



Sequential Test for Potential Strategic Locations in Chichester District

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1 . Introduction

1.1 This document sets out the sequential test in line with Technical Guidance to the National Planning Policy Framework (NPPF) (March 2012). The sequential approach is a simple decision making tool designed to ensure that sites at little or no risk of flooding are developed in preference to areas at high risk of flooding. It informs the production of the Local Plan, the principal planning tool for Chichester District Council for the period between 2014 to 2029.

1.2 It is a high level assessment of sites falling partly within Flood Zones 2 and 3, it is based on the information available at the current time and it is acknowledged that further work will need to be undertaken by the site developers to meet the requirements of the NPPF.

Planning Policy Context

National Planning Policy Framework

1.3 The NPPF states that local plans should apply a sequential risk-based approach to the location of development; to avoid where possible flood risk to people and property and manage any residual risk, taking account of the impacts of climate change. The NPPF states that where the sequential test has been applied and it is not possible for the development to be located in zones with a lower probability of flooding, the exception test should be applied.

1.4 The Government's Practice Guidance on Development and Flood Risk, which supports the NPPF, provides guidance on how the sequential and exception tests should be applied and information on the vulnerability of certain uses. The Environment Agency guidance for Local Planning Authorities on undertaking a sequential test has also been used to inform this sequential test.

1.5 The aim of the sequential test is to ensure that areas at little or no risk of flooding are developed in preference to areas at higher risk and to keep all development out of medium and high flood risk areas which are Flood Zones 2 and 3 where possible. Potential strategic housing allocations are therefore 'Tested' on the basis of their flood risk attributes and the outcome used to inform decisions that include other spatial planning issues.

1.6 The Test is applied to demonstrate that there are no reasonably available sites in areas with a lower probability of flooding that would be appropriate to the type of development or land use proposed. In order to do this there was a need to:

- Identify which sites are large enough for strategic development available in the area;
- Identify which sites are appropriate for certain types of development, excluding flood risk;
- Apply the consideration of flood risk through the Sequential Test as part of the decision making process for strategic land use planning.

1.7 Separate sequential tests will be prepared for land uses identified through the site allocations DPD and for any masterplans that are prepared as part of the Local Plan.

1.8 The document is broken down into two parts: Part 1 Site and Development Information and Part 2 The Sequential Test.

2 . Site and Development Information

2.1 Chichester District is affected by varying degrees from flooding; the most significant sources affecting the district are from rivers, the sea and groundwater. There are settlements in the district that are significantly affected by surface water flooding although this is not an issue to be addressed through the sequential test.

2.2 In the Chichester City area, flood risk is fluvial from the River Lavant, tidal from the sea at Chichester Harbour and surface water run off from existing and new development may contribute to the risk in all areas.

2.3 The table below is an extract from the Strategic Flood Risk Assessment that was undertaken by Capita Symonds in July 2008. It outlines the key flood risk statistics:

Flood Risk Statistics (SFRA Volume II Technical Report July 2008)

Flood Risk Indicator	Area (KM ²)	% of total CDC area
Size of CDC planning area	813.6	N/A
Total developed area	35.3	4.3
Area in Flood Zone 2 (flooding from rivers - 0.1% AEP)	32.9	4.0
Area in Flood Zone 2 (flooding from the sea - 0.1% AEP)	26.0	3.2
Area in Flood Zone 3a (flooding from rivers - 0.1% AEP)	25.7	3.2
Area in Flood Zone 3a (flooding from the sea - 0.5% AEP)	23.5	2.9
Area in Flood Zone 3b (flooding from rivers - defended 5% AEP)	23.4	2.9
Area in Flood Zone 3b (flooding from the sea - defended 5% AEP)	4.6	0.6
Area that has a high probability of being affected by flooding from land	408.0	50.1
Area that has a high probability of being affected by flooding from groundwater	294.0	36.1
Area that has a high probability of being affected by flooding from sewers	Unable to quantify	
Area that has a high probability of being affected by flooding from artificial sources	Unable to quantify	
Total area of Built up Areas	23.3	2.9

2 . Site and Development Information

Table 2.1

	Area (KM ²)	% of Built up Area
Built up Area in Flood Zone 3b	0.6	2.5
Built up Area in Flood Zone 3a	1.0	4.2
Built up Area in Flood Zone 2	1.8	7.6

Flood Risk Zones in which the allocated sites are located

2.4 The proposed strategic development locations West of Chichester and Tangmere lie within Flood Risk Zones 1 and Westhampnett and North East Chichester strategic development location lies within Flood Risk Zones 1, 2, 3a and 3b. It is proposed that development at Westhampnett and North East Chichester will be directed towards Flood Zone 1 away from the River Lavant Floodplain.

2.5 Key information is set out in three tables:

Table 1 - Site information contains:

- The address of all allocated sites,
- The Flood Risk Zone,
- Existing flood defences that provide site protection,
- The existing land use,
- The uses proposed in the site allocation,
- The Flood Vulnerability Classification for each intended use.

2 . Site and Development Information

Table 1 - All strategic location options, existing flood defences, existing and proposed uses and Flood Vulnerability Classification

Address	Flood Risk Zone (Fluvial)	Flood Risk Zone (Tidal)	Other sources of flooding	Existing flood defences and protection afforded	Existing uses	Proposed Uses	Flood Vulnerability Classification
Westhampt and North East Chichester	Zone 1	Zone 1	Low-medium land risk.		Agriculture	Residential	More Vulnerable
	Zone 2		Groundwater emergence Zone.			Community Facilities	Less Vulnerable
	Zone 3a		Part high/part medium groundwater flood risk.			Employment	Less Vulnerable
	Zone 3b		Historic fluvial flooding along the River Lavant.			Amenity open space	Water Compatible development
West of Chichester	Zone 1	Zone 1	Low-medium/medium-high land risk. Part high/part medium groundwater flood risk.		Agriculture	Recreational	Water Compatible development
						Residential	More Vulnerable
						Community Facilities	Less Vulnerable
						Employment	Less Vulnerable
						Amenity open space	Water Compatible development
						Recreational	Water Compatible development

2 . Site and Development Information

Address	Flood Risk Zone (Fluvial)	Flood Risk Zone (Tidal)	Other sources of flooding	Existing flood defences and protection afforded	Existing uses	Proposed Uses	Flood Vulnerability Classification
Tangmere	Zone 1	Zone 1	Low-medium land risk. Medium groundwater risk.		Agriculture and farm buildings	Residential Community Facilities Employment Amenity open space Recreational	More Vulnerable Less Vulnerable Less Vulnerable Water Compatible development Water Compatible development

3 . The Sequential Test

3.1 In introducing the Sequential and Exception Tests, government guidance does not intend to prevent all development on sites liable to flooding, accepting that some form of development may often have to take place there. Due to the obvious risks of developing on land liable to flooding, the intention is to minimise the risks to people and property.

3.2 The overall aim of decision-makers should be to steer new development to Flood Zone 1. Where there are no reasonably available sites in Flood Zone 1, decision-makers should take into account the flood risk vulnerability of land uses and consider reasonably available sites in Flood Zone 2, applying the Exception Test if required. Only where there are no reasonably available sites in Flood Zones 1 or 2 should decision-makers consider the suitability of sites in Flood Zone 3, taking into account the flood risk vulnerability of land uses and applying the Exception Test if required.

3.3 Within each Flood Zone, new development should be directed first to sites at the lowest probability of flooding and the flood vulnerability of the intended use matched to the flood risk of the site, e.g. higher vulnerability uses located on parts of the site at lowest probability of flooding.

1. Are the strategic locations in Flood Zone 1 - Low Probability	
Yes	<p>Chichester District Council Proposed Submission Local Plan Key Policies includes the following strategic sites in Flood Zone 1. Those listed below are solely within Zone 1 for both tidal and fluvial.</p> <ul style="list-style-type: none"> • West of Chichester • Tangmere <p>For the potential strategic locations in Flood Zone 1 there is no need to proceed with the Sequential Test.</p>
	<p>For the potential strategic locations in Flood Zones 2 and 3 proceed to Question 2.</p> <p>All sites listed in Table 2 lie wholly or partly in Flood Zones 2 and 3. The table provides details for each relevant to questions 3, 4 and 5.</p>

2. Could the development proposals for the strategic locations in Flood Zone 2 and 3 alternatively be located in 'Flood Zone 1 Low Probability' of flood risk?	
Yes	<p>a) identify alternative strategic locations that were considered and explain why they were considered and explain why they are dismissed:</p> <p>Alternative sites that were promoted through the Strategic Housing Land Availability Assessment were considered but were not of a strategic size. However, there is no need to identify alternative sites as although the site listed below has an element of Zone 2 and 3, proposed development would be located towards those areas predominantly within Zone 1. Therefore development can be planned to avoid Zones 2 and 3 with mitigation if required. Any development in the areas at risk of flooding</p>

3 . The Sequential Test

2. Could the development proposals for the strategic locations in Flood Zone 2 and 3 alternatively be located in 'Flood Zone 1 Low Probability' of flood risk?	
	<p>i.e. flood zones 2 and 3a could be 'water compatible' e.g. Amenity open space, nature conservation, biodiversity etc. It is recognised that this will reduce the overall capacity of the site for development.</p> <ul style="list-style-type: none"> Westhampnett and North East Chichester is largely in Zone 1, however, it has a significant proportion of linear Zone 2, 3a and 3b (Fluvial) running with the River Lavant.
	<p>b) explain why the strategic location can be redirected to Zone 1: The site listed above has an element of Zone 2 and 3 but is predominantly within Zone 1. Development can be planned to avoid Zones 2 and 3 with mitigation as required. It is recognised that this will reduce the overall capacity of the site for development.</p>
	<p>If the strategic location is in 'Flood Zone 2 Medium Probability' proceed to Question 3 The site listed above has an element of Zone 2 and 3 but is predominantly within Zone 1. Development can be planned to avoid Zones 2 and 3 with mitigation as required. It is recognised that this will reduce the overall capacity of the sites for development.</p>

3. For strategic locations in 'Zone 2 Medium Probability' of flood risk.	
3a. Are the strategic location uses in the 'Water Compatible', 'Less Vulnerable', 'More Vulnerable', or 'Essential Infrastructure' Flood Risk Vulnerability classifications?	
Yes	<p>List the proposed uses in each Flood Risk Vulnerability classification:</p> <p>At this stage, precise uses of the strategic sites has not been determined but uses are likely to include:</p> <ul style="list-style-type: none"> Water compatible - amenity open space, nature conservation and biodiversity, outdoor sports and recreation and essential facilities such as changing rooms. Less vulnerable - local shops, offices, general industry, storage and distribution and community uses. More vulnerable - residential. <p>Less vulnerable and more vulnerable are appropriate if located in Flood Zone 2. Water compatible uses may be proposed in Zone 3a or 3b. There is no need to proceed with the Exception Test.</p>
	<p>Essential Infrastructure -</p> <p>None</p>

4. Sites in 'Zone 3a High Probability' of flood risk	
Westhampnett and North East Chichester has an element of Zone 2 and 3 but is predominantly within Zone 1. Development can be planned around the zones with mitigation as required. It is recognised that this will reduce the overall capacity of the site for development.	
4a. Can the development proposal be redirected to 'Zone 2 Medium Probability'?	
Yes	Westhampnett and North East Chichester has an element of Zone 2 and 3 but is predominantly within Zone 1. Development can be planned around the zones with mitigation as required. It is recognised that this will reduce the overall capacity of the site for development.
4b. Are the development proposals in the 'Water Compatible' or 'Less Vulnerable' classifications?	
Yes	<p>List the proposed uses not in these classifications:</p> <p>Water compatible - amenity open space, nature conservation and biodiversity, outdoor sports and recreation and essential facilities such as changing rooms.</p> <p>Less vulnerable - local shops, offices, general industry, storage and distribution and community uses.</p> <p>These proposals are appropriate in Flood Zone 3a and there is no need to proceed with the Exception Test.</p>
4c Are any proposed uses in the 'Highly Vulnerable' classification?	
No	Proceed to Question 4d
4d. Can the more flood sensitive development use types be directed to parts of the site where the risks are lower for both the occupiers and the premises themselves?	
Yes	<p>Planning guidance will, where possible, direct the more vulnerable uses away from the sources of flooding closer to or in Flood Zones 1 and 2. During the survey/analysis/design stages for developments the most sensitive uses on each site should be located in the areas of relatively lower flood risk.</p> <p>In all cases it must be demonstrated than an adequate standard of safety can be achieved though a site specific Flood Risk Assessment and will comply with the requirements of the NPPF and associated guidance and exception tests if applicable.</p> <p>There is no need to proceed with the Exception Test.</p>

3 . The Sequential Test

Sites in Zone 3b The Functional Flood Plain

3.4 The following site is within Zone 3b:

- Westhampnett and North East Chichester

5. For sites in Zone 3b The Functional Floodplain Westhampnett and North East Chichester					
5a. Can the proposed uses be redirected to 'Zone 2 Medium Probability'?					
Yes	<p>Explain why?</p> <p>There is sufficient land for housing development in Zone 1 with open space provision being directed to Zones 2 and 3.</p> <p>Proceed to Question 5b</p>				
5b. Can the proposed uses be redirected to 'Zone 3a High Probability'?					
Yes	<p>There is sufficient land for housing development in Zone 1 with open space provision being directed to Zones 2 and 3.</p> <p>Proceed to Question 5c.</p>				
5c. Are the proposed uses in the 'Water Compatible', classifications?					
Yes, in part	<p>Development of this site would include land around the River Lavant which is in Flood Zone 3a. There is potential for the river to be designed into the site layout and any land in FZ3a to only accommodate water compatible development.</p> <p>This part of the site allocation is appropriate and there is no need to proceed with the Exception Test.</p>				
5d. Is the development proposal in the 'Less Vulnerable', 'More Vulnerable', 'Highly Vulnerable' or 'Essential Infrastructure' classifications?					
Yes	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">More Vulnerable:</td> <td style="width: 50%;">Less vulnerable:</td> </tr> <tr> <td>Residential</td> <td>Community facilities, Employment</td> </tr> </table>	More Vulnerable:	Less vulnerable:	Residential	Community facilities, Employment
More Vulnerable:	Less vulnerable:				
Residential	Community facilities, Employment				
<p>Although the development proposal would be inappropriate within this Flood Risk Zone, the feature itself (River Lavant) could be used to enhance and integrate the development as part of Green Infrastructure.</p>					

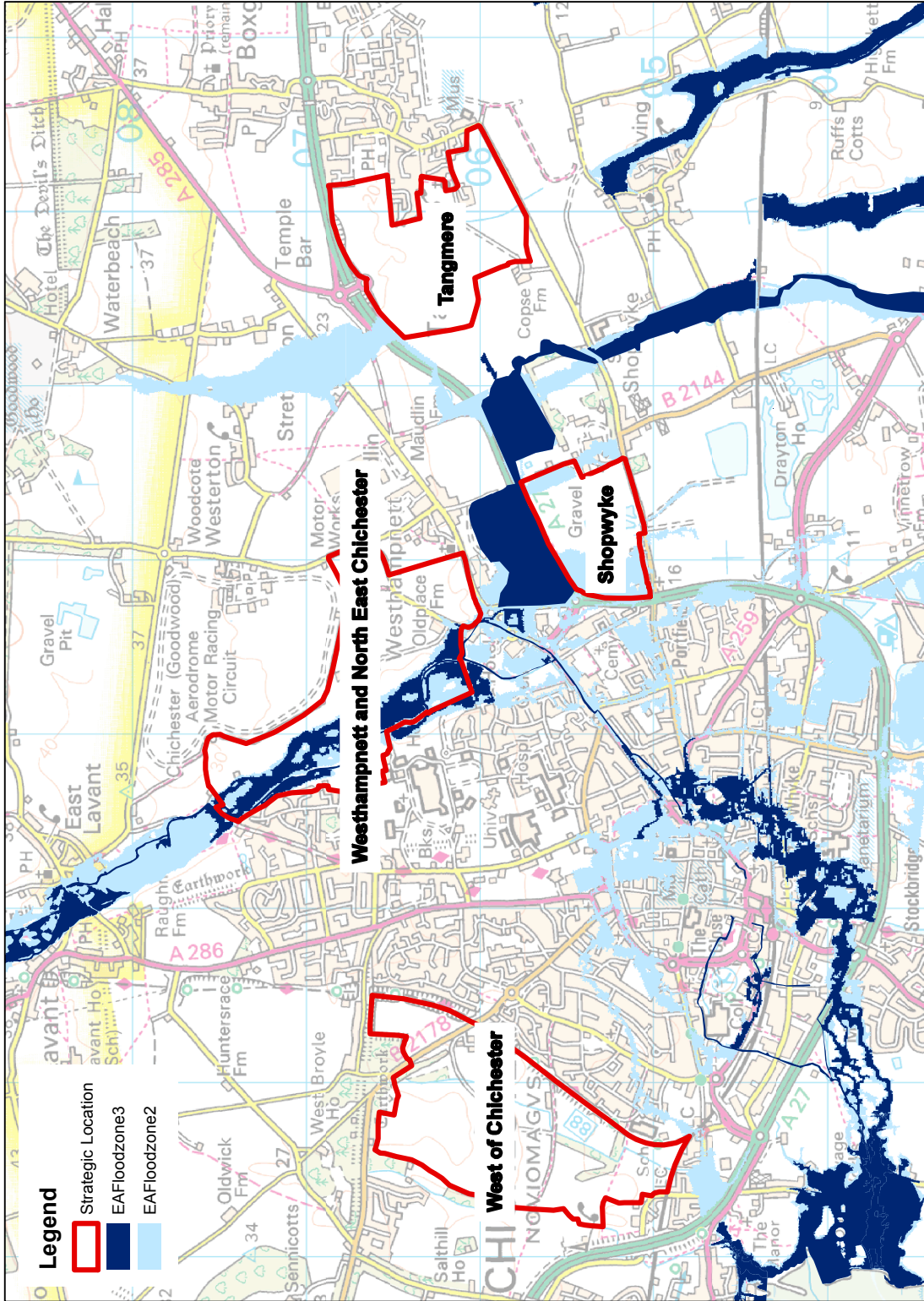
Alternative Sites Considered

3.5 Sites were put forward through the Strategic Housing Land Availability Assessment process, however, none of the sites put forward to the Council were of a size that could accommodate a strategic development.

3.6 Consideration was given to the expansion of rural settlements, however it was considered that no large scale strategic land releases were acceptable in this area. Development here is limited by strategic objectives for countryside protection. In light of the Council's analysis, there are no other suitable or reasonable strategic locations of lesser flood risk available.

4 . Strategic Development Location

Map 4.1 Strategic Development Locations



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