

Central Lancashire Level 1 Strategic Flood Risk Assessment

Preston City Council

South Ribble Borough Council

Chorley Borough Council

SFRA User Guide

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SFRA User Guide

The User Guide provides specific guidance for the SFRA. This report should be used by all involved in the development planning process. This Guide is presented as five key chapters comprising:

- Guidance for Spatial Planners
- Guidance for Development Management
- Guidance for Developers
- Guidance for Flood Risk Management
- Guidance for Emergency Planners

SFRA Mapping

A suite of strategic flood risk maps has been produced for the SFRA. These maps should be used to locate development away from areas at high risk of flooding.

Future development planning also needs to make reference to this suite of strategic flood risk maps, as well as any updated information provided by the LPAs and Environment Agency.

Use of SFRA Data

Whilst all data used in the preparation of this SFRA has been supplied to the LPAs (including reports, mapping, Geographic Information Systems (GIS) and modelled data and development allocation assessments) there is a need to maintain controls over the data and how it is applied and modified. It is anticipated that the SFRA and associated maps will be published on the Council's website as PDFs. As the central source of SFRA data, these maps will be available to download.

The LPAs will be able to use the modelled output (depths, hazards, velocities and extent outlines) for internal use. The use of this information must consider the context within which it was produced. The use of this data will fall under the license agreement between the LPAs and the Environment Agency as it has been produced using Environment Agency data. It should be remembered that the modelling undertaken for the SFRA is of a strategic nature and more detailed FRAs should seek to refine the understanding of flood risk from all sources to any particular site.

SFRA data should not be passed on to third parties outside of the LPAs. Any third party wishing to use existing Environment Agency flood risk datasets should contact the Environment Agency. A charge is likely to apply for the use of this data.

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1 Introduction

1.1 Background

JBA Consulting were commissioned by the Central Lancashire Local Plan Team to undertake a Level 1 Strategic Flood Risk Assessment (SFRA) on behalf of the Central Lancashire Authorities (CLA) which includes Preston City Council, South Ribble Borough Council and Chorley Borough Council.

The Level 1 SFRA has been prepared in accordance with the updated National Planning Policy Framework¹ (NPPF), 2019 and the accompanying Flood Risk and Coastal Change Planning Practice Guidance² (FRCC-PPG), 2014.

This User Guide has been prepared in support of the SFRA. This guidance should be used to understand the process and procedures required to support development planning and flood risk guidance in accordance with the NPPF.

This User Guide has been developed to provide guidance on the use of the SFRA for local authority spatial planning, regeneration, Flood Risk Management, development management and emergency planning.

1.1.1 Assessment of flood risk

Flooding is a natural process that is not restricted by political demarcations or administrative boundaries. It is primarily influenced by natural factors such as rainfall, tides, geology, topography, rivers and streams and manmade infrastructure such as flood defences, roads, buildings and sewers.

The vulnerability of the proposed land use to flooding should be considered and measures taken to minimise flood risk to people, property and the environment. This is the basis of the risk-based sequential approach to managing flood risk.

Government policy requires Local Planning Authorities (LPAs) to demonstrate that sufficient consideration has been given to the issue of flood risk as part of the planning process, through a Level 1 SFRA. It also requires that flood risk is managed in an effective and sustainable manner. Where new development is exceptionally necessary in flood risk areas, the policy aim is to make it safe without increasing flood risk elsewhere, guided by a more detailed Level 2 SFRA. Whenever possible, overall flood risks should be avoided or reduced.

A SFRA is a planning tool that enables the group of Councils (CLA) to select and develop sustainable development site allocations sequentially away from vulnerable flood risk areas. The assessment focuses on the existing site allocations within the area but also sets out the procedures to be followed when assessing sites for future development.

It is recognised that considerable land use pressures for regeneration, inward investment and economic growth exist. The SFRA will guide CLA in developing strategies, policies and decisions in respect of their Local Plans.

1.1.2 Level 1 SFRA

The Level 1 element of a SFRA is based on existing information that is required to make an assessment of flood risk from all sources, both now and in the future. It provides the evidence for LPA officers to apply the Sequential Test and identifies the need to pass the Exception Test where required. Both of these tests are a fundamental part of the NPPF.

¹ <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

² <https://www.gov.uk/guidance/flood-risk-and-coastal-change>
2019s0129 Central Lancs SFRA - Appendix G v2.0.docx

The main tasks for the Level 1 SFRA, reflecting the 2019 EA guidance on how LPAs should prepare a Level 1 SFRA³, include:

- Stakeholder consultation, data collection and review
- Assessment of current and long term flood risk
- Delineation of NPPF Flood Zones including the Functional Floodplain and the impact of climate change
- Assessment of flood risk from 'other' sources including surface water, groundwater, sewers, reservoirs and canals
- Assessment of potential development sites and potential Local Plan allocations
- Assessment of flood risk management and defences, including for natural flood management and opportunities to reduce the causes and impacts of flooding
- Cumulative impacts of new development
- Recommendations on addressing flood risk
- Production of a range of strategic flood risk maps

³ <https://www.gov.uk/guidance/local-planning-authorities-strategic-flood-risk-assessment#level-1-sfra-what-to-include>

2 Guidance for Spatial Planners

The purpose of this section of the guide is to provide guidance to Spatial Planners on dealing with allocations using the SFRA.

- **Scope the Sustainability Appraisal of the Local Plan alongside this SFRA**
 - *Screen development options*
 - *Produce appropriate flood risk indicators*
- **Avoid sites at high risk of flooding where no other planning objectives outweigh flood risk**
 - *Using Sustainability Appraisal and Sites Assessment Spreadsheet (Appendix B of this SFRA) to assist with the Sequential Test.*
- **Carry out the Sequential Test on proposed development sites**
 - *Using information provided in this SFRA and Sites Assessment Spreadsheet to avoid sites at high risk.*
- **Identify those sites where a greater understanding of flood risk is required (requiring of a Level 2 SFRA)**
 - *These should include key development sites at high risk of flooding.*
 - *Sites requiring application of the Exception Test.*
- **Identify the likelihood of sites passing the Exception Test**
 - *Using the Sustainability Appraisal to assess development sites with regards to other planning objectives and assign weight given to flood risk as a planning constraint.*
 - *Using information provided in a Level 2 SFRA to assess the level of risk to each site and likelihood of it remaining safe. If a site cannot pass all the criteria of the Exception Test it cannot be approved.*
- **Allocate appropriate development through the Sustainability Appraisal**
 - *Produce evidence that both Tests have been applied by noting the outcome and decisions made to avoid, substitute or allocate the site (through Level 1 and 2 SFRA as the evidence bases).*
- **Draft flood risk policies and develop guidance on each allocated site within the Sustainability Appraisal**
 - *Guidance should include the need for site-specific FRAs.*

2.1 Introduction

This Level 1 SFRA provides the basis for the sequential approach to achieving sustainable development. The LPAs should consider flood risk, the mechanisms of flooding, as well as the spatial distributions and development vulnerability in all stages of the development planning process.

This Level 1 SFRA promotes positive planning to deliver strategic opportunities that reduce flood risk to both planned development and existing communities.

Throughout the risk-based sequential testing process, opportunities to minimise flood risk at each stage of the planning process need to be considered. The primary aim of these actions is to ensure that risks to people and property are effectively managed and where possible, reduced. The hierarchy of development management decisions and actions comprise:

- Avoidance, by locating new development outside of areas at risk of existing and future flooding from all sources;
- Substitution, by changing from more vulnerable to less vulnerable land uses; and
- Control & Mitigation of residual risks, by implementing suitable flood risk management measures.

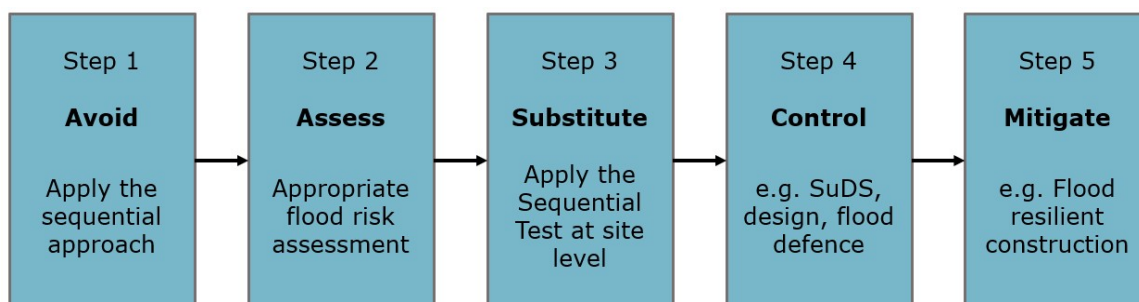


Figure 2-1: Flood Risk Management hierarchy

This Level 1 SFRA provides information on flood risk allowing the LPAs to:

- Produce appropriate policies for development control and site allocation;
- Produce appropriate flood risk indicators that inform the Sustainability Appraisal;
- Undertake the Sequential Test and (with sufficient and suitable information) preliminary information for application of the Exception Test within a Level 2 SFRA; and
- Allocate appropriate land use for development.

It is recommended that a supporting document is prepared, by the LPAs, recording decisions made for each proposed development site using the information recorded in the Sites Assessment spreadsheet (Appendix C). This should include all evidence considered in decision making and this record will form the evidence base that demonstrates that both the Sequential and Exception Test (where applicable) have been applied.

In granting planning permission, it will be the requirement of Development Control officers to confirm that all parts of the Sequential and Exception Tests have been addressed through this Level 1 SFRA and a Level 2 SFRA (if required) and/or FRA. During the initial spatial planning stage, only the **likelihood** of passing the Exception Test can be assessed. To pass the Exception Test a site-specific FRA will be required to identify constraints and demonstrate that safe development is achievable.

This Level 1 SFRA also provides information to allow planners to make strategic decisions that identify the amount and type of development that may be suitable

in each community, and the reality of each development remaining safe from flooding, if allocated. It also identifies potential strategic mitigation strategies that may be required for development to be feasible in at risk areas.

2.2 Sequential Test

When allocating or approving land for development in flood risk areas, those responsible for making development decisions are expected to demonstrate that there are no suitable alternative development sites (of the type and nature proposed by the Local Plan) located in lower flood risk areas.

The Sequential Test is core to the Level 1 SFRA process. The Sequential Test is the key driver for this Level 1 SFRA. In order to carry out the Sequential Test the LPAs needs to know:

- Spatial extent of flood risk within the CLA area
- Flood Zones
 - Flood Zone 1 – Low Probability: less than 0.1% AEP fluvial flood event
 - Flood Zone 2 – Medium Probability: between a 1% AEP and 0.1% AEP fluvial flood event
 - Flood Zone 3a – High Probability: with a 1% AEP or greater fluvial flood event
 - Flood Zone 3b – Functional Floodplain: land where water has to flow or be stored in times of flood. This is land which would flood with an annual probability of 1 in 20 (5% AEP) or greater in any year or is designed to flood in an extreme (0.1% AEP) flood.
- Flooding from other sources: surface water (pluvial runoff), sewer/drainage network, residual risk from canals and reservoirs, groundwater etc.
- Location of proposed development sites and the proposed vulnerability of that development in flood risk terms (See Appendix B in the SFRA)

There are a number of steps that Spatial Planners may follow when sequentially testing sites and assessing the likelihood that a site will pass the Exception Test. These are:

- The LPAs are required to prioritise the allocation of land for development in ascending order from Flood Zone 1 to Flood Zone 3 (including subdivisions of Flood Zone 3: Flood Zones 3a and 3b);
- Identify those sites where substitution is possible due to high percentage of land within lower flood risk areas;
- Identify those high risk sites where a Level 2 SFRA is required to inform the Exception Test;
- Record the decisions taken on each site in the Sites Assessment spreadsheet (Appendix C) of this Level 1 SFRA, to demonstrate each LPA has fully accounted for flood risk;
- Identify those sites that can pass the first part of the Exception Test;
- Identify those sites that may pass the second part of the Exception Test (upon additional evidencing);
- Do not allocate those sites that will likely fail the Exception Test, as identified through a Level 2 SFRA; and
- Produce a supporting document recording all decisions made during the decision-making process. Each proposed development site should be referenced, and the decisions made to avoid, substitute, or allocate the

site and the evidence and/or reasoning used to make the decision should be recorded.

There are a number of key challenges faced by the LPAs in applying the Sequential Test. The Sequential Test is purely based on the Flood Zones as defined by Table 1 in the FRCC-PPG⁴, but these zones only take account of fluvial and tidal flooding, and ignore the presence of flood risk management measures such as defences and pumping stations. Other sources of flooding must also be considered in the spatial distribution of development, most notably surface water.

Whilst it may not be appropriate to avoid development at risk from other sources of flooding, risk should be considered when taking a sequential approach to land use or the substitution of lower development vulnerability in higher risk areas within a development site.

2.3 Exception Test

If the Sequential Test has been successfully applied, and the LPAs cannot allocate development in lower flood risk areas, Table's 2⁵ and 3⁶ of the FRCC-PPG should be referred to. Only once the vulnerability of the development is defined should an assessment be made of whether or not that development is appropriate within that Flood Zone and whether the Exception Test needs to be applied. This Level 1 SFRA informs this decision-making process.

The NPPF and FRCC-PPG explain where and for what type of development the Exception Test needs to be applied. In some situations, for certain types of development, it is not appropriate to use the Exception Test to justify development. For example, highly vulnerable development cannot be justified within the high-risk zone through the use of the Exception Test. Note, the Exception Test must not be used to bypass the Sequential Test. The Sequential Test must be carried out first.

There are conditions, all of which must be fulfilled before the Exception Test can be **passed**. These conditions (see paragraph 160 of the NPPF) are as follows:

1. the development would provide wider sustainability benefits to the community that outweigh the flood risk; and
2. the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.

It will be the requirement of Development Management officers to make sure all parts of the Exception Test have been passed in granting planning permission (see Section 6 of the SFRA). At a spatial planning stage, only the likelihood of passing the Exception Test can be assessed, as actually passing the Test will require the completion of a site-specific FRA to determine if the site and its occupiers will be safe during times of flood.

What should be done at this early stage of the planning process is to identify those sites in which the Exception Test is required and to avoid those sites in which flood risk is too great, using the information provided in the Level 1 SFRA, or there are no overriding planning objectives for that development.

⁴ <https://www.gov.uk/guidance/flood-risk-and-coastal-change#Table-1-Flood-Zones>

⁵ <https://www.gov.uk/guidance/flood-risk-and-coastal-change#Table-2-Flood-Risk-Vulnerability-Classification>

⁶ <https://www.gov.uk/guidance/flood-risk-and-coastal-change#Table-3-Flood-risk-vulnerability>

2.4 Applying the Sequential Test

This section provides guidance on how spatial planners are to apply the Sequential Test within the Sustainability Appraisal of the Local Plan.

The LPAs should produce clear and transparent evidence that the Sequential Test has been applied, which can then feed into the Sustainability Appraisal process. This can either be reported within the Sustainability Appraisal itself or a supporting stand-alone document which then feeds into the Sustainability Appraisal.

The guidance provided in this Level 1 SFRA User Guide should not supersede the NPPF or FRCC-PPG or other national / local plans and policies but should be seen as a practicable approach in how the LPAs should apply the Sequential Test within the preparation of the Local Plans. In applying the test, spatial planners should keep in mind the flood risk management hierarchy of avoid, substitute, control and mitigate (see Figure 2-1), whilst identifying and allocating sustainable development sites.

The evidence provided in this Level 1 SFRA and the Sustainability Appraisal should form the main input to the test. Initially the LPAs should assess alternative development options at a strategic scale using the Sustainability Appraisal. This then expands to using evidence provided in the SFRA to avoid inappropriate development sites, substitution within the site boundary, identify those sites requiring Exception Testing (using this Level 1 SFRA).

Spatial Planners should use the Sustainability Appraisal process to assess alternative sites against flood risk indicators and other planning considerations. Once this has been completed the evidence base for the Sustainability Appraisal, the allocation of appropriate development sites, and the production of flood risk policies and development guidance can be carried out.

3 Guidance for Development Management

The aim of this section is to provide guidance on the use of this Level 1 SFRA by Development Management.

When reviewing individual planning applications, planners should use the guidance in the SFRA, NPPF and FRCC-PPG to:

- **Check whether the Sequential Test has already been applied**
 - *Refer developers to the Local Plan and supporting evidence to identify if the Sequential Test has been applied.*
 - *If evidence is available, the Sequential Test has been assessed. If no evidence is available, developers must carry out the Sequential Test).*
- **Refer developer to the following in order for them to apply the Sequential Test**
 - *Level 1 SFRA (to inform Sequential Test), in particular the Sites Assessment spreadsheet (Appendix B) and the interactive maps (Appendix A);*
- **Consult with the Environment Agency and other relevant stakeholders to**
 - *Assess flood risk constraints identified on site using the SFRA*
- **Scope an appropriate FRA**
 - *What is the scale and nature of risk from all sources?*
 - *Are there any strategic mitigation requirements identified in the SFRA?*
- **Consult with Environment Agency over FRA acceptance and approval and LLFA where surface water risk or risk from ordinary watercourses is involved**

3.1 Introduction

The LPAs are the decision-makers on planning applications for new development. Whilst it is the developer's responsibility to fully consider flood risk issues, the LPAs should be involved during any pre-application discussions.

Following on from recommendations made in the Pitt Review (2007), Development Management must take some of the roles and responsibilities from the Environment Agency as the first point of call in Flood Risk Management and planning applications.

Flood risk needs to be considered at a strategic level by Development Control officers, even though applications for proposed developments are submitted on a site by site basis. Applications may need to fit within a wider flood risk management strategy for an area rather than on a site by site basis.

Development Management officers must always consider development from a strategic viewpoint and the cumulative effect of all proposed development taking place, even though applications for developments are submitted at a site level. It should not be presumed that flood risk has been understood at a strategic high level and that one application may need to fit within a flood risk management strategy for an area.

3.2 The Sequential Test and Exception Test

If the proposed site is already identified in the Local Plan, which is supported by the findings of the relevant LPAs' Level 1 SFRA which provides transparent evidence that the Sequential Test has been carried out, then the developer can assume that the site will already have been through the Sequential Test, however confirmation must be sought from the LPAs. Also, the developer must still apply the sequential approach to site layout within a site boundary when matching land use vulnerability.

However, where it is identified that a site has not been through the Sequential Test, the developer will need to provide evidence to the LPAs that there are no other reasonably available sites, within the identified search area (identified by the LPAs), where the development could be located. The LPAs will then use this information to apply the Sequential Test. This will particularly apply to Windfall Sites that have not been allocated in the Local Plan.

For Windfall Sites, developers will need to provide evidence that the Exception Test can be passed (through a Level 2 SFRA), if required according to the vulnerability of the proposed land use. Development Management will then need to review the evidence provided and decide whether a site passes the Exception Test in consultation with the Environment Agency, the LLFA and wider stakeholders.

Paras 033 - 044 of the FRCC-PPG provide more detail and recommended approaches on how to apply the Sequential Test and Exception Test to individual planning applications.

3.3 Supporting the FRA process

All development applications must be supported by an appropriate site-specific FRA in accordance with the guidance provided in Paras 030 - 032 and 068 of the FRCC-PPG.

At the earliest practical stage, Development Management should refer developers to the SFRA including the associated flood risk mapping and the Environment Agency's online Flood Map for Planning. The developer should also be referred to the appropriate Local Plan flood risk policies which could potentially influence their development proposals.

If a site has been identified as being at risk of flooding, Development Management and the developer should consult the Environment Agency (if within 20 metres of a main river and / or coastal flood risk) and the Lead Local Flood Authority (if risk is from surface water or ordinary watercourse), together with any other relevant flood risk consultees, such as water and sewerage companies, Canal & River Trust, reservoir undertakers, emergency planners, emergency services, highways authorities, regional flood and coastal committees and internal drainage boards (if relevant) to identify known flood-related site constraints and agree the scope of an FRA.

As well as the FRCC-PPG, the Environment Agency's standing advice should be used at this stage. This can be accessed online:

<http://www.environment-agency.gov.uk/research/planning/82584.aspx>

Also, guidance for completing a FRA as part of a planning application is provided by the Environment Agency via:

<https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications>

4 Guidance for Developers

The aim of this section is to provide guidance to developers on using the SFRA.

Developers should use the Guidance in the SFRA, NPPF and FRCC-PPG to:

- **Assess whether the site is a**
 - *Windfall development, allocated development within the Local Plan, within a regeneration area, single property or change of use.*
- **Check whether the Sequential Test has already been applied**
 - *Request information from the LPAs on whether the Sequential Test has been assessed;*
 - *If not, provide evidence to the LPAs that the site passes the Sequential Test and will pass the Exception Test (through a Level 2 SFRA).*
- **Consult with LPAs Development Control, the Environment Agency, the Lead Local Flood Authority and the wider group of flood risk consultees (where appropriate) to scope an appropriate FRA if required. Also consult:**
 - *Guidance on FRAs provided in the SFRA;*
 - *The NPPF and FRCC-PPG;*
 - *Environment Agency standing advice and advice for planning applications (see links in previous section), CIRIA advice (CIRIA Report C624).*
- **Submit FRA to Development Control, Environment Agency, Lead Local Flood Authority (if appropriate) for approval, and other applicable flood risk consultees, where necessary**

4.1 Introduction

The SFRA provides the evidence base for developers to assess flood risk at a strategic level and determine the requirements of an appropriate site-specific FRA.

Developers will need to liaise closely with the LPAs in the first instance to determine if a site is suitable for development. If a site is considered suitable then developers should prepare a site-specific FRA considering all sources of flood risk when assessing the suitability of a site. Developers should also refer to

Environment Agency online advice for FRAs when applying for planning permission via:

<https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications>

4.2 The Sequential Test and Exception Test (Level 2 SFRA)

These tests should have already been carried out if they are included with the LPAs' Local Plans. However, these tests may still be required at an individual site level. Table 4-1 identifies when the Sequential and Exception Tests are required for certain types of development and who is responsible for providing the evidence and those who need to apply the tests.

Development	Sequential Test Required?	Who Applies the Sequential Test?	Exception Test Required?	Who Applies the Exception Test?
Allocated Sites	No (assuming the development type is the same as that submitted via the allocations process)	Local Planning Authorities should have already carried out the test during the allocation of development sites	Dependent on land use vulnerability	Local Planning Authority to advise on the likelihood of test being passed. The developer must also provide evidence that the test can be passed by providing planning justification and producing a detailed Flood Risk Assessment.
Windfall Sites	Yes	Developer provides evidence, to the Local Planning Authority that the test can be passed. An area of search will be defined by local circumstances relating to the catchment and for the type of development being proposed	Dependent on land use vulnerability	Developer must provide evidence that the test can be passed by providing planning justification and producing a detailed Flood Risk Assessment
Regeneration Sites Identified Within Local	No	-	Dependent on land use vulnerability	Local Planning Authority to advise on the likelihood of

Development	Sequential Test Required?	Who Applies the Sequential Test?	Exception Test Required?	Who Applies the Exception Test?
Plan				test being passed. The developer must also provide evidence that the test can be passed by providing planning justification and producing a detailed Flood Risk Assessment
Redevelopment of Existing Single Properties	No	-	Dependent on land use vulnerability	Developer must provide evidence that the test can be passed by providing planning justification and producing a detailed Flood Risk Assessment
Changes of Use	No (except for any proposal involving changes of use to land involving a caravan, camping or chalet site)	Developer provides evidence to the Local Planning Authority that the test can be passed	Dependent on land use vulnerability	Developer must provide evidence that the test can be passed by providing planning justification and producing a detailed Flood Risk Assessment

Table 4-1: Development types and application of Sequential and Exception Tests for developers

4.3 Site-specific Flood Risk Assessments

The principal aims of an FRA are to determine the level of flood risk to a site and to confirm that suitable flood management measures can be developed to control flooding, and safeguard life and property, without increasing risk to the surrounding area.

Once the site has been Sequentially Tested and has been identified as being likely to pass the Exception Test (through a Level 2 SFRA), a site-specific FRA should be undertaken. The LPAs and EA should be consulted in order to determine the content and scope of the FRA.

The production of a site-specific FRA can be seen as an iterative process by subdividing the FRA into three levels:

- Level 1 is a screening study used to identify whether there are any flood risk issues that need to be considered further;
- Level 2 is a scoping study that should be undertaken if the Level 1 FRA indicates that there are flood risk issues that need further consideration; and
- Level 3 is a detailed study where further quantitative analysis is required to fully assess flood issues and confirm that effective mitigation measures can be implemented to control flood risk and that the second part of the Exception Test can be passed. This level would usually involve detailed modelling.

It is appropriate to review the level of risk present and assess whether development is appropriate and achievable at each stage of the assessment.

The SFRA is an assessment of flood risk at a strategic level. This information can be used to provide evidence for Level 1 and Level 2 of the FRA. Where a more detailed FRA is required (Level 3), then a developer should undertake a detailed assessment of the flood risk at the site. The scope of the FRA should be agreed by the developer through consultation with the LPAs and applicable stakeholders such as the EA, the LLFA and other relevant flood risk consultees.

Significant consultation with the LPAs and the flood risk consultees that are relevant to the site may be required for complex development proposals. Complex developments may need to include flood mitigation measures and compensatory storage.

Together with appropriate consultation, accepted FRA guidance should be followed by developers:

- Find out when you need to do an FRA as part of a planning application, how to complete one and how it's processed: <https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications>
- What is a site-specific FRA? (Paras 030 - 032 - <https://www.gov.uk/guidance/flood-risk-and-coastal-change#site-specific-flood-risk-assessment-all>)
- FRA checklist: <https://www.gov.uk/guidance/flood-risk-and-coastal-change#Site-Specific-Flood-Risk-Assessment-checklist-section>

In summary, the FRA should address the following:

1. Development description and location
 - a. What is the type of development and where will it be located?
 - b. What is the vulnerability classification (Table 2 of FRCC-PPG) of the current and future building use?
 - c. Has the development site been assessed in the SFRA? If so, has the Sequential Test been carried out? Has the Exception Test (if applicable) been applied and passed previously?
2. Access and egress
 - a. Can safe access and egress routes be achieved during a flood event?
 - b. Safe access and escape routes should be explicitly identified as part of an agreed emergency plan.
3. Definition of flood hazard

- a. What are the sources of flooding at the site?
 - b. For each source how would flooding occur? Referencing any historical records
 - c. What existing surface water drainage infrastructure is present on the site? Consultation required with LPAs, LLFA, EA and water companies)
4. Probability
- a. Confirm the Flood Zone designation for the site (refer to the Flood Map for Planning: <https://flood-map-for-planning.service.gov.uk/>)
 - b. Determine the actual and residual risks at the site (refer to the SFRA maps and EA modelled depth and hazard information)
 - c. What are the discharge rates and volumes generated by the existing site and proposed development?
5. Climate change
- a. How is flood risk at the site likely to be affected by climate change?
 - b. Check appropriate allowances:
<https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>
6. Flood Risk Management measures
- a. How will the site be protected by flooding, including the potential impacts of climate change, over the lifetime of the development?
7. Residual risks
- a. What are the consequences to the site of flood defence failure? Breach / overtopping scenarios should be modelled.
 - b. Is there residual risk from reservoirs? If so, how can this be mitigated and does the emergency plan address such risk? Reference the EA's Reservoir Flood Map:
https://flood-warning-information.service.gov.uk/long-term-flood-risk/map?map=SurfaceWater#Reservoirs_3-ROFR
 - c. Is there residual from canals? If so, how can this be mitigated and does the emergency plan address such risk? consultation required with the EA, LLFA and Canal & River Trust. Breach / overtopping scenarios should be modelled.
 - d. What flood-related risks will remain after mitigation measures have been implemented?
 - e. How, and by whom, will these risks be managed over the lifetime of the development?
8. Offsite impacts
- a. How will the proposed development ensure there are no impacts to other development downstream or nearby?
 - b. What measures will be implemented to control surface water runoff?
9. Groundwater
- a. This mechanism of flooding should be considered particularly when determining the acceptability of SuDS schemes as a way of managing surface water drainage. Developers should consult with the LPAs, LLFA and EA at an early stage of the assessment.

10. Sewer systems

- a. Where the SFRA has identified a risk of surface water flooding, any water that escapes from the sewer system would tend to follow similar flow paths and pond in similar locations. The SFRA should also contain historical evidence to refer to.
- b. Where required, liaison with the relevant water company should be undertaken at an early stage in the assessment process to confirm localised sewer flooding problems that could affect the site.
- c. Future development should be designed so that it does not exacerbate existing sewer capacity problems.

5 Guidance for Emergency Planners

This section provides guidance on how Local Authority Emergency Planners can use the outputs of the SFRA to update Multi-agency Flood Plans and provide advice on Flood Plans written by developers for new development.

Emergency Planners should use the guidance in this SFRA, the NPPF and FRCC-PPG to:

- **Update the Local Resilience Forum, including the Community Risk Register and Community Emergency Plan**
 - *Using the overall assessment of flood risks provided in the SFRA*
- **Provide advice on developer flood plans for new development**
 - *Using outputs from the SFRA*
 - <https://www.adeptnet.org.uk/floodriskemergencyplan>
- **Raise awareness of flood risk from all sources through the Local Resilience Forum**
 - *Using outputs from the SFRA*
- **Flood warning and evacuation plans**
 - *Using outputs from the SFRA*
 - *In partnership with the EA. Advice and guidance on plans available from the EA. Plan templates available for businesses and local communities*

5.1 Introduction

This section provides guidance on how Local Authority Emergency Planners can use the outputs of the SFRA to update Multi-agency Flood Plans and provide advice on flood plans written by developers for new development.

5.2 Flood plan recommendations

The Level 1 SFRA provides a number of flood risk data sources that should be used when producing or updating flood plans. Emergency Planners may wish to use the assessment to help them in considering and understanding the possibility, likelihood and spatial distribution of all sources of flooding, including fluvial, surface water and sewer, manmade bodies of water including canals and reservoirs and groundwater flooding, as discussed in the Level 1 SFRA. This information may support emergency responders in planning for and delivering a proportionate, scalable, and flexible response to the level of risk.

Relevant SFRA sections and maps include:

- Understanding the risk from different sources of flooding
- Flood zone maps
- Surface water maps
- Climate change
- Residual risk associated with flood risk management infrastructure
- Flood defence infrastructure
- Reservoir Flood Map
- Groundwater flood map
- Flood warning

Emergency planners should use the data in the SFRA to:

- Consider the need for evacuation plans for existing vulnerable institutions and people in the floodplain and other areas at high flood risk
- Develop appropriate warning and informing strategies
- Consider reviewing and updating safe evacuation routes and access routes for emergency services from any existing area of flood risk to rest centres, avoiding routes that may be flooded
- Review the Lancashire Resilience Forum Community Risk Register (CRR)

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Thirsk
Wallingford
Warrington

Registered Office
1 Broughton Park
Old Lane North
Broughton
SKIPTON
North Yorkshire
BD23 3FD
United Kingdom

+44(0)1756 799919
info@jbaconsulting.com
www.jbaconsulting.com
Follow us:  

Jeremy Benn Associates Limited

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