPF and PPG;
- the Sequential and Exception Tests and application to the Local Plan;
- the risk-based approach; and
- applying the Sequential Test and Exception Test to individual planning applications.

4 Information used in the Level 2 SFRA

This section outlines the datasets used in assessing the Local Plan proposed development sites in the Level 2 SFRA Appendix A.

It should be noted that datasets used to inform this SFRA may be updated following the publication of this SFRA and new information on flood risk may be produced by RMAs. This new information (such as updated mapping and modelling) may supersede the information included in this SFRA. Guidance should be sought from the LPA, LLFA, and the EA as appropriate to check the most up to date source of information is used for future flood risk assessment.

Appendix B provides an overview of the supplied data used to inform the appraisal of flood risk for Swale, including when the data was provided, the source of the data, and how the data can be obtained by a developer if applicable.

4.1 Historic flooding

Historic flooding was assessed using a database of recorded flood incidents across the district provided by Kent County Council as LLFA. The EA's Historic Flood Map dataset has also been used to understand the extent of historic fluvial and tidal flooding within the study area, as well as Southern Water's Sewer Incident Report Form (SIRF)

It is important to note that the absence of historic flood records does not mean that an area has never flooded, only that records are not held. For previously undeveloped sites, it is likely that historic flooding incidents may have gone unreported due to a lack of site use or interest. In addition, it is also possible that flooding mechanisms have changed since the date of a recorded flooding incident, making it more or less likely for flooding to occur on site.

4.2 River networks

Main Rivers are represented by the EA's Statutory Main River layer. Ordinary Watercourses are represented by the Ordnance Survey (OS) Watercourse Link layer.

The North Kent Marshes Water Level Management Board watercourses and areas were provided by the board (formerly the Lower Medway Internal Drainage Board). For sites within the North Kent Marshes Water Level Management Board district, the Board should be consulted regarding its watercourse and asset records where these may be relevant to the assessment of flood risk or proposed development.

Caution should be taken when using these layers to identify culverted watercourses which may appear as straight lines but in reality, are not.

4.3 Fluvial flooding

The EA initially updated the Flood Map for Planning (FMfP) (gov.uk) in March 2025 following the release of the National Flood Risk Assessment 2 (NaFRA2). The FMfP now shows updated extents for Flood Zone 2 (undefended 0.1% AEP (1 in 1000-year)) and Flood Zone 3a (undefended 1% AEP (1 in 100-year)) which incorporate new national modelling, as well as appropriate local models where available.

Flood Zone 3 and 3a are used interchangeably within national policy. However, these represent the same flood zone extent. Within this report the term Flood Zone 3a is used.

Flood Zone 3b (the functional floodplain) was defined as part of the Level 1 SFRA and shows flood risk that accounts for the presence of existing flood risk management features and flood defences, unlike the Zones 3a and 2 (which do not take account of defences).

The mapping in the SFRA identifies Flood Zone 3b as land which would flood during a defended 3.3% AEP (1 in 30-year) flood event. This includes the detailed model outputs below:

- Scrapsgate Drain
- Warden Bay
- Iwade Stream

Where detailed modelling is not available, the gaps have been filled with the Environment Agency's River and Sea 3.3% AEP defended flood risk extents – present day dataset as agreed with the Environment Agency. This is based on generalised modelling.

Where detailed fluvial models are available, the outputs are shown in this report including flood outlines, and detailed grids containing flood depth, velocity and hazard results for present day and climate change extents.

The defended 3.3% AEP (1 in 30-year), 1% AEP (1 in 100-year), and 0.1% AEP (1 in 1,000-year) present day events were included and the most up to date climate change allowances, applying the Central 22% allowance for the 2070 epoch within the North Kent Management Catchment to the 1% AEP (1 in 100-year) event.

4.4 Tidal flooding

The North Kent Coast coastal modelling study (2024) has been used to understand the coastal flood risk within the Local Plan area and is included in the Flood Map for Planning Flood Zones. Flood Zone 3 and 3a are used interchangeably within national policy. However, these represent the same flood zone extent. Within this report Flood Zone 3a is used.

The defended 3.3% AEP (1 in 30-year), 0.5% AEP (1 in 200-year), and 0.1% AEP (1 in 1,000-year) present day events have been assessed, as well as the defended 0.5% AEP (1 in 200-year) event with the Upper End climate change allowances for

2100 (75 years) used for non-residential developments and 2125 (100 years) for residential developments. The climate change data also includes depth, hazard and velocity outputs.

4.5 Flood defences

Current flood defence information has been taken from the EA's Asset Information Management System (AIMS) Spatial Defences dataset. These datasets include all flood defences currently owned, managed or inspected by the EA and include information pertaining to their current condition and standard of protection.

Section 8 of the Swale Borough Council Level 1 SFRA report provides information on flood defences and schemes.

4.6 Surface water flooding

The EA's FMfP Surface Water Spatial Planning extents (gov.uk) dataset has been used to assess surface water risk within this SFRA. This dataset includes additional flood depth data, as well as climate change outputs for the 2070s epoch.

The surface water mapping aims to provide a consistent standard for assessing surface water flood risk across England and Wales, supporting LLFAs, the EA, and developers in managing and mitigating surface water flood risk more effectively. Whilst the dataset is not intended for assessing flood risk at individual properties, it is appropriate for high-level studies such as SFRAs prepared for Local Authorities.

Within this dataset, surface water flood risk is subdivided into three categories:

- 3.3% AEP (1 in 30-year) - high risk event
- 1% AEP (1 in 100-year) - medium risk event
- 0.1% AEP (1 in 1,000-year) - low risk event

The EA has also released depth outputs as part of the Surface Water Spatial Planning dataset. However, velocity and hazard data is not currently available.

4.7 Climate change

Climate change mapping is shown in the mapping in Appendix A for fluvial, tidal and surface water flooding using modelled outputs with the latest climate change uplifts where available.

4.7.1 Climate change allowances for peak flows

Climate change is expected to increase the peak flows of rivers, meaning that flows which were previously thought to be extreme will now be considered far more possible. Areas benefiting from flood defences will find the standard of protection changes over time with overtopping of defences more likely unless they are upgraded.

Peak river flow climate change allowances developed by the EA are divided into a series of Management Catchments. Swale is covered by three Management Catchments, with the relevant allowances for each Management Catchment detailed in Table 4-1, Table 4-2 and Table 4-3.

Table 4-1: Peak river flow allowances for the North Kent Management Catchment.

Allowance category	Total potential change (%) anticipated for '2020s' (2015 to 2039)	Total potential change (%) anticipated for '2050s' (2040 to 2069)	Total potential change (%) anticipated for '2080s' (2070 to 2125)
Upper end	28%	36%	67%
Higher Central	15%	17%	34%
Central	10%	9%	22%

Table 4-2: Peak river flow allowances for the Medway Management Catchment.

Allowance category	Total potential change (%) anticipated for '2020s' (2015 to 2039)	Total potential change (%) anticipated for '2050s' (2040 to 2069)	Total potential change (%) anticipated for '2080s' (2070 to 2125)
Upper end	29%	37%	62%
Higher Central	19%	21%	37%
Central	14%	15%	27%

Table 4-3: Peak river flow allowances for the Stour Management Catchment.

Allowance category	Total potential change (%) anticipated for '2020s' (2015 to 2039)	Total potential change (%) anticipated for '2050s' (2040 to 2069)	Total potential change (%) anticipated for '2080s' (2070 to 2125)
Upper end	40%	55%	101%
Higher Central	25%	30%	55%
Central	18%	20%	38%

Where detailed modelling is available at the assessed sites, these outputs have been used. The climate change extents from all models used within this Level 2 SFRA, fall within the required '2070s' epoch Central allowance for the North Kent Management Catchment within Swale (1% AEP (1 in 100-year) plus 22% climate change).

The FMfP Flood Zones 2 and 3 plus climate change dataset has been used to assess the impact of climate change on fluvial and tidal flood risk where detailed

fluvial and tidal modelling is unavailable. This represents the 'Central' climate change allowance for the 2080s epoch for risk of flooding for rivers and the 'Upper End' allowance for risk of flooding from the sea, accounting for cumulative sea level rise to 2125. It should be noted that the dataset provides flood extent information only, with no associated data on flood depth, velocity, or hazard. Therefore, it is recommended that further assessment of climate change, including modelling of the relevant allowances, is undertaken within a site-specific Flood Risk Assessment.

4.7.2 Climate change allowances for peak rainfall

Climate change is predicted to result in wetter winters and increased summer storm intensity in the future. This increased rainfall intensity will affect land and urban drainage systems, resulting in surface water flooding, due to the increased volume of water entering the systems.

Peak rainfall climate change allowances developed by the EA are divided into the same Management Catchments as peak river flows and are detailed in Table 4-4, Table 4-5 and Table 4-6.

Table 4-4: Peak rainfall intensity allowances for small and urban catchments for the North Kent Management Catchment.

Allowance category	Total potential change (%) anticipated for '2050s' (2022 to 2060) for 3.3% AEP (1 in 30-year)	Total potential change (%) anticipated for '2050s' (2022 to 2060) for 1% AEP (1 in 100-year)	Total potential change (%) anticipated for '2070s' (2061 to 2125) for 3.3% AEP (1 in 30-year)	Total potential change (%) anticipated for '2070s' (2061 to 2125) for 1% AEP (1 in 100-year)
Upper end	40%	45%	40%	40%
Central	20%	20%	20%	20%

Table 4-5: Peak rainfall intensity allowances for small and urban catchments for the Medway Management Catchment.

Allowance category	Total potential change (%) anticipated for '2050s' (2022 to 2060) for 3.3% AEP (1 in 30-year)	Total potential change (%) anticipated for '2050s' (2022 to 2060) for 1% AEP (1 in 100-year)	Total potential change (%) anticipated for '2070s' (2061 to 2125) for 3.3% AEP (1 in 30-year)	Total potential change (%) anticipated for '2070s' (2061 to 2125) for 1% AEP (1 in 100-year)
Upper end	35%	45%	35%	40%
Central	20%	20%	20%	20%

Table 4-6: Peak rainfall intensity allowances for small and urban catchments for the Stour Management Catchment.

Allowance category	Total potential change (%) anticipated for '2050s' (2022 to 2060) for 3.3% AEP (1 in 30-year)	Total potential change (%) anticipated for '2050s' (2022 to 2060) for 1% AEP (1 in 100-year)	Total potential change (%) anticipated for '2070s' (2061 to 2125) for 3.3% AEP (1 in 30-year)	Total potential change (%) anticipated for '2070s' (2061 to 2125) for 1% AEP (1 in 100-year)
Upper end	40%	45%	40%	45%
Central	20%	20%	20%	20%

The Surface Water Spatial Planning climate change extents (gov.uk) dataset was used to assess climate change. On 28th May 2026, alongside present-day scenarios, the EA released new surface water climate change mapping for the 3.3% (1 in 30-year), 1% (1 in 100-year) and 0.1% AEP (1 in 1,000-year) events to indicate the predicted impacts of climate change on future flood risk.

Within this SFRA, the 1% AEP (1 in 100-year) event incorporating the 'Upper End' allowance for the 2070s epoch has been used to assess the impact of climate change on surface water flood risk as this data is readily available. It should be noted that the Environment Agency's Upper End allowance for the 2050s epoch for the 1% AEP (1 in 100-year) event in the North Kent and Medway Management Catchments is greater than the 2070s epoch for the 1% AEP (1 in 100-year) event so the climate change uplift may be slightly underestimated within the site summary sheets.

4.7.3 Climate change allowances for sea level rise

Increasing global temperatures are leading to ocean warming. This is resulting in sea level rise from two different mechanisms: as the oceans warm seawater expands and the melting of ice over land is resulting in further water adding to the ocean.

The borough is located within the Thames River Basin District (RBD). Sea level rise data is not available for the Thames RBD. However, the Environment Agency climate change guidance states that sea level risk allowances for the South East RBD should be used. Table 4-7 shows the sea level rise allowances that apply.

Table 4-7: Sea level allowances for the South East RBD for each epoch in mm for each year (based on a 1981 to 2000 baseline). The total sea level rise for each epoch is in brackets.

Allowance category	2000 to 2035 (mm)	2036 to 2065 (mm)	2066 to 2095 (mm)	2096 to 2125 (mm)	Cumulative rise 2000 to 2125 (metres)
Upper end	6.9	11.3	15.8	18.2	1.60
Higher central	5.7	8.7	11.6	13.1	1.20

The North Kent Coast flood risk coastal modelling study (2024) has been used to understand the tidal flood risk along the Local Plan area. The tidal mapping provides information for the Upper End climate change event for the years 2100 and 2125, demonstrating depth, hazard and velocity data as well.

4.8 Groundwater flooding

The JBA Groundwater Emergence map has been used to assess potential areas that are likely to be at higher risk of groundwater flooding. The JBA Groundwater Emergence map, shows the likelihood of groundwater emergence posing a risk to both surface and subsurface assets, based on predicted groundwater levels during a 1% AEP (1 in 100-year) event. Surface water mapping and topographic data is used to gain an understanding of the overland flow routes which may be impacted by this emergence.

The JBA Groundwater Emergence mapping is categorised into five different classes; a detailed description of the classes is in Table 4-8 below.

Table 4-8: JBA Groundwater Emergence Map category descriptions.

Category	Potential risk
Groundwater levels are either at or very near (within 0.025m of) the ground surface.	Within this zone there is a risk of groundwater flooding to both surface and subsurface assets. Groundwater may emerge at significant rates and has the capacity to flow overland and/or pond within any topographic low spots.
Groundwater levels are between 0.025m and 0.5m below the ground surface.	Within this zone there is a risk of groundwater flooding to both surface and subsurface assets. There is the possibility of groundwater emerging at the surface locally.
Groundwater levels are between 0.5m and 5m below the ground surface.	There is a risk of flooding to subsurface assets, but surface manifestation of groundwater is unlikely.
Groundwater levels are at least 5m below the ground surface.	Flooding from groundwater is not likely.
No risk.	This zone is deemed as having a negligible risk from groundwater flooding due to the nature of the local geological deposits.

4.8.1 Groundwater flooding and climate change

The impact of climate change is more uncertain for groundwater flooding associated with rivers and land catchments and those watercourses where groundwater has a large influence on winter flood flows. Changes in frequency and intensity of groundwater flooding due to climate change would depend on the flooding mechanism and geological characteristics.

Milder wetter winters may increase the frequency of groundwater flooding incidents in areas that are already susceptible, but warmer drier summers may counteract this effect by drawing down groundwater levels to a greater extent during the summer months.

4.9 Reservoir flooding

The risk of inundation as a result of a breach or failure of a number of reservoirs within the area has been identified from the EA's Reservoir Flood Extents dataset (gov.uk). Although it is predicted that there is a risk to life if these reservoirs were to fail, the risk of such an event occurring is very low.

This dataset consists of flood extents for two scenarios including 'Wet Day' and 'Dry Day', for all large, raised reservoirs. The 'Dry Day' scenario shows flood extents in the event that reservoirs were to fail and release the water they hold when local rivers are at normal levels. The 'Wet Day' scenario shows flood extents in the event that reservoirs were to fail and release the water they hold when local rivers are in flood.

Flood extents are not included for smaller reservoirs or for reservoirs commissioned after the reservoir modelling programme began in October 2016. Furthermore, only those reservoirs with an impounded volume greater than 25,000 cubic metres are governed by the Reservoir Act 1975.

4.10 Sewer flooding

Southern Water are the water company responsible for the management of the sewerage networks across Swale.

Historic incidents of flooding are detailed by Southern Water through their Sewer Incident Report Form (SIRF). This database records incidents of flooding relating to public foul, combined or surface water sewers and displays which properties suffered flooding.

Due to licencing and confidentiality restrictions, sewer data has not been represented on the mapping, but incidents within the same postcode location as a site were referred to within the detailed site assessments.

4.11 Residual risk

A few sites assessed within Swale are near culverted sections of watercourses which flow beneath roads, railway lines, and footpaths, and present a residual flood

risk should they become blocked or collapse. Potential culvert blockages that may affect a site were identified on OS Mapping and the OS Watercourse Link layer to determine where watercourses flow into culverts or through structures (i.e. bridges) in the vicinity of the sites. Any potential locations were flagged in the detailed site assessments.

Several sites within Swale are located within close proximity of raised flood defences which present a residual risk should they breach or be overtopped. Raised flood defences were identified using the EA AIMS Dataset.

4.12 Depth, velocity, and hazard to people

The Level 2 assessment seeks to map the probable depth and velocity of flooding as well as the hazard to people and use this within the detailed site assessments.

Hazard to people has been calculated using the below formula as suggested in Defra's Supplementary note on flood hazard ratings and thresholds for development planning and control purpose (gov.uk). The different hazard categories are shown in Table 4-9. Developers should also test the impact of climate change depths, velocities, and hazard on the site, as part of the site-specific FRA.

Table 4-9: Defra's 'Flood Risks to People' classifications

Description of Flood Hazard Rating	Flood Hazard Rating	Classification Explanation
Very Low Hazard/ Caution	<0.75	'Flood zone with shallow flowing water or deep standing water'
Danger For Some (i.e. children)	0.75 - 1.25	'Danger: flood zone with deep or fast flowing water'
Danger For Most	1.25 - 2.00	'Danger: flood zone with deep fast flowing water'
Danger For All	>2.00	'Extreme danger: flood zone with deep fast flowing water'

4.12.1 Fluvial

Where detailed modelling is available, the flood depth, velocity and hazard grids were used to provide a more accurate picture of flood risk at the sites. Where only national modelling covers a site, flood depth, velocity and hazard data is not available.

4.12.2 Tidal

Using detailed modelling the flood depth, velocity and hazard grids were presented to provide a more accurate picture of flood risk at the sites.

4.12.3 Surface Water

The new Flood Map for Planning – Surface Water Spatial Planning Extents dataset has been used to assess flood depths at the development sites. However, this dataset does not include velocity or hazard information.

4.13 SuDS suitability

The hydraulic and geological characteristics of each site have been assessed to determine the factors that potentially constrain schemes for surface water management. This assessment is high level and designed to inform the early-stage site planning process and is not intended to replace site-specific detailed drainage assessments. A detailed assessment should be carried out during the planning stage in line with the Defra National standards for sustainable drainage systems (SuDS) (gov.uk).

A high-level assessment of suitability of SuDS is included in the site assessments in Appendix A. The assessment is based on catchment characteristics using the following data:

- EA 1m LiDAR
- The British Geological Survey website (bgs.ac.uk) geology and soils mapping
- JBA Groundwater Emergence Mapping (see Section 0 for further details)
- Historic landfill sites
- Groundwater Source Protection Zones
- Nitrate Vulnerable Zones
- Main River and OS Watercourse Link layers
- Flood Map for Planning – Surface Water Spatial Planning Extents mapping
- Flood Zones

This data was then collated to provide an indication of particular groups of SuDS systems which might be suitable at a site. SuDS techniques were categorised into five main groups, as shown in Table 4-10.

Table 4-10: Summary of SuDS categories

SuDS Type	Technique
Source Controls	Green Roof, Rainwater Harvesting, Rain Gardens
Infiltration	Infiltration Trench, Infiltration Basin, Soakaway, Pervious Pavements
Detention	Pond, Wetland, Subsurface Storage, Shallow Wetland, Extended Detention Wetland, Pocket Wetland, Submerged Gravel Wetland, Wetland Channel, Detention Basin
Filtration	Surface Sand Filter, Sub-Surface Sand Filter, Perimeter Sand Filter, Bioretention, Filter Strip, Filter Trench
Conveyance	Dry Swale, Under-drained Swale, Wet Swale

The suitability of each SuDS type for the development sites has been described in the detailed site assessments, where applicable. The assessment of suitability is broadscale and indicative only; more detailed assessments should be carried out during the site planning stage to confirm the feasibility of different types of SuDS. National standards promoting the SuDS approach is noted in Section 7.1.

4.14 Emergency Planning

Flood Warning Areas (FWAs) and Flood Alert Areas (FAAs) are detailed in the EA's GIS datasets and can be used to inform emergency planning. FAAs inform the people within the area when there is flooding first in the catchment, irrespective of properties, hence this coverage tends to apply to whole watercourses or stretch of coastline. FWAs are derived from the extreme flood outline (0.1% AEP event), focussed on communities, properties, and/or infrastructure. Modelled depth, velocity and hazard data can be used to understand safe access and escape routes for each site.

4.14.1 Existing emergency plans and procedures

Flooding in Swale is supported by the Swale Local Multi-Agency Flood Plan, the Pan-Kent Multi-Agency Flood Plan and Swale Borough Council's Major Emergency Plan. These plans provide the framework for a coordinated council and multi-agency response to significant flooding.

5 Level 2 Assessment Methodology

This section outlines how sites were screened against flood risk datasets to determine which sites required a Level 2 detailed site assessment. It also identifies other sites, referred to in this SFRA as 'less preferable', at lower risk with general recommendations for developers.

5.1 Site screening

Within the Level 1 SFRA a total of 636 potential site allocations were provided by Swale Borough Council, as Local Planning Authority (LPA), and were screened against all sources of flooding risk, with a percentage coverage for each flood risk dataset calculated. This analysed various flood risk datasets against the site allocations layer and calculated the percentage cover for each flood risk dataset against each site. This was used to provide a summary of risk to each site, including:

- the proportion of the site in each Flood Zone.
- the proportion of the site affected by climate change within detailed fluvial and coastal modelling extents, where available, and the EA's FMfP Flood Zones 2 and 3 plus climate change dataset, where not available.
- whether the site is shown to be at risk from surface water flooding in the Flood Map for Planning – Surface Water Spatial Planning Extents mapping for the 3.3% (1 in 30-year), 1% (1 in 100-year), and 0.1% AEP (1 in 1,000-year) events. The impact of climate change on the 1% AEP (1 in 100-year) surface water event was represented by the Flood Map for Planning – Surface Water Spatial Planning Extents 0.1% AEP (1 in 1,000-year) dataset. This dataset was used as a proxy as appropriate surface water climate change mapping was not available at the time.
- whether the site is within, or partially within, the reservoir 'Dry Day' or 'Wet Day' flood extents.
- whether the site is at risk from groundwater emergence using the JBA Groundwater Emergence Map.
- whether the site is within, or partially within, the EA Historic Flood Map dataset or within 50m of a LLFA record flood incident.

The results of the screening assisted Swale Borough Council with Sequential Test decision-making so that flood risk is taken into account when considering allocation options.

5.2 Sites taken forward to a Level 2 assessment

Swale Borough Council refined the long list to 72 sites that were considered potential allocations within the Local Plan. JBA then undertook a more detailed scoping assessment of these sites to determine whether they required inclusion in the Level

2 SFRA. Each site was assigned a 'least preferable', 'less preferable', or 'most preferable' rating based on its relative level of flood risk:

- 'Least Preferable' sites were identified where more than 20% of the site was at risk from either surface water, fluvial or tidal sources. 'Least preferable' sites had significant obstacles or challenges for development which would need consideration if taken forward. The proportion of the allocation at risk is too large for a sequential approach at the site level to be undertaken. They may need the Exception Test to demonstrate that the site can be safely developed, from a flood risk perspective. Additional modelling requirements will need to be considered within a site-specific Flood Risk Assessment.
- 'Less preferable' sites were identified to have between 0% and 20% of the site at risk from either surface water, fluvial or tidal sources. 'Less preferable' sites were flagged for further consideration by the Planning Policy team but it is likely to be possible to address the flood risk constraints at planning application stage. These sites will require the sequential approach to be undertaken at the site level and safe access and escape should be considered and investigated for all allocations prior to any development.
- 'Most preferable' sites were identified to have 0% of the allocation at risk from either surface water, fluvial or tidal sources. However, it is noted that 'most preferable' sites may still require an FRA and drainage strategy, depending on the size and location of the site. Safe access and escape should be considered and investigated for all allocations prior to any development.

Of the 72 sites screened, the results were as follows:

- 25 'Least preferable' sites (22 were taken forward after review from Swale Borough Council).
- 33 'Less preferable' sites
- 14 'Most preferable' sites

5.3 Detailed site assessments

As part of the Level 2 SFRA, Swale Borough Council confirmed that 22 of the 25 'Least preferable' sites would be going forward. SHELAA/217 and SLA18/207 are the same site but the proposed land uses are residential and employment respectively. Therefore, 23 detailed site assessments have therefore been produced for the following sites:

- SHELAA/143 - Land south of Little Groves - Policy HOA9
- REG3197 - Land at Marshlands Farm - Policy EMA6
- CFS24 - Ridham Dock - Policy EMA1
- SHELAA/220 - West of Rushenden Road - Policy Regen 3d
- SHELAA/323 - Sheppey Beach Villas - Policy HOA10

- SHELAA/223 - The Foundary - Policy Regen 3e
- SHELAA/418 - Land at West Minster off of Brielle Way - Policy HOA03
- SHELAA/432 - The Peartree - Policy HOA17d
- SHELAA/435 - Three Lakes Park. - Policy HOA17a
- SHELAA/436 - 15 The Laurels - Policy HOA17e
- SHELAA/433 - Jack Russell Place - Policy HOA17k
- SHELAA/258 - Bell House - Policy Regen 2a
- SHELAA/421 - Land at Brielle Way - Policy HOA04
- SHELAA/306 - Land at Forge Lane - Policy HOA14
- SHELAA/351 - The Classic Cinema, High Street- Policy Regen 2c
- SHELAA/217 and SLA18/207- South of Queenborough Creek - Policy Regen 3b
- SHELAA/346 - Digswell, Lower Hartlip Road - Policy HOA16c
- SHELAA/368 - Amethyst Horticulture, Land at Newington Nurseries - Policy HOA11A
- SHELAA/216 - Land at West Street - Policy Regen 3a
- SHELAA/142 & R10 - Newington Industrial Estate - Policy EMA7
- CFS2024/129 - Smeed Dean Works - Policy EMA3
- SHELAA/218 - Former Istil site Rushenden Road/Thomsett Way - Policy Regen 3c

The site assessments and mapping can be found in Appendix A. Table 5-1 sets out the information contained within each section of the site assessment.

Table 5-1: Summary of the information within each section of the detailed site assessments.

Section	Information
1. Background	• Location of the site • Area, current land use (greenfield/brownfield), proposed site use • Topography of the site • Geology and soil characteristics
2. Sources of flood risk	• Existing drainage features • Fluvial – proportion of site at risk including description from mapping/modelling, utilising depth, hazard, and velocity information from detailed hydraulic models where available • Tidal - proportion of site at risk including description from mapping/modelling, utilising depth, hazard, and velocity information from detailed hydraulic models where available Surface Water – proportion of site at risk including description from the Flood Map for Planning – Surface Water Spatial Planning Extents mapping using available depth information • Reservoir flood risk in both the 'Dry Day' and 'Wet Day' scenarios • Groundwater emergence risk • Sewer flood risk - reported incidences in proximity to the site • Flood history - historic incidents on or surrounding the site from the EA Historic Flood Map dataset and LLFA flood records
3. Climate Change	• Fluvial climate change - summary of available climate change allowances and increase in flood extent compared to the 1% AEP (1 in 100-year) event (Flood Zone 3a) • Tidal climate change - summary of available climate change allowances and increase in flood extent compared to the 0.5% AEP (1 in 200-year) event • Surface water climate change - summary of available climate change allowances and increase in flood extent compared to the 1% AEP (1 in 100-year) event
4. Flood risk management infrastructure	• Flood risk management infrastructure • Description of residual risk

Section	Information
5. Emergency planning	• Flood warnings and alerts • Access and escape routes
6. Requirements for drainage control and impact mitigation	• Broadscale assessment of possible SuDS to provide indicative surface water drainage advice for each site assessed for the Level 2 SFRA. • Identification of potential SuDS constraints including Groundwater Source Protection Zones, Nitrate Vulnerable Zones and historic landfill sites
7. NPPF and planning implications	• Exception Test requirements • Requirements and guidance for site-specific Flood Risk Assessment • Guidance for site design and making development safe
8. Conclusions	• Summary of key risks to the site • Summarising considerations if development proceeds

5.4 'Less preferable' sites assessment

As set out in Section 5.2, 33 sites that are being taken forward by Swale Borough Council were identified as 'less preferable' sites based on the surface water, fluvial, coastal reservoir flood risk and/or groundwater emergence potential at the site. These sites are likely to have some challenges for development but are not identified as requiring a detailed Level 2 assessment. Safe access and escape should be considered and investigated for all allocations prior to any development.

Appendix C provides a more detailed overview of the flood risk at the identified 'less preferable' and general recommendations that should be applied to any future development at these sites.

6 Flood risk management requirements for developers

The flood risk management requirements for developers are detailed within Section 7 of the Swale Borough Council Level 1 SFRA. Users should refer to this section for guidance on site-specific FRAs and other principles for managing flood risk in new development.

This contains details on:

- early consultation with statutory and non-statutory consultees;
- requirements for site-specific FRAs, including signposting to specific guidance; and
- emergency planning.

The sections below contain further information on emergency planning and the requirements for developer contributions.

6.1 Emergency planning

Safe access and escape routes from the site should be provided. The developer should seek to incorporate an emergency plan and a safe refuge point if the development site has been identified to be at risk of flooding. The local authority and Emergency Services should be consulted when designing an emergency plan.

This Level 2 assessment has identified 12 proposed 'least preferable' sites located within existing EA FWA:

- CFS2024/129 - Smeed Dean Works - Policy EMA3
- CFS24 - Ridham Dock - Policy EMA1
- SHELAA/143 - Land south of Little Groves - Policy HOA9
- SHELAA/216 - Land at West Street - Policy Regen 3a
- SHELAA/217 and SLA18/207- South of Queenborough Creek - Policy Regen 3b
- SHELAA/218 - Former Istil site Rushenden Road/Thomsett Way - Policy Regen 3c
- SHELAA/220 - West of Rushenden Road - Policy Regen 3d
- SHELAA/223 - The Foundary - Policy Regen 3e
- SHELAA/323 - Sheppey Beach Villas - Policy HOA10
- SHELAA/418 - Land at West Minster off of Brielle Way - Policy HOA03
- SHELAA/421 - Land at Brielle Way - Policy HOA04
- SHELAA/435 - Three Lakes Park. - Policy HOA17a

For proposed development within existing EA FWAs, developers should consult the EA to ensure that adequate flood warning procedures and evacuation processes are in place and that RMAs are not put under any additional burden.

Section 9 of the Level 1 SFRA report discusses NPPF requirements and what an emergency plan will need to consider and other relevant information on emergency planning. Further information is provided on the Kent County Council Emergency Planning webpage and in the Swale Borough Local Plan.

The duration and onset of flooding affecting a site depends on several factors:

- Location of the site within the catchment: flooding is likely to be rapid and flashy in the upper catchment (e.g. small tributaries) and slower responding and longer in duration in the lower catchment.
- Upstream storage: floodplains, reservoirs, and other storage areas upstream of a site may provide some online flood storage that reduces the flood risk downstream and delays the onset of flooding.
- Timing of peak flow: at the confluence of the larger watercourses and smaller tributaries, there may be different timings of peak flows, for example smaller tributaries would peak much earlier than the larger catchments.
- Proximity to the coastline and ground levels in the area. Tidal surge, and the effects of wave overtopping.
- The principal source of flooding: where this is surface water, depending on the intensity and location of the rainfall, flooding could be experienced within 30 minutes of the heavy rainfall event e.g., a thunderstorm. Typically, the duration of flooding for areas at risk of surface water flooding, or from flash flooding from small watercourses, is short (hours rather than days).
- The preceding weather conditions prior to the flooding: wet weather lasting several weeks will lead to saturated ground. Rivers respond much quicker to rainfall in these conditions.
- Whether a site is defended, noting that if the defences were to fail, a site could be affected by very fast flowing and hazardous water within 15 minutes of a breach developing (depending on the size of the breach and the location of the site in relation to the breach), causing danger to life.
- Catchment geology: the permeability of a catchment affects its response time, for example chalk catchments take longer to respond than clay catchments.

6.2 Developer contributions

In some cases, and following the application of the Sequential Test, it may be appropriate for the developer to contribute to the improvement of flood defence provision that would benefit both proposed new development and the existing local community. Developer contributions can also be made to maintenance and provision of flood risk management assets, flood warning and the reduction of surface water flooding (i.e. SuDS).

A Medway Estuary & Swale Coastal Risk Management Strategy (MEAS) Contribution Advice Note has been prepared by Swale Borough Council for developments within the MEAS Contribution Zone and complements Policy C7 of the emerging Swale Local Plan. The Policy and Advice Note outline the need for payments to contribute to flood defence works through Planning Obligations/S106 Agreements. The Advice Note sets out the location of the contribution area and requirements for contributions.

The document sets out two zones:

- **MEAS Contribution Zone 1** - The Environment Agency Flood Map for Planning Flood Zones plus Climate Change dataset with the fluvial only flood risk removed (accessed April 2026).
  The Flood Map for Planning Flood Zones plus Climate Change dataset shows how the combined extent of Flood Zones 2 and 3 could increase with climate change over the next century, ignoring the benefits of any existing flood defences. The dataset uses the 'Upper End' allowance for risk of flooding from the sea, accounting for cumulative sea level rise to 2125.
  The Defra Data Services Platform provides further information on both the Flood Map for Planning - Flood Zones plus Climate Change dataset and the Flood Map for Planning - Flood Zones dataset.
- **MEAS Contribution Zone 2** - The Isle of Sheppey

Within the Board's drainage district, the North Kent Marshes Water Level Management Board Byelaws apply. These include provisions relating to the introduction of additional water into the Board's drainage system and provide the basis for the Board's Surface Water Development Contribution, where applicable. Developers are directed to engage with the Board at an early stage where development proposes to discharge surface water to, or otherwise has the potential to affect, the managed drainage system.

7 Surface water management and SuDS

The Surface Water Management roles and responsibilities for different organisations and relevant legislation, policy and strategy are detailed within Section 11 of the Swale Borough Council Level 1 SFRA. Users should refer to this section when considering the different sources of flood risk to the site and how this can be mitigated in a sustainable way.

This contains detail on:

- role of the LLFA and LPA in surface water management;
- types of SuDS;
- sources of SuDS guidance; and,
- other surface water considerations including Groundwater Vulnerability Zones (GVZs), Groundwater Source Protection Zones (GSPZs), and Nitrate Vulnerability Zones (NVZs).

7.1 SuDS guidance

The Defra National standards for sustainable drainage systems (SuDS) (gov.uk) were published in June 2025.

Previously SuDS guidance was developed to sit alongside the PPG and provide non-statutory standards as to the expected design and performance for SuDS. The policy (F8.2.a) in the NPPF now explicitly required drainage schemes to be designed in accordance with the National Standards for SuDS. These standards aim to reflect and reinforce good practice and use of SuDS, reflecting the four pillars of SuDS design.

The national standards contain two sets of standards. The first type (Standard 1) is known as the hierarchy standard and gives criteria for the prioritisation of final runoff destinations. The other standards (Standards 2-7) detail the minimum requirements of design criteria that surface water drainage systems should satisfy alongside how they are to be appropriately built, maintained, and operated.

7.2 Opportunities for wider sustainability benefits and integrated flood risk management

The following recommendations for managing surface water and integrated flood risks are included in the Level 2 site assessments in Appendix A, and should be considered as part of any site proposed for development in Swale Borough:

- Implementation of SuDS at the development sites should provide opportunities to deliver multiple benefits including volume control, water quality, amenity and biodiversity. This could provide wider sustainability benefits to the sites and surrounding areas. Proposals to use SuDS techniques should be discussed with relevant stakeholders (Local

Planning Authority, Lead Local Flood Authority, and the EA) at an early stage to understand possible constraints.

- Development at the development sites must not increase flood risk either on or off site. The design of the surface water management proposals should take into account the impacts of future climate change over the projected lifetime of the development.
- Opportunities to incorporate filtration techniques such as filter strips, filter drains and bioretention areas must be considered.
- The use of multistage SuDS treatment will improve water quality of surface water runoff discharged from the site and reduce the impact on receiving water bodies.
- Opportunities to incorporate source control techniques such as green roofs, permeable surfaces and rainwater harvesting must be considered in the design of the site.
- Consideration should be made to the existing condition of receiving waterbodies and their Water Framework Directive objectives for water quality. The use of multistage SuDS treatment will improve water quality of surface water runoff discharged from the development sites and reduce the impact on receiving water bodies. No surface water runoff should be discharged directly into watercourses. This is essential to prevent pollution, erosion, and directly into watercourses. This is essential to prevent pollution, erosion, and habitat degradation. The potential to utilise conveyance features such as swales to intercept and convey surface water runoff should be considered. Conveyance features should be located on common land or public open space to facilitate ease of access. Where slopes are >5%, features should follow contours or utilise check dams to slow flows.
- Interception of the first 5mm of rainfall runoff from development sites is a key requirement of the National Standards for Sustainable Drainage Systems (SuDS).

8 Recommendations

8.1 Considering the Exception Test for the proposed development sites

When required, to pass the Exception Test it must be shown that the development will provide wider sustainability benefits that outweigh the risk, and that the development will be safe throughout its lifetime without increasing risk elsewhere, and where possible reduce flood risk overall. The former is a planning-related consideration and the Level 2 SFRA helps to answer the latter parts of the Test.

In principle, the sites assessed within this Level 2 SFRA are likely to pass the flood risk element of the Exception Test by:

- Undertaking a sequential approach to site planning so development is steered away from areas within the site at the highest risk.
- Considering safe access/escape routes in the event of a flood (from all parts of the site, if say the site is severed by a flood flow path). If access and escape are affected, a Flood Response Plan may be required.
- Designing buildings with finished floor levels above the estimated flood level (fluvial 1% AEP event or tidal 0.5% AEP event with an allowance for climate change), including an allowance for freeboard.
- Using areas in Flood Zone 2 for the least vulnerable parts of the development in accordance with Table 2 in the PPG. No development should be permitted in Flood Zone 3b (aside from Essential Infrastructure).
- Testing flood mitigation measures if these are to be implemented, to ensure that they will not displace water elsewhere (for example, if land is raised to permit development on one area, compensatory flood storage may be required in another area).
- Considering space for green infrastructure in the areas of highest flood risk.

Although not explicitly required within the PPG, consideration should be given to the surface water risk where this is high, with regards to the Exception Test. All of the sites were identified to be at risk in the 3.3% AEP (1 in 30-year) surface water event except:

  - CFS2024/129 - Smeed Dean Works - Policy EMA3
  - SHELAA/418 - Land at West Minster off of Brielle Way - Policy HOA03
  - SHELAA/433 - Jack Russell Place - Policy HOA17k
  - SHELAA/436 - 15 The Laurels - Policy HOA17e

The Exception Test should not be required for sites located within Flood Zone 1 solely on the basis of surface water flood risk.

Furthermore, where a site has been allocated through an adopted development plan and the Exception Test has already been applied at the plan-making stage, there is no requirement for the test to be repeated at the planning application stage, provided

the proposed development remains consistent with the allocation and associated flood risk evidence.

If a site is split in future into smaller land parcels for development, and some of those parcels are in areas of flood risk, the Exception Test may need to be re-applied by the developer at the planning application stage.

8.2 Sites considered unsuitable for development

The following sites have been identified as unsuitable for development:

- SHELAA/435 - Three Lakes Park - Policy HOA17a - due to the proposed development being 'highly vulnerable' in an area with a significant tidal and surface water flood risk
- SHELAA/436 - 15 The Laurels - Policy HOA17e - due to the proposed development being residential and being located in the Coastal Change Management Area (CCMA) Erosion Zone 2. According to Local Plan's CCMA Policy C6, permanent new residential developments are not permitted in the CCMA.

8.3 Recommendations from the Level 1 SFRA

Recommendations from this report should be considered in addition to recommendations from the Level 1 SFRA, which still stand for the site allocations and any windfall development that comes forward. The recommendations for the Level 1 SFRA are set out in Section 18 of the Swale Borough Council Level 1 SFRA.

8.4 Requirements for developers

The sections below set out requirements for developers to consider both for developing sites assessed within this Level 2 SFRA and for developing windfall sites.

8.4.1 Watercourses

A buffer strip of 8m is required from any non-tidal main river or ordinary watercourse and 16m from tidal main rivers. Where flood defences are present, these distances should be taken from the landward toe of the defence. These should be incorporated into site designs to protect water quality and support ecological networks.

This may introduce constraints regarding what development will be possible and consideration will also need to be given for access and maintenance at locations where there are culverts. Developers will be required to apply for appropriate permits so the activity being carried out over easements does not increase flood risk. Further information relating to this can be viewed on the government website Flood risk activities: environmental permits (gov.uk).

Where no recent detailed hydraulic modelling is present, it is recommended that developers construct new, or update existing, detailed hydraulic models at these

sites as part of a site-specific FRA using channel, structure, and topographic survey to confirm flood risk. Site-specific flood modelling will likely need to be developed in locations where it is necessary to understand the effects of proposed development schemes on the existing flood flow paths and flood volume storage, in the present day and in the future.

At the planning application stage, developers may need to undertake more detailed hydrological and hydraulic assessments of unmodelled watercourses and surface water interactions so that the potential effects of proposals can be evaluated at site level and ensure that there is no increase in risk off-site as a result of development. The modelling should evidence flood extents, depths, velocities and hazard (including latest climate change allowances), inform development zoning within the site and prove, if required, whether the Exception Test can be passed.

If an ordinary watercourse is within or immediately adjacent to the site area, consultation with Kent County Council as the LLFA should be undertaken. If alterations or discharges are proposed to the watercourse, a land drainage consent will be required.

Where an ordinary watercourse is within or immediately adjacent to a site, developers should consult Kent County Council as Lead Local Flood Authority, as appropriate.

Where the site is also within the North Kent Marshes Water Level Management Board district, the Water Level Management Board should additionally be consulted in relation to ordinary watercourses and the managed drainage network. Early consultation with the Water Level Management Board is also recommended where development proposes to discharge surface water to, or otherwise has the potential to affect, the Board's managed drainage system. Relevant consents and requirements under the Board's sustainable Byelaws should be identified as part of this process.

Developers should be aware of the need to identify the route of, and flood risk associated with, any culverts within a site. CCTV condition survey will be required to establish the current condition of the culvert and hydraulic assessments will be necessary to establish culvert capacity of both culverts on site and those immediately offsite that could pose a risk to the site. The risk of flooding should be established using site survey, including the residual risk of culvert blockage.

8.4.2 Flood risk management infrastructure and residual risk

For sites where existing flood defences provide a reduction in the flood risk to the site, it is important to understand the standard of protection these structures and measures provide. It is also necessary to understand how this level of protection changes over time, considering the implications of climate change.

If flood defences are required to protect a development site, evidence will be required to show that the new development does not adversely impact and increase

flood risk to other areas, for example that there is no net loss in floodplain storage in circumstances where this is a material consideration. It will need to be established that these defences can be appropriately managed and maintained during the lifetime of the development. In some cases, it will be a requirement to demonstrate that there is an appropriate level of commitment to the maintenance of the standard of protection afforded by existing defences, where reliance is placed on the standard they provide.

8.4.3 Access and escape routes

Access and escape routes should be considered at the site, but also in the vicinity of the site, for example, a site may have low surface water risk, but in the immediate locality, access/escape routes to and from the site could be restricted for vehicles and/or people. For sites assessed within this Level 2 SFRA, an initial overview of potential access and escape options is provided within the detailed site assessments and potential constraints identified.

8.4.4 Surface water flood risk and SuDS

Surface water risk should be considered in terms of the proportion of the site at risk in the 3.3% (1 in 30-year), 1% (1 in 100-year) and 0.1% AEP (1 in 1,000-year) events (with an appropriate allowance for climate change), whether the risk is due to isolated minor ponding or deeper pooling of water, or whether the risk is due to a wider overland flow route.

A strategic assessment of SuDS options has been undertaken using regional datasets for sites assessed within this Level 2 SFRA. A detailed site-specific assessment of suitable SuDS techniques should be undertaken at site-specific level to understand which SuDS options are most appropriate. This may need to include infiltration testing to determine the suitability of infiltration methods.

Surface water risk and mitigation should be considered as part of a detailed site-specific FRA and surface water drainage strategy.

8.5 Use of SFRA data and future updates

It is important to recognise that the SFRA has been developed using the best available information at the time of preparation. This relates both to the current risk of flooding from all sources and the potential impacts of future climate change.

The SFRA should be a ‘living document’, and as a result should be updated when new information on flood risk, flood warning, or new planning guidance or legislation becomes available. New information may be provided by Swale Borough Council, Kent County Council as LLFA, the EA, and Southern Water. Such information may be in the form of:

- New hydraulic modelling results.
- Flood event information following a future flood event.

- Policy or legislation updates.
- Updates to the EA flood mapping.
- New flood defence schemes or flood alleviation schemes.

The EA regularly reviews their flood risk mapping, and it is important that they are approached to determine whether updated information is available prior to commencing a detailed FRA.

Appendices

A Detailed site assessments and mapping

B Data sources used in this SFRA

C Less Preferable Sites

Table C-1: 'Less Preferable' Sites and sites excluded from the L2 SFRA which were 'Least Preferable'

Reference	Site name and Regulation 19 Local Plan reference	Preferability	Flood Risk	Reason for exclusion from L2 SFRA	Recommendations
CFS2024/177	Grove Farm (EMA10)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <10% Groundwater flood risk: Yes Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of groundwater and surface water flooding from the site. Development should avoid the areas at risk of surface water flooding. Underground development may not be permitted due to groundwater flood risk.
CFS2024/188	Land north of Keycol Hill (Yellow/Blue parcel) (EMA 4)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <1% Groundwater flood risk: Yes Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of groundwater and surface water flooding from the site. Development should avoid the areas at risk of surface water flooding Underground development may not be permitted due to groundwater flood risk.
CFS50	Land East of Faversham expansion	Less Preferable	Tidal flood risk: <10% Fluvial flood risk: <10% Surface Water flood risk: <10%	Less than 20% of the site is at risk of fluvial, tidal or surface	A site specific FRA should be undertaken to assess the risk of flooding from the site. Development should avoid the

Reference	Site name and Regulation 19 Local Plan reference	Preferability	Flood Risk	Reason for exclusion from L2 SFRA	Recommendations
			Groundwater flood risk: Yes Reservoir flood risk: No	water flooding	areas at risk of tidal, fluvial and surface water flooding. Underground development may not be permitted due to groundwater flood risk.
LPR2470 (R15)	Lamberhurst Farm, Yorkletts - proposed southern expansion (EMA11)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <10% Groundwater flood risk: No Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of surface water flooding from the site. Development should avoid the areas at risk of surface water flooding.
SBC17/ 008	Land fronting east side Bobbing Hill, Sittingbourne (EMA2)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <1% Groundwater flood risk: Yes Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of surface water and groundwater flooding from the site. Development should avoid the areas at risk of surface water flooding. Underground development may not be permitted due to groundwater flood risk.

Reference	Site name and Regulation 19 Local Plan reference	Preferability	Flood Risk	Reason for exclusion from L2 SFRA	Recommendations
SBC17/ 094	Land adj A2 - Love Ln & W of Salter's Ln - Brenley Corner (Duchy site) (STRAT2)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <10% Groundwater flood risk: Yes Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of surface water and groundwater flooding from the site. Development should avoid the areas at risk of surface water flooding. Underground development may not be permitted due to groundwater flood risk.
SBC17/ 095	Hartlip Industrial Estate, Hartlip (extension to) (EMA9)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <20% Groundwater flood risk: No Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of surface water flooding from the site. Development should avoid the areas at risk of surface water flooding and use SuDS to manage the flow of water on site.
SBC17/005	Land at Pheasant Farm (west), Howt Green, Sittingbourne	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <20% Groundwater flood risk: No Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of surface water flooding from the site. Development should avoid the areas at risk of surface water flooding and use SuDS to manage the flow of water on site.

Reference	Site name and Regulation 19 Local Plan reference	Preferability	Flood Risk	Reason for exclusion from L2 SFRA	Recommendations
SBC17/025	Land at Radfield Farm, London Road, Bapchild (EMA8)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <10% Groundwater flood risk: Yes Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of surface water and groundwater flooding from the site. Development should avoid the areas at risk of surface water flooding. Underground development may not be permitted due to groundwater flood risk.
SHELAA/012	Land west of existing Bobbing Village (STRAT1)	Less Preferable	Tidal flood risk: No Fluvial flood risk: <1% Surface Water flood risk: <10% Groundwater flood risk: Yes Reservoir flood risk: <1%	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of fluvial, surface water, reservoir and groundwater flooding from the site. Development should avoid the areas at risk of fluvial and surface water flooding. Underground development may not be permitted due to groundwater flood risk. The reservoir operator should be consulted at the FRA stage.
SHELAA/022	Land at Street Farm, Pond Farm Road (Site B)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <1% Groundwater flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface	A site specific FRA should be undertaken to assess the risk of surface water flooding from the site.

Reference	Site name and Regulation 19 Local Plan reference	Preferability	Flood Risk	Reason for exclusion from L2 SFRA	Recommendations
	(HOA16h)		Reservoir flood risk: No	water flooding	
SHELAA/037	Land off Colonels Lane (HOA16f)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <10% Groundwater flood risk: No Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of surface water flooding from the site. Development should avoid the areas at risk of surface water flooding.
SHELAA/044	The Former Garden Hotel (no 169), The Street (HOA16g)	Less Preferable	Tidal flood risk: No Fluvial flood risk: <10% Surface Water flood risk: No Groundwater flood risk: No Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of surface water flooding from the site. Development should avoid the areas at risk of surface water flooding.
SHELAA/081	Lady Dane Farm Buildings, Love Lane (HOA16a)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <10% Groundwater flood risk: No Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of surface water flooding from the site. Development should avoid the areas at risk of surface water flooding.
SHELAA/111	Land at Graveney Road, East of Faversham (Site A)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <1% Groundwater flood risk: Yes Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of groundwater and surface water flooding from the site. Underground development may not be permitted due to

Reference	Site name and Regulation 19 Local Plan reference	Preferability	Flood Risk	Reason for exclusion from L2 SFRA	Recommendations
	(HOA1)				groundwater flood risk.
SHELAA/114	South East Faversham (STRAT2)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <10% Groundwater flood risk: Yes Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of groundwater and surface water flooding from the site. Development should avoid the areas at risk of surface water flooding. Underground development may not be permitted due to groundwater flood risk.
SHELAA/153	Land at Claxfield Road (Site 1 small parcel) (HOA12)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <20% Groundwater flood risk: Yes Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of groundwater and surface water flooding from the site. Development should avoid the areas at risk of surface water flooding and use SuDS to manage the flow of water on site. Underground development may not be permitted due to groundwater flood risk.

Reference	Site name and Regulation 19 Local Plan reference	Preferability	Flood Risk	Reason for exclusion from L2 SFRA	Recommendations
SHELAA/154	Land at Claxfield Road (Site 2) (HOA12)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <10% Groundwater flood risk: Yes Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of groundwater and surface water flooding from the site. Development should avoid the areas at risk of surface water flooding. Underground development may not be permitted due to groundwater flood risk.
SHELAA/206	Land at Norton Ash Garden Centre (HOA13)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <1% Groundwater flood risk: No Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of surface water flooding from the site.
SHELAA/244	Halfway Houses Primary School, Southdown Rd (HOA5)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <10% Groundwater flood risk: No Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of surface water flooding from the site. Development should avoid the areas at risk of surface water flooding.
SHELAA/262	Former Bus Depot, East Street (Regen 2b)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk:	Less than 20% of the site is at risk of fluvial, tidal or surface	A site specific FRA should be undertaken to assess the risk of surface water flooding from the site. Development should avoid

Reference	Site name and Regulation 19 Local Plan reference	Preferability	Flood Risk	Reason for exclusion from L2 SFRA	Recommendations
			<10% Groundwater flood risk: No Reservoir flood risk: No	water flooding	the areas at risk of surface water flooding.
SHELAA/267	ISP, Church Street (Regen 2f)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <10% Groundwater flood risk: No Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of surface water flooding from the site. Development should avoid the areas at risk of surface water flooding.
SHELAA/308	Land south of Forge Lane and Holywell Primary School (HOA14)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <10% Groundwater flood risk: No Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of surface water flooding from the site. Development should avoid the areas at risk of surface water flooding.

Reference	Site name and Regulation 19 Local Plan reference	Preferability	Flood Risk	Reason for exclusion from L2 SFRA	Recommendations
SHELAA/321	Land west of Warden (HOA15)	Less Preferable	Tidal flood risk: <20% Fluvial flood risk:<10% Surface Water flood risk: <10% Groundwater flood risk: No Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of tidal, fluvial and surface water flooding from the site. Development should avoid the areas at risk of tidal, fluvial and surface water flooding and use SuDS to manage the flow of surface water on site. This site needs to be accessed through the CCMA.
SHELAA/324	Home Farm, Breach Lane, Lower Halstow, ME9 7DB (HOA16i)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <10% Groundwater flood risk: No Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of surface water flooding from the site. Development should avoid the areas at risk of surface water flooding.
SHELAA/332	10-14 High Street, Sittingbourne (Regen 2d)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <10% Groundwater flood risk: No Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of surface water flooding from the site. Development should avoid the areas at risk of surface water flooding.
SHELAA/344	Land adjacent to	Less Preferable	Tidal flood risk: No	Less than 20% of the site is at	A site specific FRA should be undertaken to assess the risk of

Reference	Site name and Regulation 19 Local Plan reference	Preferability	Flood Risk	Reason for exclusion from L2 SFRA	Recommendations
	Leysdown Road, Eastchurch (HOA8)		Fluvial flood risk: No Surface Water flood risk: <10% Groundwater flood risk: No Reservoir flood risk: No	risk of fluvial, tidal or surface water flooding	surface water flooding from the site. Development should avoid the areas at risk of surface water flooding.
SHELAA/381	Syndale Park, London Road, Ospringe, Faversham (HOA16b)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <10% Groundwater flood risk: Yes Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of groundwater and surface water flooding from the site. Development should avoid the areas at risk of surface water flooding. Underground development may not be permitted due to groundwater flood risk.
SHELAA/393	Land at Lion Field, Faversham (HOA2)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <10% Groundwater flood risk: Yes Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of groundwater and surface water flooding from the site. Development should avoid the areas at risk of surface water flooding. Underground development may not be permitted due to groundwater flood risk.

Reference	Site name and Regulation 19 Local Plan reference	Preferability	Flood Risk	Reason for exclusion from L2 SFRA	Recommendations
SHELAA/402	Hollybush Farm Caravan Park, Oak Lane, Minster (HOA6)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <1% Groundwater flood risk: No Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of surface water flooding from the site. Development should avoid the areas at risk of surface water flooding.
SHELAA/427	Keycol Farm, Keycol Hill, Newington, ME9 8NA (HOA17g)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <10% Groundwater flood risk: Yes Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of groundwater and surface water flooding from the site. Development should avoid the areas at risk of surface water flooding. Underground development may not be permitted due to groundwater flood risk.

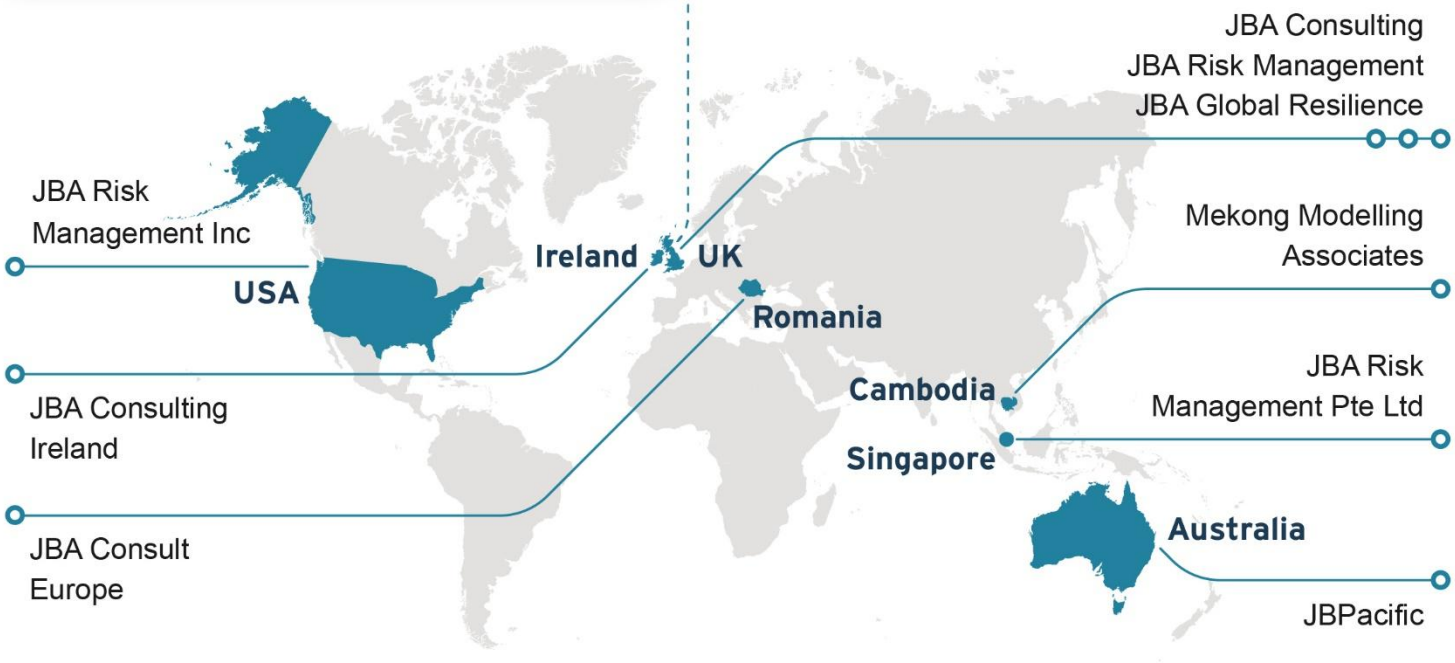
Reference	Site name and Regulation 19 Local Plan reference	Preferability	Flood Risk	Reason for exclusion from L2 SFRA	Recommendations
SHELAA/429	Halstow Cross, Lower Halstow, ME9 7ER (HOA17j)	Less Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: <10% Groundwater flood risk: Yes Reservoir flood risk: No	Less than 20% of the site is at risk of fluvial, tidal or surface water flooding	A site specific FRA should be undertaken to assess the risk of groundwater and surface water flooding from the site. Development should avoid the areas at risk of surface water flooding. Underground development may not be permitted due to groundwater flood risk.
CFS34	Land adj. Kemsley Substation, ME10 2FE	Least Preferable	Tidal flood risk: >20% Fluvial flood risk: >20% Surface Water flood risk: <20% Groundwater flood risk: No Reservoir flood risk: >20%	Due to other planning considerations this site was not taken forward	Majority of the site is at risk of flooding from rivers and sea now and in the future, If it goes to FRA stage, the reservoir operator should be consulted.
SHELAA/270	Land at Tonge Road	Least Preferable	Tidal flood risk: No Fluvial flood risk: No Surface Water flood risk: >20% Groundwater flood risk: Yes Reservoir flood risk: No	Due to other planning considerations this site was not taken forward	A site specific FRA should be undertaken to assess the risk of groundwater and surface water flooding from the site. Development should avoid the areas at risk of surface water flooding. Underground development may not be permitted due to groundwater flood risk.

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