Rotherham local plan

Submission Sites & Policies

Flood Risk Sequential and Exception Test Background Paper

March 2016

Rotherham Metropolitan Borough Council

www.rotherham.gov.uk

Introduction

1. This background paper has been prepared to demonstrate that sites to be allocated through the Local Plan in areas at flood risk are appropriate in the context of the Sequential and Exception Tests which are required as part of the National Planning Policy Framework (NPPF)[1].

2. The NPPF provides policy guidance in relation to the allocation of development sites in areas at risk of flooding. Further guidance is set out in the accompanying Planning Practice Guidance[2]. The overall approach is that inappropriate development should be avoided in areas at risk of flooding. This is achieved by directing development away from areas at highest risk. Where development is necessary, it should be made safe without increasing flood risk elsewhere.

3. This document sets out the local flood risk context before describing how flood risk has been taken into account in the selection of sites for allocation as part of Rotherham's new Local Plan. It identifies those sites and mixed use areas partly or wholly within areas at higher risk of flooding and which require more detailed Sequential and Exception Testing in line with national planning policy. It sets out how these Sequential and Exception Test assessments have been undertaken, and then presents the findings.

Planning policy context

4. Chapter 10 of the NPPF provides policy guidance on flooding, and in particular Paragraphs 99-102 set out the way in which allocations in a Local Plan should be handled. This states that inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk, but where development is necessary, it should be made safe without increasing flood risk elsewhere.

5. The accompanying Planning Practice Guidance provides more detail, including the application of the Sequential and Exception Tests when preparing Local Plans. Local Authorities should apply the Sequential approach to direct development away from areas of flood risk. Where the Exception Test is required to be applied then it must be demonstrated that the development provides wider sustainability benefits to the community that outweigh flood risk, and a site-specific flood risk assessment must demonstrate that 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.

6. Rotherham's Local Plan will include two key documents: a Core Strategy and an accompanying Sites and Policies document which allocates specific sites for development.

7. The Core Strategy, adopted in September 2014, plans to provide for 14,371 homes and 235ha of employment land by 2028. It sets out how this

[1] http://planningguidance.planningportal.gov.uk/
[2] http://planningguidance.planningportal.gov.uk/

development will be distributed across Rotherham. Policy CS1 establishes a hierarchy of settlements and directs appropriate levels of growth to them, having regard to the principles of sustainable development and their ability to accommodate further growth and change. This hierarchy is set out below in Table 1: Rotherham Core Strategy Settlement Hierarchy.

Table 1: Rotherham Core Strategy Settlement Hierarchy

		Housing Target (homes)	Employment Target (hectares)	Retail Target (square metres)
Main Location For New Growth	Rotherham urban area (including Bassingthorpe Farm Strategic Allocation)	5,471	71	18,500 sqm
Principal Settlements For Growth	Dinnington, Anston and Laughton Common (including Dinnington East Broad Location For Growth)	1,300	38	0
	Wath-upon-Dearne, Brampton Bierlow and West Melton	1,300	16	0
	Bramley, Wickersley and Ravenfield	800	16	1,500 sqm
Principal Settlements	Maltby and Hellaby	700	5	0
	Aston, Aughton and Swallownest	560	19	0
	Swinton and Kilnhurst	560	0	0
	Wales and Kiveton Park	370	9	0
	Waverley	2,500	42	0
Local Service Centres	Catcliffe, Treeton and Orgreave	170	12	0
	Thorpe Hesley	170	0	0
	Thurcroft	300	7	0
	Todwick	170	0	0
	Harthill			
	Woodsetts			
Other Villages	Laughton en le Morthen			
	Harley			
Green Belt Villages	Green Belt Villages	0	0	0

8. Policy CS3 identifies that in allocating sites for development the Council will take account of a range of sustainability criteria including ability to avoid, or suitably reduce the risk of flooding. Policy CS25 also sets out more detailed guidance regarding flood risk. This includes the Sequential approach, ensuring that development is directed to areas at lowest risk of flooding.

9. The Core Strategy is supported by sustainability appraisal; which is set out in the accompanying Integrated Impact Assessment[3] (IIA). The sustainability appraisal objectives have also informed the IIA of the Sites and Policies document. With regard to flooding this includes an objective which seeks to reduce Rotherham's vulnerability to flooding.

[3] IIA Report – Submission Version of the Core Strategy (June 2013) & Addendum 1 to the IIA Report (June 2013) - Assessment of Main Modifications (May 2014)

10. The Sites and Policies IIA has included assessment of flood risk as part of the broader sustainability appraisal process. For example it identifies a number of sites in the Rotherham Urban Area which are within flood zones 2/3 but notes that there are no alternative employment sites of a suitable size.

11. The IIA assesses individual sites and combinations of alternative sites in Rotherham and Dinnington, and also assesses a range of separate topics. Within Rotherham it concluded that for all alternatives the sites will have some level of vulnerability to either flood levels above the feasible protection afforded by mitigation, or to the disruption and potential stress and other health effects caused by flooding. For Dinnington it found that all alternatives have sites in flood zone 1 (least flood risk), and are therefore equivalent from an SA / IIA perspective.

12. The IIA does not recommend any further changes to the Sites and Policies document and concludes that:

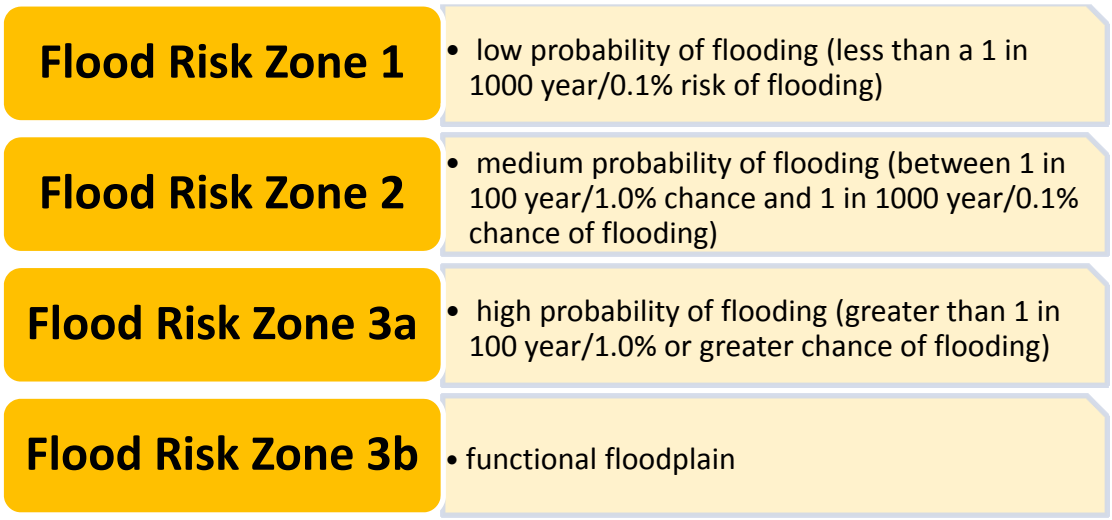
"The combined effects of the site allocations, safeguarded land (if developed in future) and policies are considered most likely to be neutral / negligible in the short term, and slightly beneficial in the medium and long term. This is due to the above opportunities, particularly within and around Rotherham Town Centre.

The certainty is high, because assuming that the NPPF is abided by, and that the Local Plan policies are implemented as intended, the effects should be guaranteed. However, uncertainty regarding climate change and unusual weather could potentially have a negative influence on flood risk indicators, despite Local Plan measures."

Local flood risk context

13. The Environment Agency identifies all land in the country as being within one of three Flood Zones, based on the probability of flooding from rivers and the sea, but ignoring the presence of flood defences. Zone 3 is further split into 3a and 3b through Rotherham's Strategic Flood Risk Assessment. These zones are:

Figure 1: Flood Risk Zones



14. The south east third of Rotherham lies in the Sherwood sub-area of the River Trent Catchment Flood Management Plan[4], and is identified as an area of low to moderate flood risk where generally existing flood risk is effectively being managed. The remainder of Rotherham lies in the Rotherham sub-area of the Don Catchment Flood Management Plan[5]. This identifies Rotherham as a medium to high flood risk area where the policy is to take further action to reduce flood risk. It sets out the following key messages for the Rotherham sub-area:

- Climate change is expected to increase flood risk from a variety of sources.
- Development pressure must be controlled so that flood risk is not increased but also so that opportunities for the management of existing flood risk are taken.
- The Environment Agency will support and provide guidance to Rotherham Metropolitan Borough Council and Yorkshire Forward in the implementation of the Rotherham Flood Alleviation scheme.
- The Environment Agency will work with strategic partners to manage surface water.

15. A Strategic Flood Risk Assessment (SFRA)[6] has been produced which identified that a proportion of Rotherham is at risk of flooding. Table 2: Level 1 Strategic Flood Risk Assessment (SFRA) Findings summarises the findings.

[4] River Trent Catchment Flood Management Plan. Environment Agency. December 2010
[5] Don Catchment Flood Management Plan. Environment Agency. December 2010.
[6] Rotherham Strategic Flood Risk Assessment (Level 1), 2008

Table 2: Level 1 Strategic Flood Risk Assessment (SFRA) Findings

Area	SFRA findings
Wath-upon-Dearne	A sizeable swathe of land within this area is affected by Zone 3a High Probability, associated primarily with Brook Dike. A number of localised flood risk issues have also been identified within this area.
Brampton	With the exception of those areas situated immediately adjacent to the Knoll Beck waterway corridor, the entire area is situated within Zone 1 Low Probability. No localised flood risk issues have been identified within this area.
Swinton, Kilnhurst, Sandhill & Ryecroft	A sizeable area designated Zone 3b Functional Floodplain, representing washland areas that are frequently affected by river flooding. Additional areas adjoining the waterway corridor fall within Zone 3a High Probability.
Thorpe Hesley, Wentworth & Nether Haugh	With the exception of areas situated immediately adjacent to the local waterway corridor, the entire area is situated within Zone 1 Low Probability. There is a potential risk of localised flooding in the vicinity of Wentworth Road (Thorpe Hesley).
Rawmarsh, Eastwood, Dalton & Greasbrough	Areas adjacent to the River Don, Sheffield & South Yorkshire Navigation Canal, Dalton Brook and Greasbrough Dike corridors are situated within Zone 3a High Probability. A proportion of the area, adjoining the main river corridor, is delineated as Zone 2 Medium Probability. A localised flooding issue has been identified, associated with a hydraulic constriction (under capacity culvert) on Dalton Brook,
Ravenfield	With the exception of those areas situated immediately adjacent to the Hooton Brook waterway corridor, the entire area is situated within Zone 1 Low Probability.
Masbrough, Templebrough & Kimberworth	Rotherham Metropolitan Borough Council has committed future funding to secure a 1% (100 year) standard of protection for the Templebrough to Rotherham reach of the River Don. The remaining areas are situated within Zone 1 Low Probability. A number of localised flood risk issues have been identified within the area: The River Mas, Ickles Goit and Holmes Goit.
Brinsworth, Moorgate & Whiston	Low lying areas adjacent to the River Rother corridor are situated within Zone 3b Functional Floodplain. The remaining areas of the area are situated within Zone 1 Low Probability. A number of localised flooding issues have been identified in relation to the River Whiston.
Maltby & Hellaby	With the exception of those areas situated immediately adjacent to the Maltby Dike and Hellaby Brook waterway corridors, the entire area is situated within Zone 1 Low Probability.
Laughton en le Morthen	With the exception of areas adjacent to the Brookhouse Dike waterway corridor, the entire area is situated within Zone 1 Low Probability. Brookhouse Brook is subject to localised flooding during wet weather
Treeton, Aughton, Catcliffe & Orgreave	Low lying areas adjacent to the River Rother corridor are situated within Zone 3b Functional Floodplain. A proportion of this area been delineated as Zone 3a High Probability (including the River Rother and Ulley Brook corridors). The remaining areas of the area are situated within Zone 1 Low Probability.
Aston & Wales	A small proportion of this area (i.e. within the River Rother corridor) is delineated Zone 3a High Probability. The remaining area is situated within Zone 1 Low Probability. Pigeon Bridge Brook at Swallownest is recognised as a sensitive area.

Area	SFRA findings
Norwood & Harthill	With the exception of those areas situated immediately adjacent to the County Dike waterway corridor, the entire area is situated within Zone 1 Low Probability.
Netherthorpe	With the exception of those areas situated immediately adjacent to the local waterway corridor, the entire area is situated within Zone 1 Low Probability.
Thorpe Salvin, Kiveton Park & South Anston	With the exception of those areas situated immediately adjacent to the Broad Bridge Dike, Anston Brook and Chesterfield Canal waterway corridors, the entire area is situated within Zone 1 Low Probability. Brook Bridge Dike culvert is identified as limited capacity, and susceptibility to potential blockage. There is an area of Zone 3a High Probability sitting just outside of the borough boundary.
Todwick, North Anston & Dinnington	With the exception of those areas situated immediately adjacent to the Anston Brook and Cramfit Brook waterway corridors, the entire area is situated within Zone 1 Low Probability. The upper reaches of Cramfit Brook and rear of the Severn Trent STW (Eel Mires Dike), represent localised flood risks.
Remaining Areas of the Borough	All remaining areas are situated on higher ground within Zone 1 Low Probability, and/or are not subject to any future development pressures. Some localised drainage issues may exist, however these should not preclude future development.

16. Parts of Rotherham town centre and surrounding areas contain areas of medium to high flood risk. However as the Borough's principal service centre and given its location at the heart of the urban area, it is a key development and regeneration area.

17. A Level 2 SFRA and Flood Risk toolkit[7] have therefore been produced to help address these more specific challenges. The Toolkit splits the defined study area (called the "Rotherham Regeneration" area) into nine character zones and provides guidance on the acceptability of different types of uses, advises on applying the Sequential and Exception Tests and addresses flood mitigation and resilience issues. It recognises the flood risks present but acknowledges that continuing development is necessary for wider sustainable development and town centre regeneration reasons. This supports the Core Strategy which identifies the Rotherham urban area as the main location for new growth and Rotherham town centre as the borough's principal retail and service centre. It concludes that the flood risk and regeneration challenges within and adjacent to Rotherham Town Centre can be overcome through a pro-active and comprehensive strategy towards flood risk management.

[7] Rotherham Level 2 Strategic Flood Risk Assessment and Flood Risk Toolkit, 2011

18. Table 3: Level 2 Strategic Flood Risk Assessment Findings summarises the level of flood risk (including surface water) in each character area:

Table 3: Level 2 Strategic Flood Risk Assessment Findings

Area	Main Fluvial Flood Risk Zones			Surface Water Risk		
	1	2	3a	Low	Med.	High
1 Bradmarsh & Templeborough		✓			✓	
2 Masborough West of Centenary Way		✓				✓
3 Central Riverside Area		✓	✓	✓		✓
4 Town Centre	✓					✓
5 Masborough Thornhill	✓				✓	
6 College Street		✓				✓
7 Northfield			✓			✓
8 Parkgate Retail		✓	✓			✓
9 Eastwood	✓	✓	✓		✓	

19. The Flood Risk Toolkit identifies that in applying the Sequential Test in the "Rotherham Regeneration" area only potential alternative locations within the defined boundary of this area need to be considered. This has been taken forward through Core Strategy Policy CS25. Therefore, alternative sites outside this boundary can be discounted from the Sequential Test.

Whilst the Level 1 and 2 SFRA and Flood Risk Toolkit were written in the context of previous flood risk planning guidance in PPS25, they are considered to be largely consistent with the guidance contained within the NPPF (in particular paragraphs 99 to 102) and the Planning Practice Guidance (in particular advice regarding Strategic Flood Risk assessments[8], and the key steps around assessing, avoiding, managing and mitigating flood risk[9]). They also support the overall thrust of the Core Strategy which identifies the Rotherham Urban Area as the main location for new growth over the plan period (2013 to 2028). The Flood Risk Toolkit contributes towards meeting sustainability objectives (see

20. Table 6: Rotherham's Sustainability Appraisal (SA) Objectives) by promoting regeneration, employment and housing opportunities at the heart of Rotherham's urban area whilst reducing Rotherham's vulnerability to flooding.

21. Since November 2000, RMBC, in partnership with the Environment Agency, have undertaken studies to define flood risk and identify flood risk management solutions for Rotherham. This included detailed hydrological and hydraulic modelling to fully identify the flood risk, followed by technical, environmental and economic appraisal of alternative options to manage flood risk. These studies concluded that a community wide Rotherham Renaissance

[8] http://planningguidance.planningportal.gov.uk/blog/guidance/flood-risk-and-coastal-change/strategic-flood-risk-assessment/how-should-a-strategic-flood-risk-assessment-be-prepared-in-terms-of-scope-and-detail/

[9] http://planningguidance.planningportal.gov.uk/blog/guidance/flood-risk-and-coastal-change/planning-and-flood-risk/

Flood Alleviation Scheme (RRFAS) is required to reduce the risk of flooding from the rivers in Rotherham to an appropriate level.

22. In conjunction with the Environment Agency significant investment has already gone into the community wide flood alleviation scheme, to address flood issues in these areas. This has included:
    - Construction of new flood defence structures over 4km;
    - Works to existing lock structures;
    - Works to goits that discharge into the river;
    - Raising of two bridges and removal of two bridges that cause obstructions to flood flows;
    - Creation of a low lying wetland area that acts as compensatory floodplain and provides ecological interest at the Centenary Riverside site;
    - Improvements to riverside access.

23. The Flood and Water Management Act 2010 imposes new duties on the Council as a Lead Local Flood Authority. One of these duties is that the Council have a responsibility to develop, maintain, apply and monitor a strategy for local flood risk management.

24. The Council has subsequently produced a number of documents:
    - A Preliminary Flood Risk Assessment (June 2011)
    - Surface Water Management Plans (2013) for Anston; Aston, Aughton and Swallownest; Wath upon Dearne; and Forge Island within Rotherham town centre.
    - A Local Flood Risk Management Strategy (May 2014)

25. The Preliminary Flood Risk Assessment is a high level exercise which has identified over 8,500 residential properties in Rotherham as potentially at risk from surface water flooding, compared with less than 300 at risk of flooding from rivers. 106 areas have been identified for prioritisation in subsequent flood risk management planning.

26. The Local Flood Risk Management Strategy[10] sets out how local flood risk within Rotherham will be managed. The Strategy identifies objectives and an action plan to achieve them.

27. At a more detailed level Surface Water Management Plans enable local communities and different organisations to gain a better understanding of flood risk and outline the preferred surface water management strategy at a given local location.

28. A surface water flood risk assessment of proposed allocation sites and mixed use areas has been undertaken in conjunction with the Council's drainage section. This is included at appendix 3.

[10] http://modgovapp/mgAi.aspx?ID=68044#mgDocuments

Methodology

29. This section sets out the methodology adopted in applying national and local planning policy to the selection of sites for allocation as development sites and as mixed use areas.

30. The assessment has had regard to the flood risk vulnerability guidance set out in Planning Practice Guidance:

Table 4: Flood Risk Vulnerability

Flood Risk Vulnerability and Flood Zone compatibility	Essential Infrastructure e.g. Transport and Utility Infrastructure	Water Compatible e.g. open space, docks, marinas and wharves	Highly Vulnerable e.g. Police Stations, mobile homes and emergency dispersal points	More Vulnerable e.g. Hospitals, residential institutions and houses	Less Vulnerable e.g. offices, industry and storage or distribution
Flood Risk Zone 1	✓	✓	✓	✓	✓
Flood Risk Zone 2	✓	✓	Exception Test Required	✓	✓
Flood Risk Zone 3a	Exception Test Required	✓	✗	Exception Test Required	✓
Flood Risk Zone 3b	Exception Test Required	✓	✗	✗	✗
✓ - development appropriate ✗ - development should not be permitted					

31. The methodology used is set out below in Figure 2: Methodology for Assessing Sites and Mixed Use Areas. Table 5: Applying NPPF Flood Risk Guidance to Site Selection then briefly summarises how the site/mixed use area selection process has addressed the flood risk requirements of NPPF.

Figure 2: Methodology for Assessing Sites and Mixed Use Areas

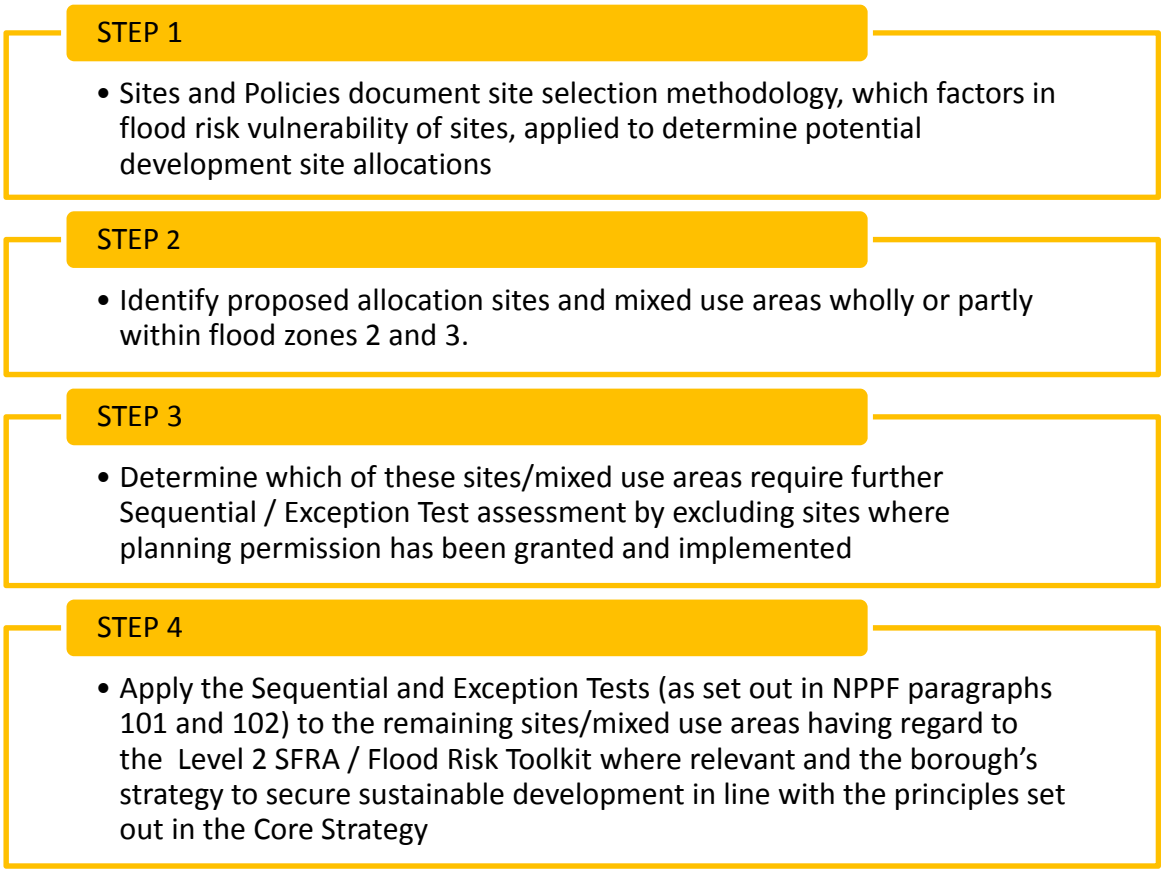


Table 5: Applying NPPF Flood Risk Guidance to Site Selection

NPPF Requirement		How this has been addressed
Climate Change	New development should be planned to avoid increased vulnerability to the range of impacts arising from climate change (paragraph 99).	• Local Plan site selection methodology • Application of Sequential / Exception Tests in line with paragraphs 101 and 102 of NPPF as set out in this document • Identified where mitigation may be required to allow development (set out in the Flood Risk Assessments at appendices 1 and 2) • Development to comply with Core Strategy Policy CS25, Sites and Policies Policy SP50 and any relevant policy in the Local Plan
Sequential / Exception Tests	Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (paragraph 100). Apply a Sequential, risk-based approach to the location of development applying the Sequential Test and if necessary, applying the Exception Test (paragraph 100)	• Application of Sequential / Exception Tests in line with paragraphs 101 and 102 of NPPF as set out in this document • Development to comply with Core Strategy Policy CS25, Sites and Policies Policy SP50 and any relevant policy in the Local Plan

NPPF Requirement		How this has been addressed
Safety of Development	When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures (paragraph 99). Where development is necessary, making it safe without increasing flood risk elsewhere (paragraph 100).	• Identified where mitigation may be required to allow development (set out in the Flood Risk Assessments at appendices 1 and 2) • Development to comply with Core Strategy Policy CS25, Sites and Policies Policy SP50 and any relevant policy in the Local Plan

Applying the Sequential Test

32. The Planning Practice Guidance indicates that the Sequential Test should be applied to the whole local planning authority area to increase the possibilities of accommodating development which is not exposed to flood risk. However in applying the Sequential Test at step 4 above the Council has taken account of the borough-wide strategy to deliver sustainable development across Rotherham set out in Core Strategy Policies CS1 and CS25. These establish a settlement hierarchy having regard to principles of sustainable development and the ability of settlements to accommodate further growth and change. They provide targets which seek to distribute development to the borough's settlements (refer to Table 1: Rotherham Core Strategy Settlement Hierarchy) and also identify how the Sequential approach will be applied within the defined Rotherham Regeneration Area.

33. This approach is supported by Sustainability Appraisal through the Integrated Impact Assessment, which assessed the Core Strategy against a range of sustainability objectives set out below:

Table 6: Rotherham's Sustainability Appraisal (SA) Objectives

SA Topic	SA Objective
1. Economy and Employment	Enhance the provision of quality local or easily accessible employment opportunities for all in stable or competitive growth sectors.
	Enhance conditions that enable sustainable economic growth and investment.
	Enhance the function and vibrancy of town or district centres.
2. Transport	Improve sustainable transport and movement patterns.
3. Education / Skills	Improve the level of education and skills for all, reducing disparities across Rotherham and strengthening its position regionally and nationally.
	Encourage creativity, innovation and the effective use of sound science and appropriate technology.
	Promote awareness of sustainable development and encourage sustainable lifestyles and business practices.
4. Health and Well-Being	Improve the health of the people of Rotherham, reduce disparities in health and encourage healthy living for all.
	Improve access to quality cultural, leisure and recreational activities available to everyone.
	Enhance safety, and reduce crime and fear of crime for everyone.
5. Biodiversity	Enhance Rotherham's habitats and biodiversity.
6. Pollution and Emissions	Reduce the negative impact of air pollution on people and the natural environment.

SA Topic	SA Objective
	Reduce the risk of soil pollution.
	Reduce the risk of water contamination and assist in meeting Water Framework Directive objectives.
	Reduce the negative impact of noise on people and their surroundings.
	Reduce light pollution and its effects on people and their surroundings.
	Reduce greenhouse gas emissions and increase the use of renewable energy.
7. Flood Risk	Reduce Rotherham's vulnerability to flooding.
8. Natural Resources	Reduce the rate of mineral resource consumption. (Fossil fuels are considered under Objective 6F.)
	Reduce the rate of water consumption.
	Reduce the amount of waste requiring disposal and reduce the use of non-reusable materials.
9. Townscape	Enhance the built quality of settlements and neighbourhoods.
10. Soil, Land Use and Geology	Improve the efficiency of land use through integrated planning.
11. Housing	Provide everyone with the opportunity to live in decent affordable housing.
12. Landscape	Enhance the landscape quality of Rotherham. (Light pollution is dealt with under Objective 6E.)
13. Historic Environment	Enhance the historic assets of Rotherham.
14. Accessibility / Community Facilities	Build community cohesion, involvement and encourage a pride in the community.
	Enhance internal and external images and perceptions of Rotherham and make Rotherham a good place to live, work or visit.
15. Population and Equality	Enables and enhances equality and tackles prejudice and discrimination.

34. The IIA [11]assessed the settlement hierarchy (section 5.9) and whilst noting sustainability constraints in some settlements it broadly supported the approach to growth set out in Core Strategy Policy CS1. Overall it concluded that in the majority, the Core Strategy policies are capable of addressing all risks of negative sustainability impacts, and achieving net benefits.

35. The delivery of new housing and economic development is a priority for the Core Strategy. As such, to ensure delivery of the borough's overall strategy, where the Sequential Test is required for sites the Sequential approach has been restricted to considering alternative opportunities within that site's settlement hierarchy grouping. This is considered to represent an appropriate response to balancing flood risk requirements with the wider sustainable development approach of the Local Plan in meeting the borough's development needs.

36. The exception to this where sites fall within the Rotherham Regeneration Area. The Flood Risk Toolkit, produced in close conjunction with the Environment Agency, clearly establishes the regeneration benefits of development taking place within the Regeneration Area and sets out how the Sequential and Exception Tests will be applied. In this case the Sequential approach is only required to look within the Regeneration Area boundary.

[11] Integrated Impact Assessment (IIA) of the Core Strategy, June 2013

37. The method set out above is considered to represent an appropriate, practical approach to balancing flood risk requirements with the wider sustainable development approach of the Local Plan in meeting the borough's development needs.

Applying the Exception Test

38. In applying the Exception Test regard has been had to the need to demonstrate both wider community benefits and also safety of the development via a site specific flood risk assessment.

39. The Flood Risk Toolkit notes that within the Rotherham Regeneration Area the Exception Test will be passed where proposals meet the regeneration objectives for that character area (set out in table A-1 of the Sequential approach guide section of the Flood Risk Toolkit).

40. Where sites fall within the Regeneration Area information has been provided demonstrating how the proposed development meets the relevant objectives identified above. Where sites fall outside of the Regeneration Area information has been provided regarding the wider regeneration benefits of development.

41. Planning Practice Guidance accompanying the NPPF provides a helpful checklist setting out the information which a site specific flood risk assessment should contain. This has been utilised to provide site specific flood risk assessments at appendix 2 for those sites requiring the exception test.

Step 1: Taking flood risk into account in site selection

42. Rotherham's Local Plan will consist of two key documents: the Core Strategy and the Sites and Policies document. The Core Strategy sets out the overall spatial strategy for Rotherham and the scale and distribution of development. The delivery of new housing and economic development is a priority and the strategy directs this development to certain parts of the borough in line with the principles of sustainable development. Except for land at Bassingthorpe Farm which is identified as a Strategic Allocation in the Core Strategy (and includes land for housing, employment and other supporting uses) the allocation of specific sites to meet the Core Strategy requirements is being taken forward through the Sites and Policies document.

43. The site selection background paper accompanying the Sites and Policies document sets out in detail the methodology used for the selection of sites to allocate for development. This utilises a three stage process, which is summarised below.

44. Stage 1 represents an initial sieving exercise. The objective is to filter out at an early stage all those sites that have a significant overriding constraint(s) to development. Any site (or part of a site) that falls within a functional flood plain (flood risk zone 3b) will be discounted at this stage. Sites falling within areas that are a lower risk / medium risk from flooding, or which fall within high risk (flood risk zone 3a) but not what is defined as 'functional floodplain' (i.e. they can be defended), will be considered at a later stage.

45. More detailed consideration is given at Stage 2, which dovetails with Sustainability Appraisal. A simple Red / Amber / Green assessment for most of these criteria will be used. The purpose of this scoring will be not only to compare sites, but also to report on their "likely significant effects." All sites are carried forward to the Stage 3 prioritisation stage and they are given an overall SA rating. The following approach was used for scoring flood risk (sites falling within Zone 3b having already been discounted):
    - High risk (Zone 3a) = Red,
    - Low to medium risk (Zone 2) = Amber,
    - Little or no risk (Zone 1) = Green.

46. Stage 3 sets out criteria for prioritising sites. The best performing sites when measured against these criteria and based on current knowledge of constraints will be recommended for allocation for future development.

47. Throughout this process the identification of each site's flood risk has had regard to the Level 1 and Level 2 Strategic Flood Risk Assessments and the Environment Agency's most recent flood risk mapping data and consultation responses.

48. As well as the Level 1 and 2 SFRA and Flood Risk Toolkit the site selection process has been informed by a wide range of other evidence base. The Strategic Housing Land Availability Assessment (SHLAA) identifies how much land is potentially available to meet the housing land requirements for the Local Plan allocations. On approval of the Working Group, sites within Flood Risk Zone 3b were excluded from assessment. As a general rule, it was also considered undesirable to build housing on sites that are environmentally

sensitive, or where the living environment may not be satisfactory. This includes greenfield sites in Flood Risk Zone 3a. Brownfield sites were still considered to offer potential subject to further assessment.

49. The Employment Land Review 2010 forms part of the evidence base for employment land. Employment sites identified do, in some cases, include sites which are in Flood Zones 2 and 3, although the Council has tried to exclude sites in these areas wherever possible. Those sites in Flood Zones 2 and 3 which have been included are, for the most part, brownfield sites last used for employment purposes.

50. The result of this process is that the Sites and Policies document identifies a total of 141 sites to be allocated for development:

Table 7: Proposed Site Allocations

Use	No. of Sites	Note
Residential	96	Includes 1 Gypsy and Traveller site, and 1 site (Bassingthorpe Farm) which is already allocated for residential development in the Core Strategy*.
Employment	39	Includes 2 sites at Bassingthorpe Farm which are already allocated for employment development in the Core Strategy*. It also includes 2 mixed use areas which will contribute towards the employment land requirement
Retail	6	
* Sites H1, E1 and E2 which are allocated through the adopted Core Strategy as part of the Bassingthorpe Farm Strategic Allocation		

51. In addition to the development sites, the Sites and Policies document has reviewed and amended the UDP mixed use areas. Further information is provided in the Mixed Use Areas background paper. Within these mixed use areas a range of uses may be acceptable. They mainly consist of existing developed areas therefore the majority of any new development coming forward in these areas would be through redevelopment of existing built areas. These 21 proposed mixed use areas have also been assessed below.

Steps 2 and 3: Sites requiring Sequential / Exception Test

52. The majority of the 141 proposed site allocations fall within Flood Zone 1. Table 9: Flood Risk Assessment of Proposed Allocation Sites identifies those sites which are proposed to be allocated for development where the developable area will include areas affected by flood risk. It shows that 17 sites fall wholly or partly within Flood Zones 2 or 3.

53. Of the 21 proposed mixed use areas, 12 are within Flood Zone 1. Table 10: Flood Risk Assessment of Proposed Mixed Use Areas identifies the remaining 9 mixed use areas where the developable area will include areas affected by flood risk.

54. Those sites where planning permission has been secured and partly implemented have been identified as requiring no further Sequential / Exception Test assessment on the basis that matters relating to flood risk have been thoroughly investigated and found acceptable, and development is underway. The sites to which this apply are set out in Table 8: Sites requiring no further Sequential / Exception Test assessment below:

Table 8: Sites requiring no further Sequential / Exception Test assessment

Area	Ref	Site Name	Reason
Rotherham Urban Area	E5	Henry Boot Site, Parkgate	Planning permission granted and partly implemented
	E7	Waddington Way, Aldwarke	
	E12	Areas adjacent to Magna, Templeborough	
	MU14	Junction 33 (M1)	
Wath, Brampton and West Melton	H45	Express Parks, Manvers, Wath	
	E20	Manvers Way, Wath	
Swinton	H51	Croda Site, Swinton	

Table 9: Flood Risk Assessment of Proposed Allocation Sites

Ref.	Site Name	Flood Zone	Extent of site affected	Proposed use	Vulnerability of use	Sequential Test required?	Exception Test required?	Note
E3	Off Centenery Way/ Bawtry Road	2	Whole	Employment Development	Less vulnerable	✓	✗	
E5	Land Off Rotherham Road, Parkgate	3	Whole	Employment Development	Less vulnerable	✓	✗	Planning permission granted and partly implemented
E6	Yorkshire Water Land, Aldwarke	2	Whole	Employment Development	Less vulnerable	✓	✗	
E7	Land Off Aldwarke Lane, Aldwarke	2	Whole	Employment Development	Less vulnerable	✓	✗	Planning permission granted and partly implemented
E9	Roundwood Colliery, Off Aldwarke Lane	2 & 3	Whole	Employment Development	Less vulnerable	✓	✗	
E10	Land Within Aldwarke Steel Works, Doncaster Road	2	Whole	Employment Development	Less vulnerable	✓	✗	
E11	Phoenix Business Park, Templeborough	2 & 3	Whole	Employment Development	Less vulnerable	✓	✗	
E12	Land Adjacent To Magna, Bessemer Way / Sheffield Road, Templeborough	2	Whole	Employment Development	Less vulnerable	✓	✗	Planning permission granted and partly implemented
E17	Manvers Way/ Station Road, Wath	2 & 3	Whole	Employment Development	Less vulnerable	✓	✗	
H45	Manvers Way (Express Parks), Wath	2	Whole	Residential development	More vulnerable	✓	✗	Planning permission granted and partly implemented

Ref.	Site Name	Flood Zone	Extent of site affected	Proposed use	Vulnerability of use	Sequential Test required?	Exception Test required?	Note
E19	Manvers Way / Dearne Lane, Wath	2	Whole	Employment Development	Less vulnerable	✓	✗	
E20	Manvers Way, Wath	2	Whole	Employment Development	Less vulnerable	✓	✗	Planning permission granted and partly implemented
E25	Land Off Rotherham Road, Maltby	2 & 3	Part (approx. 1/3 of site)	Employment Development	Less vulnerable	✓	✗	Planning permission granted
E31	Land Off Talbot Road, Swinton	2 & 3	Part (approx. 10% of site)	Employment Development	Less vulnerable	✓	✗	Small part of south-eastern corner in Flood Zones 2 & 3
H51	Croda site, Swinton	2	Whole	Residential Development	More vulnerable	✓	✗	Planning permission granted and partly implemented
R3	Corporation Street, Rotherham	2 & 3	Part (approx. 1/3 of site)	Town Centre Uses (residential above)	Less vulnerable	✓	✓	
E16	Todwick North, Dinnington	2 & 3	Part (approx. 5% of site)	Employment Development	Less vulnerable	✓	✗	Small area along north-eastern boundary within Flood Zones

Table 10: Flood Risk Assessment of Proposed Mixed Use Areas

Ref.	Site Name	Flood Zone	Extent of site affected	Proposed use	Vulnerability of use	Sequential Test required?	Exception Test required?	Note
MU01	Manvers Lakeside	2 & 3	Part (approx. 50%)	Assembly & Leisure	Water compatible & less vulnerable	✓	✗	Potential to deliver leisure uses associated with the lakeside location. Approx. half the site within flood risk areas: south western corner and north-eastern part.
MU02	North of Wath Town Centre	2 & 3	Part (approx. 50%)	Business, residential institutions, housing, non-residential institutions	More vulnerable & less vulnerable	✓	✓	Central part of mixed use area within flood zones 2 and 3
MU07	Masbrough Street (West of	2 & 3	Part (approx. 10%)	Business, residential institutions, housing,	More vulnerable	✓	✓	Small part of eastern corner of mixed use area within flood

Ref.	Site Name	Flood Zone	Extent of site affected	Proposed use	Vulnerability of use	Sequential Test required?	Exception Test required?	Note
	Centenary Road), Rotherham			non-residential institutions, assembly & leisure	& less vulnerable			zones
MU08	Bridge Street, Rotherham	2 & 3	Part (approx. 80%)	Office, business, non-residential institutions	More vulnerable & less vulnerable	✓	✓	Majority of site within flood zones
MU09	Main Street, Rotherham	2 & 3	Whole	Office, hotel, non-residential institutions, assembly & leisure	More vulnerable & less vulnerable	✓	✓	
MU10	Westgate, Rotherham	2 & 3	Part (approx. 25%)	Residential institutions, housing, non-residential institutions	More vulnerable & less vulnerable	✓	✓	South-western corner of mixed use area within flood zones 2 and 3
MU11	Effingham Street (North of Centenary Way), Rotherham	2 & 3	Part (approx. 25%)	Business, residential institutions, housing, non-residential institutions	More vulnerable & less vulnerable	✓	✓	Northern tip of site within flood zones 2 and 3
MU14	Junction 33 (M1)	2	Part (approx. 20%)	Motorway service area	More vulnerable & less vulnerable	✓	✓	Southern part of site in flood zone 2. Part implemented planning permission on site.
MU20	Land between Aldwarke Lane and Parkgate Shopping Park	2 & 3	Whole	Business, office, assembly & leisure, non-residential institutions	More vulnerable & less vulnerable	✓	✓	

55. However the Council recognises that there is potential for planning applications for amended schemes to be submitted on these sites. The Council will therefore expect any application to be based upon the most up to date information available regarding flood risk. This is reflected in the development principles for site allocations included in the Publication Sites and Policies document.

56. On this basis the following sites are identified as requiring further assessment:

Table 11: Proposed Allocation Sites and Mixed Use Areas Requiring Further Sequential Assessment

Location	Ref	Site Name	Flood Zone	Proposed Use
Rotherham Urban Area	E3	Off Centenary Way/ Bawtry Road	2	Employment
	E6	Yorkshire Water Land, Aldwarke	2	Employment
	E9	Roundwood Colliery, Off Aldwarke Lane	2 & 3	Employment
	E10	Land Within Aldwarke Steel Works, Doncaster Road	2	Employment
	E11	Phoenix Business Park, Sheffield Road, Templeborough	2 & 3	Employment
Brampton / West Melton / Wath-upon-Dearne	E17	Manvers Way / Station Road, Wath	2 & 3	Employment
	E19	Manvers Way / Dearne Lane, Wath	2	Employment
	MU01	Manvers Lakeside	2 & 3	Assembly & Leisure
Maltby / Hellaby	E25	Rotherham Road, Maltby	2 & 3	Employment
Swinton and Kilnhurst	E31	Land Off Talbot Road, Swinton	2 & 3	Employment
Dinnington, Anston, and Laughton Common	E16	Todwick North, Dinnington	2 & 3	Employment

Table 12: Proposed Allocation Sites and Mixed Use Areas Requiring Further Sequential and Exception Test Assessment

Location	Ref	Site Name	Flood Zone	Proposed use
Rotherham Urban Area	R3	Corporation Street, Rotherham	2 & 3	Town centre uses, residential above
	MU07	Masbrough Street (West of Centenary Way), Rotherham	2 & 3	Business, residential institutions, housing, non-residential institutions, assembly & leisure
	MU08	Bridge Street, Rotherham	2 & 3	Office, business, non-residential institutions
	MU09	Main Street, Rotherham	2 & 3	Office, hotel, non-residential institutions, assembly & leisure
	MU10	Westgate, Rotherham	2 & 3	Residential institutions, housing, non-residential institutions
	MU11	Effingham Street (North of Centenary Way), Rotherham	2 & 3	Business, residential institutions, housing, non-residential institutions
	MU20	North-East Of Parkgate Retail Park	2 & 3	Business, office, assembly & leisure, non-residential institutions
Brampton / West Melton / Wath-upon-Dearne	MU02	North of Wath Town Centre	2 & 3	Business, residential institutions, housing, non-residential institutions

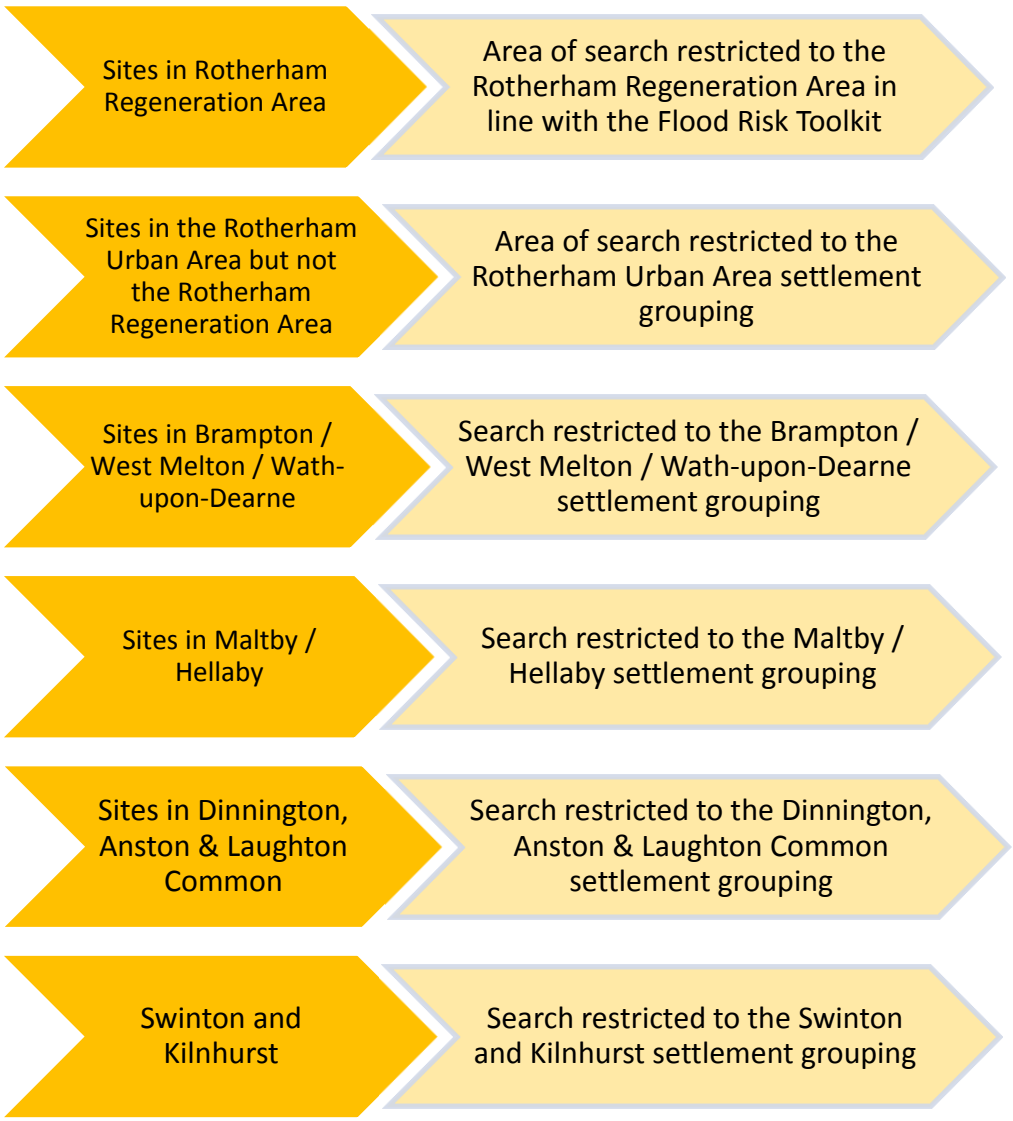
Step 4: Sequential and Exception Test assessments

57. As Table 11 and

58. Table 12 identified, 11 sites and mixed use areas require further Sequential Test Assessment, and a further 8 sites and mixed use areas require further Sequential and Exception Test assessment. The detailed assessments for those sites requiring the sequential test only are set out at appendix 1. The detailed assessments for those sites requiring both sequential and exception tests (including site specific flood risk assessment) are set out at appendix 2.

59. The Core Strategy sets out requirements for development in settlements across Rotherham. Site allocations are therefore required to meet these targets wherever possible. As such the Sequential approach has been undertaken in accordance with the methodology established earlier in this document, as shown in Figure 3: Sequential Test Approach, which takes account of the Flood Risk Toolkit guidance and the Core Strategy approach of promoting sustainable development across the borough.

Figure 3: Sequential Test Approach



60. The detailed assessments at appendix 1 and 2 show that the proposed sites and mixed use areas pass the Sequential and Exception Tests.

Conclusion

61. The overall site selection process has enshrined the principles of directing development to areas with the lowest risk of flooding. As a result, with the exception of a small number of sites the Council have been able to allocate the vast majority of development in Flood Zone 1.

62. However in order to meet the borough's development requirements (as set out in the Core Strategy and supported by Sustainability Appraisal) in accordance with the broader principles of sustainable development, it has been necessary to identify some sites in areas at higher risk from flooding.

63. Where sites are proposed for allocation for development on land in Flood Zones 2 and 3 it has been demonstrated that the Sequential approach and exceptions test outlined in the NPPF have been applied as necessary and met. It has shown that development can, in principle, be delivered appropriately in relation to flood risk.

64. It is recognised that more detailed Flood Risk Assessments will remain a requirement of the planning application process for proposals coming forward on these sites. Compliance with Local Plan policies (e.g. Policy CS25) will ensure that uses with higher vulnerability are located on parts of the site with the lowest probability of flooding.

Appendix 1: Sequential Test assessments

Rotherham Urban Area

Site	***E3: Off Centenary Way/ Bawtry Road (LDF0014)***
Proposed Allocation	• Currently allocated for industrial and business use and identified as development site E32 • The Local Plan seeks to roll this approach forward by retaining the site for business and industrial development and identifying it as a development site.

Flood Risk description	This area has suffered from historical flooding during the 2000 flood event. This site is within Flood Zone 2 as a result of the historical flooding.
Site Characteristics	• 6.65ha, brownfield site within the Rotherham Urban Area (main location for growth in the Core Strategy) • Generally permeable, undeveloped surface • The site is identified as expansion land for the adjacent business.
Sequential Test: are there alternative reasonably available sites in areas of lower flood risk?	There are no alternative available sites at lesser risk of flooding in the borough that could accommodate this development in a feasible and deliverable manner for the end user.
Options for addressing flood risk	Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding. Compliance with Policy CS25 will ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design.
Conclusion	There are no alternative available sites at lesser risk of flooding in the borough that could accommodate this development in a feasible and deliverable manner for the end user. Based on this the proposed allocation does pass the Sequential Test.

Site	***E6: Yorkshire Water Land, Aldwarke (LDF0097)***
Proposed Allocation	• Currently allocated for industrial and business use and identified as a development site • It is proposed to carry this approach forward.

Flood Risk description	This area has suffered from historical flooding during the 1947 flood event. This site is within Flood Zone 2 as a result of the historical flooding. Blackwater Dyke runs through the site which is likely to contribute to the potential flood risk. The Preliminary Flood Risk Assessment and the Environment Agency's Updated Flood Map for Surface Water identify small parts of the site as being susceptible to surface water flooding.
Site Characteristics	• 10.2ha mixed brownfield / greenfield site within the Rotherham Urban Area (main location for growth in the Core Strategy) • Generally permeable, undeveloped surface • The site falls within character area 7 of the Rotherham Regeneration area, to which the Flood Risk Toolkit applies
Sequential Test: are there alternative reasonably available sites in areas of lower flood risk?	A Sequential approach has been taken in line with the Council's Flood Risk Toolkit. There are no alternative sites of sufficient size available in Flood Zone 1 within the Rotherham Regeneration Area.
Options for addressing flood risk	Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding. Compliance with Policy CS25 will ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design.
Conclusion	Although this site is in Flood Zone 2, there are no alternative employment sites available of suitable size. The site therefore does pass the Sequential Test.

Site	***E9: Roundwood Colliery, Off Aldwarke Lane (LDF0104)***
Proposed Allocation	• Currently allocated for industrial and business use • It is proposed that this allocation is retained and it is identified as a development site.

Flood Risk description	This area has suffered from historical flooding during the 2007 flood event. This site is within Flood Zone 2 and 3 as a result of historical flooding and modelled data. The Preliminary Flood Risk Assessment and the Environment Agency's Updated Flood Map for Surface Water identify small parts of the site as being susceptible to surface water flooding.
Site Characteristics	• 6.2ha brownfield site within the Rotherham Urban Area (main location for growth in the Core Strategy) • It is currently undergoing reclamation and restoration to enable future development which it is envisaged will be complete by the end of 2015.
Sequential Test: are there alternative reasonably available sites in areas of lower flood risk?	There are no alternative employment sites available of suitable size. The site is required to help meet the employment land requirement for Rotherham Urban Area.
Options for addressing flood risk	Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding. Compliance with Policy CS25 will ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design.
Conclusion	There are no alternative employment sites available of suitable size. The site is required to help meet the employment land requirement for Rotherham Urban Area. The site therefore does pass the Sequential Test.

Site	***E10: Land Within Aldwarke Steel Works, Doncaster Road (LDF0105)***
Proposed Allocation	• Currently allocated for industrial and business use • It is proposed to retain the industrial and business use allocation and to identify it as a development site.

Flood Risk description	This area has suffered from historical flooding during the 1947 and 2007 flood events. This site is within Flood Zone 2 as a result of the historical flooding. The Preliminary Flood Risk Assessment and the Environment Agency's Updated Flood Map for Surface Water identify small parts of the site as being susceptible to surface water flooding.
Site Characteristics	• 7.1ha brownfield site within the Rotherham Urban Area (main location for growth in the Core Strategy) • Includes a stockyard and railway sidings for steel workings. • Generally impermeable, developed site
Sequential Test: are there alternative reasonably available sites in areas of lower flood risk?	There are no alternative employment sites available of suitable size. The site is required to help meet the employment land requirement for Rotherham Urban Area.
Options for addressing flood risk	Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding. Compliance with Policy CS25 will ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design.
Conclusion	There are no alternative employment sites available of suitable size. The site is required to help meet the employment land requirement for Rotherham Urban Area. The site therefore does pass the Sequential Test.

Site	***E11: Phoenix Business Park, Sheffield Road, Templeborough (LDF0602)***
Proposed Allocation	• Currently allocated for industrial and business use and identified as development sites E27 and E29 • It is proposed that the site is retained as an employment development site.

Flood Risk description	This area has suffered from historical flooding during the 1947, 2000 and 2007 flood events. This site is within Flood Zone 2 and 3 as a result of historical flooding and modelled data. The Preliminary Flood Risk Assessment and the Environment Agency's Updated Flood Map for Surface Water identify parts of the site as being susceptible to surface water flooding.
Site Characteristics	• 1.4ha brownfield site within the Rotherham Urban Area (main location for growth in the Core Strategy) • It consists of a number of sites remaining to be developed alongside the River Don • Mix of permeable and impermeable surfaces • Development is taking place on adjacent site • The site falls within character area 1 of the Rotherham Regeneration area, to which the Flood Risk Toolkit applies
Sequential Test: are there alternative reasonably available sites in areas of lower flood risk?	A Sequential approach has been taken in line with the Council's Flood Risk Toolkit. There are no alternative sites of sufficient size available in Flood Zone 1 within the Rotherham Regeneration Area.
Options for addressing flood risk	Adjacent land has been sacrificed as a wetland nature park to act as flood storage as part of the Flood Alleviation Scheme. The site will also benefit from the Flood Alleviation Scheme, which is intended to enable development on sites such as this within the urban area and close to Rotherham town centre. Indeed construction is taking place on land adjacent to this site. Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding. Compliance with Policy CS25 will ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design.
Conclusion	Although this site is in Flood Zones 2 & 3, there are no alternative employment sites available of suitable size. The site therefore passes the Sequential Test. The site also benefits from the adjacent flood defence measures.

Dinnington, Anston and Laughton Common

Site	***E16: Todwick North (LDF0830)***
Proposed Allocation	The site is proposed to be allocated for employment uses

Flood Risk description	The majority of the site is within flood zone 1. The eastern boundary and south east corner of the site is within Flood Zones 2 and 3. The site is adjacent to Anston Brook. There is also a culvert running through the middle of the site.
Site Characteristics	• 30ha site • Predominantly permeable, greenfield site
Sequential Test: are there alternative reasonably available sites in areas of lower flood risk?	The site is intended to attract major inward investment by accommodating one or more large users or through the development of smaller plots which comprise a high quality business park. There are no alternative available sites at lesser risk of flooding in the borough that could accommodate the size of site proposed. Based on this the proposed allocation does pass the Sequential Test.
Options for addressing flood risk	Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding. Compliance with Policy CS25 will ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design.
Conclusion	The site will play an important role in meeting the borough's employment land requirements. There are no alternative available sites at lesser risk of flooding in the borough that could accommodate the size of site proposed. Based on this the proposed allocation does pass the Sequential Test.

Wath-upon Dearne, Brampton and West Melton

Site	***E17: Manvers Way, Station Road, Wath (LDF0308)***
Proposed Allocation	• Currently allocated for mixed use development and as an employment development site • It is proposed to allocate this site for industrial and business use and to identify it as a development site.

Flood Risk description	This area has suffered from historical flooding during the 2007 flood event. This site is within Flood Zone 2 and 3 as a result of historical flooding. Eastern part of site liable to flooding. The Preliminary Flood Risk Assessment and the Environment Agency's Updated Flood Map for Surface Water identify parts of the site as being susceptible to surface water flooding.
Site Characteristics	• 1.9ha brownfield site within Brampton/West Melton/Wath-upon-Dearne (Principal Settlement for Growth in the Core Strategy) • Generally permeable, undeveloped site
Sequential Test: are there alternative reasonably available sites in areas of lower flood risk?	There are no alternative employment sites available of suitable size. The site is required to help meet the employment land requirement for the Brampton / West Melton / Wath-upon-Dearne settlement grouping.
Options for addressing flood risk	Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding. Compliance with Policy CS25 will ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design.
Conclusion	There are no alternative employment sites available of suitable size. The site is required to help meet the employment land requirement for the Brampton / West Melton / Wath-upon-Dearne settlement grouping. The site therefore does pass the Sequential Test.

Site	***E19: Manvers Way / Dearne Lane, Brampton (LDF0348)***
Proposed Allocation	• Currently allocated for industrial and business use and as an employment development site • It is proposed to retain the site's industrial and business allocation, and to continue identifying it as a development site.

Flood Risk description	This area has suffered from historical flooding during the 2007 flood event. This site is within Flood Zone 2 as a result of historical flooding. The Preliminary Flood Risk Assessment and the Environment Agency's Updated Flood Map for Surface Water identify small parts of the site as being susceptible to surface water flooding.
Site Characteristics	• 5ha brownfield site within Brampton/West Melton/Wath-upon-Dearne (Principal Settlement for Growth in the Core Strategy) • Mainly permeable but with some developed, impermeable surfaces • The site is part of the wider industrial estate which includes Century Business Centre. An access road has already been developed. • The 2010 Employment Land Review recommendation was to retain as an employment development site.
Sequential Test: are there alternative reasonably available sites in areas of lower flood risk?	There are no alternative employment sites available of suitable size. The site is required to help meet the employment land requirement for the Brampton / West Melton / Wath-upon-Dearne settlement grouping.
Options for addressing flood risk	Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding. Compliance with Policy CS25 will ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design.
Conclusion	There are no alternative employment sites available of suitable size. The site is required to help meet the employment land requirement for the Brampton / West Melton / Wath-upon-Dearne settlement grouping. The site therefore does pass the Sequential Test.

Site	***MU01: Manvers Lakeside***
Proposed Allocation	• The site is proposed for mixed use development - Assembly & Leisure uses are identified in the menu of appropriate uses within this area. It is considered to have potential for leisure uses associated with the lakeside location, reflecting its location adjacent to the lake and the existing boat house. It is considered that its location offers wider community regeneration benefits to build upon the existing facilities provided by the existing boat house. This could help contribute to achieving the Core Strategy objectives, one of which seeks to enhance the borough's network of accessible sport and recreation facilities. It also supports the Sustainability Appraisal objective around improving access to quality cultural, leisure and recreational activities available to everyone.

Flood Risk description	Approx. half the site within flood risk areas 2 and 3. The Preliminary Flood Risk Assessment and the Environment Agency's Updated Flood Map for Surface Water identify small parts of the site as being susceptible to surface water flooding.
Site Characteristics	• This area is in a Principal Settlement for Growth in the Core Strategy. It lies to the east of the lake at Manvers and consists of a garden centre and several residential properties. The north-eastern and south-western parts of the site fall within flood zones 2 and 3. • Brownfield; mixture of permeable and impermeable surfaces. • The mixed use areas primarily consist of existing developed areas. Therefore the proposed acceptable uses within these areas will relate, in most cases, to any future redevelopment proposals which come forward. Such redevelopments could increase the number of users / occupants of premises in the area (depending upon the nature of specific proposals).
Climate change	The Level 1 SFRA highlights the risk that climate change may increase the extent of flooding. This could suggest that areas that are currently situated outside of Zone 3 High Probability will be at risk of flooding in future years.
Sequential Test: are there alternative reasonably available sites in areas of lower flood risk?	The mixed use areas primarily consist of existing developed areas. The site has potential to deliver leisure uses which require a lakeside location. Therefore the proposed acceptable uses within these areas will relate, in most cases, to any future redevelopment proposals which come forward. There are no alternative sites of a similar size which could potentially deliver the mix of uses proposed within this mixed use area. The site has therefore passed the Sequential Test.
Options for addressing flood risk / residual risk	The SFRA identifies residual risks as: • The potential for flood management measures to be overtopped i.e. water rises to a level greater than what they are designed for; • Structural failure / overtopping of flood defences or water infrastructure; and • Inherent uncertainties in the prediction of flooding; There is also the impact of climate change i.e. more severe weather patterns may occur. Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include

	ensuring that development is directed to those parts of the site at lowest risk of flooding. Compliance with Policy CS25 will ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design. This will include taking account of the SFRA.
Conclusion	There are no alternative sites of a similar size which could potentially deliver the mix of uses proposed within this mixed use area. The proposed development will provide wider regeneration benefits by accommodating development requiring a lakeside location. The safety of development will be secured through mitigation measured identified through an FRA submitted with any planning application submitted. The site has therefore passed the Sequential Test.

Maltby and Hellaby

Site	***E25: Rotherham Road, Maltby (LDF0328)***
Proposed Allocation	• Currently allocated for business use • It is proposed to retain the site's business use allocation, and to identify it as a development site.

Flood Risk description	Part of the site is within Flood Zones 2 and 3, which follows the line of Hellaby Brook. The Preliminary Flood Risk Assessment and the Environment Agency's Updated Flood Map for Surface Water identify the site as being susceptible to surface water flooding.
Site Characteristics	• 1ha green field site within Maltby / Hellaby (Principal Settlement in the Core Strategy) • Permeable, undeveloped surface • Planning permission for office development was granted in March 2014.
Sequential Test: are there alternative reasonably available sites in areas of lower flood risk?	There are no alternative employment sites available of suitable size. The site is required to help meet the employment land requirement for the Maltby / Hellaby settlement grouping.
Options for addressing flood risk	Flood risk has already been adequately addressed, reflected in the grant of planning permission. Should planning permission not be implemented then Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding. Compliance with Policy CS25 will ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design.
Conclusion	There are no alternative employment sites available of suitable size. The site is required to help meet the employment land requirement for the Maltby / Hellaby settlement grouping. The site therefore does pass the Sequential Test.

Swinton and Kilnhurst

Site	***E31: Land Off Talbot Road, Swinton (LDF0392)***
Proposed Allocation	• This site, allocated for industrial and business use in the UDP, is also identified as an employment development site (E51). • It is proposed to retain the current industrial and business use allocation and to identify it as a development site.

Flood Risk description	The majority of the site is within Flood Zone 1. A small part of the south-eastern corner of the site is within Flood Zones 2 and 3. The site was subject to flooding in 2007. Surface water flooding assessment shows medium to high risk in the north west side and south east corner of the site.
Site Characteristics	• 1.54ha, greenfield site within Swinton • This site is expansion land for the adjacent Morphy Richards. • Predominantly permeable site
Sequential Test: are there alternative reasonably available sites in areas of lower flood risk?	There are no alternative available sites at lesser risk of flooding in the borough that could accommodate this development in a feasible and deliverable manner for the end user
Options for addressing flood risk	Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding. Compliance with Policy CS25 will ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design.
Conclusion	The site consists of land owned by and retained for the expansion of Morphy Richards which operates from the adjacent land. There are no alternative available sites at lesser risk of flooding in the borough that could accommodate this development in a feasible and deliverable manner for the end user. Based on this the proposed allocation does pass the Sequential Test.

Appendix 2: Sites requiring sequential and exception test

Rotherham Urban Area

Site	***R3: Corporation Street, Rotherham town centre (LDF0823)***
1. Development description and location	
a. What type of development is proposed (e.g., new development, an extension to existing development, a change of use etc.) and where will it be located?	• The site is proposed to be allocated for as a retail allocation. The site is within the town centre and retail / town centre uses would be acceptable on site. Local Plan policies also support residential development above ground floor level. • The site consists of existing fire damaged buildings; redevelopment of the site is the most likely form of development in the future. •
b. What is its flood risk vulnerability classification?	Approximately a third of the site is within Flood Zone 2, with a very small sliver of the site falling within Flood Zone 3.
c. Is the proposed development consistent with the Local Plan for the area?	Not relevant – see 1a
d. What evidence can be provided that the Sequential Test and where necessary the Exception Test has/have been applied in the selection of this site for this development type?	The area is within the Rotherham Regeneration Area to which the Level 2 SFRA and Flood Risk Toolkit apply (in character area 4). This site includes properties which have been vacant for a number of years following fire damage. The site is detrimental to the quality of the town centre environment and redevelopment would improve the street scene and contribute towards the vitality and viability of the town centre. A Sequential approach has been taken in line with the Council's Flood Risk Toolkit. There are no alternative sites of sufficient size available in Flood Zone 1 within the Rotherham Regeneration Area which would also meet other planning policy requirements for the proposed type of development. The site will play an important role in improving the vitality and viability of Rotherham town centre and contributes towards meeting the retail floorspace requirements set out in the Core Strategy. Based on this the proposed allocation does pass the Sequential Test.

	The renaissance objective for character area 3 is “To regenerate the Core Town Centre through improving vitality through encouraging more visitors and diversifying land uses”. Uses proposed as acceptable will contribute towards this objective. It is at the heart of Rotherham’s urban area, which the Core Strategy (supported by sustainability appraisal) identifies as the main location for new growth. It is considered that accommodating the proposed mix of uses in this location, within the borough’s principal town and service centre, would provide wider regeneration benefits than directing development elsewhere. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted in this area (as required by Core strategy Policy CS25) will be incorporated into the final design, ensuring the safety of development over its lifetime. This will include taking account of the Level 2 SFRA. The site has therefore passed both parts of the exceptions test.
e. Will your proposal increase overall the number of occupants and/or users of the building/land, or the nature or times of occupation or use, such that it may affect the degree of flood risk to these people?	Redevelopments could increase the number of users / occupants of premises in the area (depending upon the nature of specific proposals).
2. Definition of the flood hazard	
a. What sources of flooding could affect the site?	River and surface water
b. For each identified source in box 2a above, can you describe how flooding would occur, with reference to any historic records where these are available?	This area has suffered from historical flooding. This site is partly within Flood Zone 2 with a small area within Flood Zone 3. The Preliminary Flood Risk Assessment identifies the site as being close to an area susceptible to surface water flooding. River flooding from the River Don. SFRA2 modelling of Flood Zone 3 areas shows that the very small sliver of land within Flood Zone 3 modelled at a depth of 0.5 – 1m. It calculates the flood hazard for this sliver of land as ‘Extreme’. Surface water assessment shows that the majority of the site is at high risk of surface water flooding (with small parts classed as medium or low risk); modelled at a depth of 0.5 – 1m. The surface water flood risk is classified as low hazard for half of the site, with the northern half predominantly moderate hazard; a small area is classed as significant hazard. The site has also been assessed utilising the latest Flood Map for Surface Water.

	This identified the site as Green, where there are no intersections with the updated Flood Map for Surface Water, or there is a slight intersection but we believe it will not affect the site for development.
c. What are the existing surface water drainage arrangements for the site?	Main sewers
3. Probability	
a. Which flood zone is the site within?	Approximately a third of the site is within Flood Zone 2, with a very small sliver of the site falling within Flood Zone 3.
b. If there is a Strategic Flood Risk Assessment covering this site, does this show the same or a different flood zone compared with the Environment Agency's flood map?	SFRA2 modelling shows part of the site in Flood Zone 2 with a very small part within Flood Zone 3.
c. What is the probability of the site flooding, taking account of the maps of flood risk from rivers and the sea and from surface water, on the Environment Agency's web site, and the Strategic Flood Risk Assessment, and of any further flood risk information for the site?	Areas in flood zone 2 have between 1% (1 in 100) and 0.1% (1 in 1000) chance and Areas in flood zone 3 have greater than 1% (1 in 100) chance. Refer to the information in 2b.
d. If known, what (approximately) are the existing rates and volumes of surface water run-off generated by the site?	Not known. Site consists of existing, developed surfaces.
4. Climate change	
How is flood risk at the site likely to be affected by climate change?	The Level 1 and 2 SFRAs highlight the risk that climate change may increase the extent of flooding. This could suggest that areas that are currently situated outside of Zone 3 High Probability will be at risk of flooding in future years.
5. Detailed development proposals	
Where appropriate, are you able to demonstrate how land uses most sensitive to flood damage have been placed in areas within the site that are at least risk of flooding (including providing details of the development layout)?	The site consists of existing developed land. Redevelopment of the site is the most likely outcome. Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented.
6. Flood risk management measures	
How will the site/building be protected from flooding, including the potential impacts of climate	Details not known – this would depend upon any proposal which came forward. However Policy SP50 states that floor levels for habitable buildings should normally

change, over the development's lifetime?	be a minimum of 600mm above the 100 year plus climate change flood level. As a brownfield site Policy CS25 also requires surface water run-off to be reduced by at least 30%; and requires the use of appropriately constructed and maintained Sustainable Urban Drainage Systems or sustainable drainage techniques where practical and feasible.
7. Off site impacts	
a. How will you ensure that your proposed development and the measures to protect your site from flooding will not increase flood risk elsewhere?	Any proposals will need to comply with Policy CS25 to ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design. This will include taking account of the Level 2 SFRA. Potential solutions could include management of surface water discharges on site. Local Plan policies encourage the use of Sustainable Urban Drainage Systems or sustainable drainage techniques.
b. How will you prevent run-off from the completed development causing an impact elsewhere?	See above
c. Are there any opportunities offered by the development to reduce flood risk elsewhere?	Will be dependent on any specific proposals which come forward.
8. Residual risks	
a. What flood-related risks will remain after you have implemented the measures to protect the site from flooding?	Level 2 SFRA identifies residual risks as: • The potential for flood defences to be overtopped i.e. water rises to a level greater than what they are designed for; • Flood defences are breached i.e. a hole or gap in the defences occurs allowing water to flow through them; and • The impact of climate change i.e. more severe weather patterns occur.
b. How, and by whom, will these risks be managed over the lifetime of the development? (E.g., flood warning and evacuation procedures).	This will be dependent upon the details of any proposal submitted, and will be set out in the site specific FRA which Policy CS25 requires. Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding. Compliance with Policy CS25 will ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as

	identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design. This will include taking account of the Level 2 SFRA. The Council encourages sign up to flood warning services, such as the Environment Agency's free Floodline Warnings Direct service that provides flood warnings by phone, text or email. It also encourages the preparation of a flood evacuation plan which can be submitted as part a Flood risk Assessment.

Site	***MU07: Masbrough Street (West of Centenary Road), Rotherham***
1. Development description and location	
a. What type of development is proposed (e.g., new development, an extension to existing development, a change of use etc.) and where will it be located?	• The site is proposed to be allocated for a mix of uses (taking forward the existing approach in the adopted UDP) • The menu of appropriate uses within this area includes business, residential institutions, housing, non-residential institutions, assembly & leisure • The mixed use areas primarily consist of existing developed areas. Therefore the proposed acceptable uses within these areas will relate, in most cases, to any future redevelopment proposals which come forward.
b. What is its flood risk vulnerability classification?	Most of the site (approximately 90%) is within Flood Zone 1, with part of the site within Flood Zones 2 and some small parts within zone 3; the Level 2 SFRA and the Environment Agency's Updated Flood Map for Surface Water identify high surface water flood risk in places particularly around the former football ground and Almer Street.
c. Is the proposed development consistent with the Local Plan for the area?	Not relevant – see 1a
d. What evidence can be provided that the Sequential Test and where necessary the Exception Test has/have been applied in the selection of this site for this development type?	The majority of the area is within the Rotherham Regeneration Area to which the Level 2 SFRA and Flood Risk Toolkit apply (character area 2). The mixed use areas primarily consist of existing developed areas. Therefore the proposed acceptable uses within these areas will relate, in most cases, to any future redevelopment proposals which come forward. Within the Rotherham Regeneration Area there are no alternative sites of a similar size which could potentially deliver the

	mix of uses proposed within this mixed use area. The site has therefore passed the Sequential Test. The Renaissance objective for the character area in SFRA2 is "To diversify the land uses and improve the appearance and coherence of the area". Uses proposed as acceptable may contribute towards this objective. The area is close to the main road network and a main gateway into Rotherham town centre. It is at the heart of Rotherham's urban area, which the Core Strategy (supported by sustainability appraisal) identifies as the main location for new growth. It is considered that accommodating the proposed mix of uses in this location, close to the borough's principal town and service centre, would provide wider regeneration benefits than directing development elsewhere. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted in this area (as required by Core strategy Policy CS25) will be incorporated into the final design, ensuring the safety of development over its lifetime. This will include taking account of the Level 2 SFRA. The site has therefore passed both parts of the exceptions test.
e. Will your proposal increase overall the number of occupants and/or users of the building/land, or the nature or times of occupation or use, such that it may affect the degree of flood risk to these people?	Redevelopments could increase the number of users / occupants of premises in the area (depending upon the nature of specific proposals).
2. Definition of the flood hazard	
a. What sources of flooding could affect the site?	River and surface water
b. For each identified source in box 2a above, can you describe how flooding would occur, with reference to any historic records where these are available?	River flooding from the River Don. SFRA2 identifies that in a number of limited locations close to Armer Street Flood Zone 3 modelled flood depths vary between 0.50m – 1.5m, with a small area modelled at over 1.5m depth. It calculates the flood hazard in these areas as 'Significant' or 'Extreme'. Surface Water Assessment shows that there is a culverted watercourse beneath the site. The area is susceptible to surface water flooding as part of an overland flood route.
c. What are the existing surface water drainage arrangements for the site?	Main sewers
3. Probability	
a. Which flood zone is the site within?	Part within Flood Zones 2 and some small parts within zone 3;

b. If there is a Strategic Flood Risk Assessment covering this site, does this show the same or a different flood zone compared with the Environment Agency's flood map?	SFRA2 modelling shows site partly within Flood Zones 2 and 3a.
c. What is the probability of the site flooding, taking account of the maps of flood risk from rivers and the sea and from surface water, on the Environment Agency's web site, and the Strategic Flood Risk Assessment, and of any further flood risk information for the site?	Areas in flood zone 2 have between 1% (1 in 100) and 0.1% (1 in 1000) chance and areas in flood zone 3 have greater than 1% (1 in 100) chance. The Level 2 SFRA and the Environment Agency's Updated Flood Map for Surface Water identify high surface water flood risk in places particularly around the former football ground and Armer Street.
d. If known, what (approximately) are the existing rates and volumes of surface water run-off generated by the site?	Not known. Site predominantly consists of existing, developed surfaces.
4. Climate change	
How is flood risk at the site likely to be affected by climate change?	The Level 1 and 2 SFRAs highlight the risk that climate change may increase the extent of flooding. This could suggest that areas that are currently situated outside of Zone 3 High Probability will be at risk of flooding in future years.
5. Detailed development proposals	
Where appropriate, are you able to demonstrate how land uses most sensitive to flood damage have been placed in areas within the site that are at least risk of flooding (including providing details of the development layout)?	The site consists of existing developed land. Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding.
6. Flood risk management measures	
How will the site/building be protected from flooding, including the potential impacts of climate change, over the development's lifetime?	The Level 2 SFRA notes that the Masbrough area is already defended by the first phase of the Flood Alleviation Scheme. Details not known – this would depend upon any proposal which came forward. However Policy SP50 states that floor levels for habitable buildings should normally be a minimum of 600mm above the 100 year plus climate change flood level. As a brownfield site Policy CS25 also requires surface water run-off to be reduced by at least 30%; and requires the use of appropriately constructed and maintained Sustainable Urban Drainage Systems or sustainable drainage techniques where practical and feasible.

7. Off site impacts	
a. How will you ensure that your proposed development and the measures to protect your site from flooding will not increase flood risk elsewhere?	Any proposals will need to comply with Policy CS25 to ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design. This will include taking account of the Level 2 SFRA. Potential solutions could include management of surface water discharges on site. Local Plan policies encourage the use of Sustainable Urban Drainage Systems or sustainable drainage techniques.
b. How will you prevent run-off from the completed development causing an impact elsewhere?	See above
c. Are there any opportunities offered by the development to reduce flood risk elsewhere?	Will be dependent on any specific proposals which come forward.
8. Residual risks	
a. What flood-related risks will remain after you have implemented the measures to protect the site from flooding?	Level 2 SFRA notes that the Masbrough area is already defended by the first phase of the Flood Alleviation Scheme. It identifies residual risks as: • The potential for flood defences to be overtopped i.e. water rises to a level greater than what they are designed for; • Flood defences are breached i.e. a hole or gap in the defences occurs allowing water to flow through them; and • The impact of climate change i.e. more severe weather patterns occur.
b. How, and by whom, will these risks be managed over the lifetime of the development? (E.g., flood warning and evacuation procedures).	This will be dependent upon the details of any proposal submitted, and will be set out in the site specific FRA which Policy CS25 requires. Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding. Compliance with Policy CS25 will ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design. This will include taking account of the Level 2 SFRA.

	The Council encourages sign up to flood warning services, such as the Environment Agency's free Floodline Warnings Direct service that provides flood warnings by phone, text or email. It also encourages the preparation of a flood evacuation plan which can be submitted as part a Flood risk Assessment.

Site	***MU08: Bridge Street, Rotherham***
1. Development description and location	
a. What type of development is proposed (e.g., new development, an extension to existing development, a change of use etc.) and where will it be located?	• This site is proposed to be allocated for a mix of uses. The menu of appropriate uses within this area includes office, business, non-residential institutions. • The mixed use area primarily consists of existing developed areas including business, commercial, and industrial uses and including the train station, with predominantly impermeable surfaces. • The proposed acceptable uses within this area will relate, in most cases, to any future redevelopment proposals which come forward.
b. What is its flood risk vulnerability classification?	Approximately 20% of the site is within Flood Zone 1. The remainder falls within Flood Zone 2 (approx. 50%) and the remainder within Flood Zone 3 (30%).
c. Is the proposed development consistent with the Local Plan for the area?	Not relevant – see 1a
d. What evidence can be provided that the Sequential Test and where necessary the Exception Test has/have been applied in the selection of this site for this development type?	The area is within the Rotherham Regeneration Area to which the Level 2 SFRA and Flood Risk Toolkit apply (partly in character areas 6 and 3). The Preliminary Flood Risk Assessment and the Environment Agency's Updated Flood Map for Surface Water identify parts of the site as being susceptible to surface water flooding. The mixed use areas primarily consist of existing developed areas. Therefore the proposed acceptable uses within these areas will relate, in most cases, to any future redevelopment proposals which come forward. Within the Rotherham Regeneration Area there are no alternative sites of a similar size which could potentially deliver the mix of uses proposed within this mixed use area. The site has therefore passed the Sequential Test. The Renaissance objectives for character areas 3 and 6 in SFRA2 are "To regenerate and develop key riverside sites and enhance the riverside" and To continue to support the industrial and employment function of the area". Uses proposed as acceptable

	may contribute towards this objective. The area is close to the main road network and a key gateway into Rotherham town centre. It is at the heart of Rotherham's urban area, which the Core Strategy (supported by sustainability appraisal) identifies as the main location for new growth. It is considered that accommodating the proposed mix of uses in this location, close to the borough's principal town and service centre, would provide wider regeneration benefits than directing development elsewhere. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted in this area (as required by Core strategy Policy CS25) will be incorporated into the final design, ensuring the safety of development over its lifetime. This will include taking account of the Level 2 SFRA. The site has therefore passed both parts of the exceptions test.
e. Will your proposal increase overall the number of occupants and/or users of the building/land, or the nature or times of occupation or use, such that it may affect the degree of flood risk to these people?	Redevelopments could increase the number of users / occupants of premises in the area (depending upon the nature of specific proposals).
2. Definition of the flood hazard	
a. What sources of flooding could affect the site?	River and surface water
b. For each identified source in box 2a above, can you describe how flooding would occur, with reference to any historic records where these are available?	Flooding via the river and canal. Parts of the site are adjacent to the railway lines which could act as a route for flood water. SFRA2 identifies that in a number of limited locations close to Masbrough Street and Greasbrough Road Flood Zone 3 modelled flood depths vary between 0.50m 1.0m, with several small areas modelled at 1.0m – 1.5m. It calculates the flood hazard in these areas as 'Significant' or 'Extreme'. Surface Water Flood Risk modelling from SFRA2 shows that most of the area is not identified as at risk, although very small pockets throughout are identified as high, medium or low risk. Consequently the surface water flood risk hazard for the majority of the area is low, with a very small number of pockets either moderate or significant hazard. Further assessment of surface water flood risk using the Updated Flood Map for Surface Water resulted in the site being classed as amber, where the site has potential surface water flooding problems but these are likely to be able to be

	designed out (through the use of SuDS, ponds, other mitigation measures.)
c. What are the existing surface water drainage arrangements for the site?	Main sewers
3. Probability	
a. Which flood zone is the site within?	Approximately 20% of the site is within Flood Zone 1. The remainder falls within Flood Zone 2 (approx. 50%) and the remainder within Flood Zone 3 (30%).
b. If there is a Strategic Flood Risk Assessment covering this site, does this show the same or a different flood zone compared with the Environment Agency's flood map?	SFRA2 modelling shows that approximately 20% of the site is within Flood Zone 1. The remainder falls within Flood Zone 2 (approx. 50%) and the remainder within Flood Zone 3 (30%).
c. What is the probability of the site flooding, taking account of the maps of flood risk from rivers and the sea and from surface water, on the Environment Agency's web site, and the Strategic Flood Risk Assessment, and of any further flood risk information for the site?	Areas in flood zone 2 have between 1% (1 in 100) and 0.1% (1 in 1000) chance and areas in flood zone 3 have greater than 1% (1 in 100) chance. Surface water flood risk hazard for the majority of the area is low, with a very small number of pockets either moderate or significant hazard.
d. If known, what (approximately) are the existing rates and volumes of surface water run-off generated by the site?	Not known. Site predominantly consists of existing, developed surfaces.
4. Climate change	
How is flood risk at the site likely to be affected by climate change?	The Level 1 and 2 SFRAs highlight the risk that climate change may increase the extent of flooding. This could suggest that areas that are currently situated outside of Zone 3 High Probability will be at risk of flooding in future years.
5. Detailed development proposals	
Where appropriate, are you able to demonstrate how land uses most sensitive to flood damage have been placed in areas within the site that are at least risk of flooding (including providing details of the development layout)?	The site consists of existing developed land. Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding.
6. Flood risk management measures	
How will the site/building be protected from flooding, including the potential impacts of climate change, over the development's lifetime?	Details not known – this would depend upon any proposal which came forward. However Policy SP50 states that floor levels for habitable buildings should normally be a minimum of 600mm above the 100 year plus climate change flood level. As a brownfield site Policy CS25 also requires surface water run-off to be reduced by at least 30%; and requires the use of appropriately constructed and maintained

	Sustainable Urban Drainage Systems or sustainable drainage techniques where practical and feasible.
7. Off site impacts	
a. How will you ensure that your proposed development and the measures to protect your site from flooding will not increase flood risk elsewhere?	Any proposals will need to comply with Policy CS25 to ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design. This will include taking account of the Level 2 SFRA. Potential solutions could include management of surface water discharges on site. Local Plan policies encourage the use of Sustainable Urban Drainage Systems or sustainable drainage techniques.
b. How will you prevent run-off from the completed development causing an impact elsewhere?	See above
c. Are there any opportunities offered by the development to reduce flood risk elsewhere?	Will be dependent on any specific proposals which come forward.
8. Residual risks	
a. What flood-related risks will remain after you have implemented the measures to protect the site from flooding?	Level 2 SFRA identifies residual risks as: • The potential for flood defences to be overtopped i.e. water rises to a level greater than what they are designed for; • Flood defences are breached i.e. a hole or gap in the defences occurs allowing water to flow through them; and • The impact of climate change i.e. more severe weather patterns occur.
b. How, and by whom, will these risks be managed over the lifetime of the development? (E.g., flood warning and evacuation procedures).	This will be dependent upon the details of any proposal submitted, and will be set out in the site specific FRA which Policy CS25 requires. Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding. Compliance with Policy CS25 will ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design. This will include taking account of the Level 2 SFRA.

	The Council encourages sign up to flood warning services, such as the Environment Agency's free Floodline Warnings Direct service that provides flood warnings by phone, text or email. It also encourages the preparation of a flood evacuation plan which can be submitted as part a Flood risk Assessment.

Site	***MU09: Main Street, Rotherham***
1. Development description and location	
a. What type of development is proposed (e.g., new development, an extension to existing development, a change of use etc.) and where will it be located?	• The site is proposed to be allocated for a mix of uses (taking forward the existing approach in the adopted UDP) • The menu of appropriate uses within this area includes office, hotel, non-residential institutions, assembly & leisure. • The mixed use areas primarily consist of existing developed areas. Therefore the proposed acceptable uses within these areas will relate, in most cases, to any future redevelopment proposals which come forward.
b. What is its flood risk vulnerability classification?	Approximately a third of the site is within Flood Zone 2, with the remaining two thirds within Flood Zone 3.
c. Is the proposed development consistent with the Local Plan for the area?	Not relevant – see 1a
d. What evidence can be provided that the Sequential Test and where necessary the Exception Test has/have been applied in the selection of this site for this development type?	The area is within the Rotherham Regeneration Area to which the Level 2 SFRA and Flood Risk Toolkit apply (in character area 3, with small fringe areas also in areas 1 and 2). The mixed use areas primarily consist of existing developed areas. Therefore the proposed acceptable uses within these areas will relate, in most cases, to any future redevelopment proposals which come forward. Within the Rotherham Regeneration Area there are no alternative sites of a similar size which could potentially deliver the mix of uses proposed within this mixed use area. The site has therefore passed the Sequential Test. The renaissance objective for character area 3 is "To regenerate and develop key riverside sites and enhance the riverside". Uses proposed as acceptable may contribute towards this objective. It is at the heart of Rotherham's urban area, which

	the Core Strategy (supported by sustainability appraisal) identifies as the main location for new growth. It is considered that accommodating the proposed mix of uses in this location, close to the borough's principal town and service centre, would provide wider regeneration benefits than directing development elsewhere. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted in this area (as required by Core strategy Policy CS25) will be incorporated into the final design, ensuring the safety of development over its lifetime. This will include taking account of the Level 2 SFRA. The site has therefore passed both parts of the exceptions test.
e. Will your proposal increase overall the number of occupants and/or users of the building/land, or the nature or times of occupation or use, such that it may affect the degree of flood risk to these people?	Redevelopments could increase the number of users / occupants of premises in the area (depending upon the nature of specific proposals).
2. Definition of the flood hazard	
a. What sources of flooding could affect the site?	River and surface water
b. For each identified source in box 2a above, can you describe how flooding would occur, with reference to any historic records where these are available?	River flooding from the River Don. SFRA2 modelling of Flood Zone 3 areas shows a large area between the River Don and the Railway line modelled at a depth of 0.5 – 1m, with some points modelled at 1m – 1.5m. A significant part of land between the railway line and Centenary Way is modelled at 1m – 1.5m or above. It calculates the flood hazard in these areas as 'Significant' or 'Extreme'. Surface water assessment shows that various parts of the site are subject to surface water flooding. Part of the flooding risk is associated with the railway line which can act as a flood route.
c. What are the existing surface water drainage arrangements for the site?	Main sewers
3. Probability	
a. Which flood zone is the site within?	Parts of mixed use area within Flood Zones 2 and 3
b. If there is a Strategic Flood Risk Assessment covering this site, does this show the same or a different flood zone compared with the	SFRA2 show the majority of the area within Flood Zone 2 and a large area also within Flood Zone 3a.

Environment Agency's flood map?	
c. What is the probability of the site flooding, taking account of the maps of flood risk from rivers and the sea and from surface water, on the Environment Agency's web site, and the Strategic Flood Risk Assessment, and of any further flood risk information for the site?	areas in flood zone 2 have between 1% (1 in 100) and 0.1% (1 in 1000) chance and Areas in flood zone 3 have greater than 1% (1 in 100) chance. SFRA 2 and the Environment Agency's Updated Flood Map for Surface Water identify parts of the area as being at low surface water flood risk, with some small areas also at medium and high risk.
d. If known, what (approximately) are the existing rates and volumes of surface water run-off generated by the site?	Not known. Site predominantly consists of existing, developed surfaces.
4. Climate change	
How is flood risk at the site likely to be affected by climate change?	The Level 1 and 2 SFRAs highlight the risk that climate change may increase the extent of flooding. This could suggest that areas that are currently situated outside of Zone 3 High Probability will be at risk of flooding in future years.
5. Detailed development proposals	
Where appropriate, are you able to demonstrate how land uses most sensitive to flood damage have been placed in areas within the site that are at least risk of flooding (including providing details of the development layout)?	The site primarily consists of existing developed land. Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding.
6. Flood risk management measures	
How will the site/building be protected from flooding, including the potential impacts of climate change, over the development's lifetime?	The Level 2 SFRA notes that the Masbrough area is already defended by the first phase of the Flood Alleviation Scheme. Details not known – this would depend upon any proposal which came forward. However Policy SP50 states that floor levels for habitable buildings should normally be a minimum of 600mm above the 100 year plus climate change flood level. As a brownfield site Policy CS25 also requires surface water run-off to be reduced by at least 30%; and requires the use of appropriately constructed and maintained Sustainable Urban Drainage Systems or sustainable drainage techniques where practical and feasible.
7. Off site impacts	
a. How will you ensure that your proposed development and the measures to protect your site from flooding will not increase flood risk	Any proposals will need to comply with Policy CS25 to ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will

elsewhere?	accompany any planning application submitted on this site will be incorporated into the final design. This will include taking account of the Level 2 SFRA. Potential solutions could include management of surface water discharges on site. Local Plan policies encourage the use of Sustainable Urban Drainage Systems or sustainable drainage techniques.
b. How will you prevent run-off from the completed development causing an impact elsewhere?	See above
c. Are there any opportunities offered by the development to reduce flood risk elsewhere?	Will be dependent on any specific proposals which come forward.
8. Residual risks	
a. What flood-related risks will remain after you have implemented the measures to protect the site from flooding?	Level 2 SFRA identifies residual risks as: • The potential for flood defences to be overtopped i.e. water rises to a level greater than what they are designed for; • Flood defences are breached i.e. a hole or gap in the defences occurs allowing water to flow through them; and • The impact of climate change i.e. more severe weather patterns occur.
b. How, and by whom, will these risks be managed over the lifetime of the development? (E.g., flood warning and evacuation procedures).	This will be dependent upon the details of any proposal submitted, and will be set out in the site specific FRA which Policy CS25 requires. Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding. Compliance with Policy CS25 will ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design. This will include taking account of the Level 2 SFRA. The Council encourages sign up to flood warning services, such as the Environment Agency's free Floodline Warnings Direct service that provides flood warnings by phone, text or email. It also encourages the preparation of a flood evacuation plan which can be submitted as part a Flood risk Assessment.

Site	***MU10: Westgate, Rotherham***
1. Development description and location	
a. What type of development is proposed (e.g., new development, an extension to existing development, a change of use etc.) and where will it be located?	• The site is proposed to be allocated for a mix of uses (taking forward the existing approach in the adopted UDP) • The menu of appropriate uses within this area includes residential institutions, housing, non-residential institutions. • The mixed use areas primarily consist of existing developed areas. Therefore the proposed acceptable uses within these areas will relate, in most cases, to any future redevelopment proposals which come forward.
b. What is its flood risk vulnerability classification?	Majority of site is within Flood Zone 1, with South-western parts of mixed use area within Flood Zones 2 and 3.
c. Is the proposed development consistent with the Local Plan for the area?	Not relevant – see 1a
d. What evidence can be provided that the Sequential Test and where necessary the Exception Test has/have been applied in the selection of this site for this development type?	The area is within the Rotherham Regeneration Area to which the Level 2 SFRA and Flood Risk Toolkit apply (mainly in in character area 4, however those areas within flood zones 2 and 3 are within character area 3). The mixed use areas primarily consist of existing developed areas. Therefore the proposed acceptable uses within these areas will relate, in most cases, to any future redevelopment proposals which come forward. Within the Rotherham Regeneration Area there are no alternative sites of a similar size which could potentially deliver the mix of uses proposed within this mixed use area. The site has therefore passed the Sequential Test. The renaissance objective for character area 3 is “To regenerate and develop key riverside sites and enhance the riverside”. Uses proposed as acceptable may contribute towards this objective. It is at the heart of Rotherham’s urban area, which the Core Strategy (supported by sustainability appraisal) identifies as the main location for new growth. It is considered that accommodating the proposed mix of uses in this location, close to the borough’s principal town and service centre, would provide wider regeneration benefits than directing development elsewhere. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted in this area (as required by Core strategy Policy CS25) will be

	incorporated into the final design, ensuring the safety of development over its lifetime. This will include taking account of the Level 2 SFRA. The site has therefore passed both parts of the exceptions test.
e. Will your proposal increase overall the number of occupants and/or users of the building/land, or the nature or times of occupation or use, such that it may affect the degree of flood risk to these people?	Redevelopments could increase the number of users / occupants of premises in the area (depending upon the nature of specific proposals).
2. Definition of the flood hazard	
a. What sources of flooding could affect the site?	River and surface water
b. For each identified source in box 2a above, can you describe how flooding would occur, with reference to any historic records where these are available?	River flooding from the River Don. SFRA2 shows part of the mixed use area within flood zone 2, with small areas also within Flood Zone 3a. Modelled flood depths for flood zone 3 show parts of the sites at risk of flood depths of 0.5 – 1m, or 1m - 15m. It calculates the flood hazard in these areas as 'Significant' or 'Extreme'. SFRA2 shows a small area where surface water flood risk is medium or high, with a number of isolated points throughout the mixed use area at high risk. Further surface water assessment confirms the surface water flood risk affecting the western part of the site.
c. What are the existing surface water drainage arrangements for the site?	Main sewers
3. Probability	
a. Which flood zone is the site within?	Parts of mixed use area within Flood Zones 2 and 3
b. If there is a Strategic Flood Risk Assessment covering this site, does this show the same or a different flood zone compared with the Environment Agency's flood map?	SFRA2 shows part of the mixed use area within flood zone 2, with small areas also within Flood Zone 3a.
c. What is the probability of the site flooding, taking account of the maps of flood risk from rivers and the sea and from surface water, on the Environment Agency's web site, and the Strategic Flood Risk Assessment, and of any further flood risk information for the site?	Areas in flood zone 2 have between 1% (1 in 100) and 0.1% (1 in 1000) chance and areas in flood zone 3 have greater than 1% (1 in 100) chance. SFRA 2 and the Environment Agency's Updated Flood Map for Surface Water identify parts of the area as being at low surface water flood risk, with some small areas also at medium and high risk.
d. If known, what (approximately) are the existing rates and volumes of surface water run-off	Not known. Site predominantly consists of existing, developed surfaces.

generated by the site?	
4. Climate change	
How is flood risk at the site likely to be affected by climate change?	The Level 1 and 2 SFRAs highlight the risk that climate change may increase the extent of flooding. This could suggest that areas that are currently situated outside of Zone 3 High Probability will be at risk of flooding in future years.
5. Detailed development proposals	
Where appropriate, are you able to demonstrate how land uses most sensitive to flood damage have been placed in areas within the site that are at least risk of flooding (including providing details of the development layout)?	The site primarily consists of existing developed land. Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding.
6. Flood risk management measures	
How will the site/building be protected from flooding, including the potential impacts of climate change, over the development's lifetime?	Level 2 SFRA identifies residual risks as: • The potential for flood defences to be overtopped i.e. water rises to a level greater than what they are designed for; • Flood defences are breached i.e. a hole or gap in the defences occurs allowing water to flow through them; and • The impact of climate change i.e. more severe weather patterns occur. Details not known – this would depend upon any proposal which came forward. However Policy SP50 states that floor levels for habitable buildings should normally be a minimum of 600mm above the 100 year plus climate change flood level. As a brownfield site Policy CS25 also requires surface water run-off to be reduced by at least 30%; and requires the use of appropriately constructed and maintained Sustainable Urban Drainage Systems or sustainable drainage techniques where practical and feasible.
7. Off site impacts	
a. How will you ensure that your proposed development and the measures to protect your site from flooding will not increase flood risk elsewhere?	Any proposals will need to comply with Policy CS25 to ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design. This will include taking account of the Level 2 SFRA. Potential solutions could include management of surface water discharges on site. Local Plan policies encourage the use of Sustainable Urban Drainage Systems or sustainable drainage techniques.

b. How will you prevent run-off from the completed development causing an impact elsewhere?	See above
c. Are there any opportunities offered by the development to reduce flood risk elsewhere?	Will be dependent on any specific proposals which come forward.
8. Residual risks	
a. What flood-related risks will remain after you have implemented the measures to protect the site from flooding?	Level 2 SFRA identifies residual risks as: • The potential for flood defences to be overtopped i.e. water rises to a level greater than what they are designed for; • Flood defences are breached i.e. a hole or gap in the defences occurs allowing water to flow through them; and • The impact of climate change i.e. more severe weather patterns occur.
b. How, and by whom, will these risks be managed over the lifetime of the development? (E.g., flood warning and evacuation procedures).	This will be dependent upon the details of any proposal submitted, and will be set out in the site specific FRA which Policy CS25 requires. Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding. Compliance with Policy CS25 will ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design. This will include taking account of the Level 2 SFRA. The Council encourages sign up to flood warning services, such as the Environment Agency's free Floodline Warnings Direct service that provides flood warnings by phone, text or email. It also encourages the preparation of a flood evacuation plan which can be submitted as part a Flood risk Assessment.

Site	***MU11: Effingham Street (North of Centenary Way), Rotherham***
1. Development description and location	
a. What type of development is proposed (e.g., new development, an extension to existing development, a change of use etc.) and where will it be located?	• The site is proposed to be allocated for a mix of uses (taking forward the existing approach in the adopted UDP) • The menu of appropriate uses within this area includes business, residential institutions, housing, and non-residential institutions. • The mixed use areas primarily consist of existing developed areas. Therefore the proposed acceptable uses within these areas will relate, in most cases, to any future redevelopment proposals which come forward.
b. What is its flood risk vulnerability classification?	The majority of the site is within flood zone 1. Western boundary of site within flood zone 3, with other areas within flood zone 2
c. Is the proposed development consistent with the Local Plan for the area?	Not relevant – see 1a
d. What evidence can be provided that the Sequential Test and where necessary the Exception Test has/have been applied in the selection of this site for this development type?	The area is within the Rotherham Regeneration Area to which the Level 2 SFRA and Flood Risk Toolkit apply (mainly in character area 7; however parts also fall into area 4). The mixed use areas primarily consist of existing developed areas. Therefore the proposed acceptable uses within these areas will relate, in most cases, to any future redevelopment proposals which come forward. Within the Rotherham Regeneration Area there are no alternative sites of a similar size which could potentially deliver the mix of uses proposed within this mixed use area. The site has therefore passed the Sequential Test. The renaissance objective for character area 7 is “To continue to support the industrial and employment function of this area. To support the regeneration of previously developed sites and surplus land.” The uses proposed as acceptable in this mixed use area will contribute towards achieving this objective. It is at the heart of Rotherham’s urban area, which the Core Strategy (supported by sustainability appraisal) identifies as the main location for new growth. It is considered that accommodating the proposed mix of uses in this location, close to the borough’s principal town and service centre, would provide wider regeneration benefits than

	directing development elsewhere. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted in this area will be incorporated into the final design, ensuring the safety of development over its lifetime. This will include taking account of the Level 2 SFRA. The site has therefore passed the exceptions test.
e. Will your proposal increase overall the number of occupants and/or users of the building/land, or the nature or times of occupation or use, such that it may affect the degree of flood risk to these people?	Redevelopments could increase the number of users / occupants of premises in the area (depending upon the nature of specific proposals).
2. Definition of the flood hazard	
a. What sources of flooding could affect the site?	River and surface water
b. For each identified source in box 2a above, can you describe how flooding would occur, with reference to any historic records where these are available?	River flooding from the River Don. SFRA2 shows small parts of the mixed use area within flood zone 2, with small areas also within Flood Zone 3a. Modelled flood depths for flood zone 3 show parts of the sites at risk of flood depths of 0.5 – 1m, or over 1.5m. It calculates the flood hazard in these areas as 'Significant' or 'Extreme'. SFRA2 shows a small area where surface water flood risk is medium or high, with a number of isolated points throughout the mixed use area at high risk. Further surface water assessment confirms the surface water flood risk affecting the western part of the site.
c. What are the existing surface water drainage arrangements for the site?	Drain to sewers
3. Probability	
a. Which flood zone is the site within?	Parts of mixed use area within Flood Zones 2 and 3
b. If there is a Strategic Flood Risk Assessment covering this site, does this show the same or a different flood zone compared with the Environment Agency's flood map?	SFRA2 shows small parts of the mixed use area within flood zone 2, with small areas also within Flood Zone 3a.
c. What is the probability of the site flooding, taking account of the maps of flood risk from rivers and the sea and from surface water, on the Environment Agency's web site, and the Strategic Flood Risk Assessment, and of any further flood risk information for the site?	Areas in flood zone 2 have between 1% (1 in 100) and 0.1% (1 in 1000) chance and areas in flood zone 3 have greater than 1% (1 in 100) chance. SFRA 2 and the Environment Agency's Updated Flood Map for Surface Water identify parts of the areas as being at high and low surface water flood risk.

d. If known, what (approximately) are the existing rates and volumes of surface water run-off generated by the site?	Not known. Site predominantly consists of existing, developed surfaces.
4. Climate change	
How is flood risk at the site likely to be affected by climate change?	The Level 1 and 2 SFRAs highlight the risk that climate change may increase the extent of flooding. This could suggest that areas that are currently situated outside of Zone 3 High Probability will be at risk of flooding in future years.
5. Detailed development proposals	
Where appropriate, are you able to demonstrate how land uses most sensitive to flood damage have been placed in areas within the site that are at least risk of flooding (including providing details of the development layout)?	The site primarily consists of existing developed land. Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding.
6. Flood risk management measures	
How will the site/building be protected from flooding, including the potential impacts of climate change, over the development's lifetime?	Level 2 SFRA identifies residual risks as: • The potential for flood defences to be overtopped i.e. water rises to a level greater than what they are designed for; • Flood defences are breached i.e. a hole or gap in the defences occurs allowing water to flow through them; and • The impact of climate change i.e. more severe weather patterns occur. Details not known – this would depend upon any proposal which came forward. However Policy SP50 states that floor levels for habitable buildings should normally be a minimum of 600mm above the 100 year plus climate change flood level. As a brownfield site Policy CS25 also requires surface water run-off to be reduced by at least 30%; and requires the use of appropriately constructed and maintained Sustainable Urban Drainage Systems or sustainable drainage techniques where practical and feasible.
7. Off site impacts	
a. How will you ensure that your proposed development and the measures to protect your site from flooding will not increase flood risk elsewhere?	Any proposals will need to comply with Policy CS25 to ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design. This will include taking account of the Level 2 SFRA. Potential solutions could include management of surface water discharges on site. Local Plan

	policies encourage the use of Sustainable Urban Drainage Systems or sustainable drainage techniques.
b. How will you prevent run-off from the completed development causing an impact elsewhere?	See above
c. Are there any opportunities offered by the development to reduce flood risk elsewhere?	Will be dependent on any specific proposals which come forward.
8. Residual risks	
a. What flood-related risks will remain after you have implemented the measures to protect the site from flooding?	Level 2 SFRA identifies residual risks as: • The potential for flood defences to be overtopped i.e. water rises to a level greater than what they are designed for; • Flood defences are breached i.e. a hole or gap in the defences occurs allowing water to flow through them; and • The impact of climate change i.e. more severe weather patterns occur.
b. How, and by whom, will these risks be managed over the lifetime of the development? (E.g., flood warning and evacuation procedures).	This will be dependent upon the details of any proposal submitted, and will be set out in the site specific FRA which Policy CS25 requires. Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding. Compliance with Policy CS25 will ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design. This will include taking account of the Level 2 SFRA. The Council encourages sign up to flood warning services, such as the Environment Agency's free Floodline Warnings Direct service that provides flood warnings by phone, text or email. It also encourages the preparation of a flood evacuation plan which can be submitted as part a Flood risk Assessment.

Site	***MU20: Land Between Aldwarke Lane and Parkgate Shopping Park, Parkgate (LDF0099)***
1. Development description and location	
a. What type of development is proposed (e.g., new development, an extension to existing development, a change of use etc.) and where will it be located?	• This is a 14.3ha brownfield site within the Rotherham Urban Area (main location for growth in the Core Strategy). The site has previously been subject to recovery of minerals, and at present has a generally permeable, undeveloped surface. • It is proposed to allocate this site for a mix of uses including business and industrial use, non-residential institutions, assembly and leisure, and park and ride uses.
b. What is its flood risk vulnerability classification?	This site is within Flood Zone 2 and 3 as a result of historical flooding and modelled data. The Preliminary Flood Risk Assessment and the Environment Agency's Updated Flood Map for Surface Water identify small parts of the site as being susceptible to surface water flooding.
c. Is the proposed development consistent with the Local Plan for the area?	Not relevant – see 1a
d. What evidence can be provided that the Sequential Test and where necessary the Exception Test has/have been applied in the selection of this site for this development type?	The site falls within character area 8 of the Rotherham Regeneration area, to which the Level 2 SFRA and Flood Risk Toolkit apply. The site requires a mix of uses to be developed on site to enable development to be viable, to bring this site (which represents the largest undeveloped brownfield site in the urban area) forward. A Sequential approach has been taken in line with the Council's Flood Risk Toolkit. Within the Rotherham Regeneration Area there are no alternative sites of a similar size at a lower risk of flooding which could potentially deliver the mix of uses proposed within this mixed use area. The site has therefore passed the Sequential Test. The renaissance objective for character area 8 is "To continue to support the industrial and employment function of this area. To support the regeneration of previously developed sites." Uses proposed as acceptable on this site would contribute towards this objective. It is at the heart of Rotherham's urban area, which the Core Strategy (supported by sustainability appraisal) identifies as the main location for new growth. It is considered that accommodating the proposed mix of uses in this location would assist in bringing this vacant brownfield site into use. It may also assist in delivering a link road (which SYPTE are currently considering) which would bring benefits in terms of easing traffic congestion and improving public

	transport frequency / reliability. It would therefore provide wider regeneration benefits than directing development elsewhere. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted in this area (as required by Core strategy Policy CS25) will be incorporated into the final design, ensuring the safety of development over its lifetime. This will include taking account of the Level 2 SFRA. The site has therefore passed both parts of the exceptions test.
e. Will your proposal increase overall the number of occupants and/or users of the building/land, or the nature or times of occupation or use, such that it may affect the degree of flood risk to these people?	Development would increase the number of users / occupants of premises in the area.
2. Definition of the flood hazard	
a. What sources of flooding could affect the site?	River and surface water
b. For each identified source in box 2a above, can you describe how flooding would occur, with reference to any historic records where these are available?	This area has suffered from historical flooding during the 2007 flood event. The site is bounded to the east and west by railway lines which have the potential to act as routes for flood water. Fluvial modelling data was not available for this area when preparing the SFRA2 / Flood Risk Toolkit. For this site the SFRA2 utilises the national flood map data. This shows that in total around 90% of the site is within Flood Zones 2 or 3a. Around 50% of the site (concentrated in the north and parts of the western side of the site) are in Flood Zone 2. Around 40% of the site is within Flood Zone 3a, concentrated in the southern part of the site. SFRA2 shows pockets of land within the site susceptible to low, medium and high surface water flooding risk. These are concentrated in the southern half of the site and in areas close to the railway lines. Flood risk depths in high risk areas are shown, with only a few of these within the site. These spots are modelled at risk of flood depths of 0.5 – 1m, with the exception of one small area on the eastern boundary modelled at a flood depth of over 1.5m. The majority of the site is identified as a low hazard in terms of surface water flood risk, although small pockets within the site are identified as moderate or high risk. Further surface water assessment has been undertaken having regard to the Updated Flood Map for Surface Water. This assessed the site as green, where there

	is a slight intersection with the updated Flood Map for Surface Water, but we believe it will not affect the site for development.
c. What are the existing surface water drainage arrangements for the site?	None at present – site not developed
3. Probability	
a. Which flood zone is the site within?	Parts of mixed use area within Flood Zones 2 and 3
b. If there is a Strategic Flood Risk Assessment covering this site, does this show the same or a different flood zone compared with the Environment Agency's flood map?	Fluvial modelling data was not available for this area when preparing the SFRA2 / Flood Risk Toolkit. For this site the SFRA2 utilises the national flood map data.
c. What is the probability of the site flooding, taking account of the maps of flood risk from rivers and the sea and from surface water, on the Environment Agency's web site, and the Strategic Flood Risk Assessment, and of any further flood risk information for the site?	Areas in flood zone 2 have between 1% (1 in 100) and 0.1% (1 in 1000) chance and areas in flood zone 3 have greater than 1% (1 in 100) chance. SFRA2 shows pockets of land within the site susceptible to low, medium and high surface water flooding risk.
d. If known, what (approximately) are the existing rates and volumes of surface water run-off generated by the site?	Not known. Site not developed, but previously subject to mineral extraction.
4. Climate change	
How is flood risk at the site likely to be affected by climate change?	The Level 1 and 2 SFRAs highlight the risk that climate change may increase the extent of flooding. This could suggest that areas that are currently situated outside of Zone 3 High Probability will be at risk of flooding in future years.
5. Detailed development proposals	
Where appropriate, are you able to demonstrate how land uses most sensitive to flood damage have been placed in areas within the site that are at least risk of flooding (including providing details of the development layout)?	Details not known – this would depend upon any proposal which came forward. Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding.
6. Flood risk management measures	
How will the site/building be protected from flooding, including the potential impacts of climate change, over the development's lifetime?	Level 2 SFRA identifies residual risks as: • The potential for flood defences to be overtopped i.e. water rises to a level greater than what they are designed for; • Flood defences are breached i.e. a hole or gap in the defences occurs allowing water to flow through them; and

	• The impact of climate change i.e. more severe weather patterns occur. Details not known – this would depend upon any proposal which came forward. However Policy SP50 states that floor levels for habitable buildings should normally be a minimum of 600mm above the 100 year plus climate change flood level. As a brownfield site Policy CS25 also requires surface water run-off to be reduced by at least 30%; and requires the use of appropriately constructed and maintained Sustainable Urban Drainage Systems or sustainable drainage techniques where practical and feasible. It is most likely that a comprehensive scheme to mitigate flooding will be required and compensatory flood storage provided.
7. Off site impacts	
a. How will you ensure that your proposed development and the measures to protect your site from flooding will not increase flood risk elsewhere?	Any proposals will need to comply with Policy CS25 to ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design. This will include taking account of the Level 2 SFRA. Potential solutions could include management of surface water discharges on site. Local Plan policies encourage the use of Sustainable Urban Drainage Systems or sustainable drainage techniques.
b. How will you prevent run-off from the completed development causing an impact elsewhere?	See above
c. Are there any opportunities offered by the development to reduce flood risk elsewhere?	Will be dependent on any specific proposals which come forward.
8. Residual risks	
a. What flood-related risks will remain after you have implemented the measures to protect the site from flooding?	Level 2 SFRA identifies residual risks as: • The potential for flood defences to be overtopped i.e. water rises to a level greater than what they are designed for; • Flood defences are breached i.e. a hole or gap in the defences occurs allowing water to flow through them; and • The impact of climate change i.e. more severe weather patterns occur.
b. How, and by whom, will these risks be managed over the lifetime of the development? (E.g., flood warning and evacuation procedures).	This will be dependent upon the details of any proposal submitted, and will be set out in the site specific FRA which Policy CS25 requires.

	Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding. Compliance with Policy CS25 will ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design. This will include taking account of the Level 2 SFRA. The Council encourages sign up to flood warning services, such as the Environment Agency's free Floodline Warnings Direct service that provides flood warnings by phone, text or email. It also encourages the preparation of a flood evacuation plan which can be submitted as part a Flood risk Assessment.

Wath-upon-Dearne, Brampton and West Melton

Site	*MU02: North of Wath Town Centre*
1. Development description and location	
a. What type of development is proposed (e.g., new development, an extension to existing development, a change of use etc.) and where will it be located?	• The site is proposed to be allocated for a mix of uses (taking forward the existing approach in the adopted UDP) • The menu of appropriate uses within this area includes business, residential institutions, housing, and non-residential institutions. • The mixed use areas primarily consist of existing developed areas. Therefore the proposed acceptable uses within these areas will relate, in most cases, to any future redevelopment proposals which come forward.
b. What is its flood risk vulnerability classification?	Central part of mixed use area within flood zones 2 and 3.
c. Is the proposed development consistent with the Local Plan for the area?	Not relevant – see 1a
d. What evidence can be provided that the Sequential Test and where necessary the Exception Test has/have been applied in the selection of this site for this development type?	The mixed use areas primarily consist of existing developed areas. Therefore the proposed acceptable uses within these areas will relate, in most cases, to any future redevelopment proposals which come forward. There are no alternative sites of a similar size which could potentially deliver the mix of uses proposed within this mixed use area. The site has therefore passed the Sequential Test. Wath, Brampton and West Melton are identified as a principal settlement for growth in the Core Strategy, accommodating a significant amount of growth over the Plan period. The site lies immediately to the north of Wath town centre and has the potential to deliver developments close to the retail and service centre for this settlement grouping. It is considered that its location offers wider community regeneration benefits to build upon the existing facilities and help contribute to achieving the Core Strategy and Sustainability Appraisal objectives. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted in this area will be incorporated into the final design, ensuring the safety of development over its lifetime. The site has therefore passed both parts of the exceptions test.

e. Will your proposal increase overall the number of occupants and/or users of the building/land, or the nature or times of occupation or use, such that it may affect the degree of flood risk to these people?	Redevelopments could increase the number of users / occupants of premises in the area (depending upon the nature of specific proposals).
2. Definition of the flood hazard	
a. What sources of flooding could affect the site?	River and surface water
b. For each identified source in box 2a above, can you describe how flooding would occur, with reference to any historic records where these are available?	Potential of river flooding from the adjacent Brook Dike Large parts are within Flood Zone 2, with several other areas also within Flood Zone 3. The Preliminary Flood Risk Assessment identifies parts of the site as being susceptible to surface water flooding. The Environment Agency's Updated Flood Map for Surface Water shows part of the site at high risk of flooding. Further surface water assessment shows very high flood risk in the north west section of the mixed use area.
c. What are the existing surface water drainage arrangements for the site?	Drain to sewers
3. Probability	
a. Which flood zone is the site within?	Central part of mixed use area within flood zones 2 and parts within zone 3.
b. If there is a Strategic Flood Risk Assessment covering this site, does this show the same or a different flood zone compared with the Environment Agency's flood map?	SFRA identifies central part of mixed use area within flood zones 2 and parts within zone 3a.
c. What is the probability of the site flooding, taking account of the maps of flood risk from rivers and the sea and from surface water, on the Environment Agency's web site, and the Strategic Flood Risk Assessment, and of any further flood risk information for the site?	Areas in flood zone 2 have between 1% (1 in 100) and 0.1% (1 in 1000) chance and areas in flood zone 3 have greater than 1% (1 in 100) chance. The Preliminary Flood Risk Assessment identifies parts of the site as being susceptible to surface water flooding. The Environment Agency's Updated Flood Map for Surface Water shows part of the site at high risk of flooding.
d. If known, what (approximately) are the existing rates and volumes of surface water run-off generated by the site?	Not known. Site predominantly consists of existing, developed surfaces.
4. Climate change	
How is flood risk at the site likely to be affected by	The Level 1 and 2 SFRAs highlight the risk that climate change may increase the

climate change?	extent of flooding. This could suggest that areas that are currently situated outside of Zone 3 High Probability will be at risk of flooding in future years.
5. Detailed development proposals	
Where appropriate, are you able to demonstrate how land uses most sensitive to flood damage have been placed in areas within the site that are at least risk of flooding (including providing details of the development layout)?	The site primarily consists of existing developed land. Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding.
6. Flood risk management measures	
How will the site/building be protected from flooding, including the potential impacts of climate change, over the development's lifetime?	The impact of climate change i.e. more severe weather patterns occur. Details not known – this would depend upon any proposal which came forward. However Policy SP50 states that floor levels for habitable buildings should normally be a minimum of 600mm above the 100 year plus climate change flood level. Policy CS25 also requires surface water run-off to be reduced by at least 30% on brownfield sites and development on greenfield sites to maintain or reduce existing surface water run off rates, unless it can be demonstrated to be impractical or unfeasible; and requires the use of appropriately constructed and maintained Sustainable Urban Drainage Systems or sustainable drainage techniques where practical and feasible.
7. Off site impacts	
a. How will you ensure that your proposed development and the measures to protect your site from flooding will not increase flood risk elsewhere?	Any proposals will need to comply with Policy CS25 to ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design. Potential solutions could include management of surface water discharges on site. Local Plan policies encourage the use of Sustainable Urban Drainage Systems or sustainable drainage techniques.
b. How will you prevent run-off from the completed development causing an impact elsewhere?	See above
c. Are there any opportunities offered by the development to reduce flood risk elsewhere?	Will be dependent on any specific proposals which come forward.
8. Residual risks	
a. What flood-related risks will remain after you have implemented the measures to protect the	The impact of climate change i.e. more severe weather patterns occur.

site from flooding?	
b. How, and by whom, will these risks be managed over the lifetime of the development? (E.g., flood warning and evacuation procedures).	This will be dependent upon the details of any proposal submitted, and will be set out in the site specific FRA which Policy CS25 requires. Local Plan policies will ensure that in granting planning permission measures to address flood risk can be implemented. This will include ensuring that development is directed to those parts of the site at lowest risk of flooding. Compliance with Policy CS25 will ensure development does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall. Mitigation measures as identified in the detailed FRA that will accompany any planning application submitted on this site will be incorporated into the final design. This will include taking account of the Level 2 SFRA. The Council encourages sign up to flood warning services, such as the Environment Agency's free Floodline Warnings Direct service that provides flood warnings by phone, text or email. It also encourages the preparation of a flood evacuation plan which can be submitted as part a Flood risk Assessment.

Appendix 3: Surface water flood risk assessment

A An assessment has been undertaken of the risks to development from surface water. The assessment has been undertaken on the following sites:

- Residential, employment and retail development sites
- Mixed use areas

B The assessment has been undertaken by the Council's Streetpride Service (Drainage), utilising Environment Agency data; namely the latest updated Flood Map for Surface Water.

Environment Agency: Updated Flood Map for Surface Water
This has been created by the Environment Agency from new nationally produced surface water flood mapping, and appropriate locally produced mapping. It improves upon previous nationally produced surface water flood mapping.

It assesses flooding scenarios as a result of rainfall with the following chance of occurring in any given year (annual probability of flooding is shown in brackets):

- 1 in 30 (3.3%)
- 1 in 100 (1%)
- 1 in 1000 (0.1%)

It provides the following data for each flooding scenario:

- Extent
- Depth
- Velocity (including flow direction at maximum velocity)
- Hazard (as a function of depth and velocity)

C The following approach has been taken to the assessment of sites / mixed use areas:

	Description
1	Where there are no intersections with the updated Flood Map for Surface Water.
2	Where there is a slight intersection with the updated Flood Map for Surface Water, but we believe it will not affect the site for development.
3	Where there site has potential surface water flooding problems but these are likely to be able to be designed out (with SuDS: ponds etc.)
4	These sites have potential major surface water flooding which may make them unviable subject to further investigation.

D The results are shown below:

	Green	Amber	Red
Proposed Development Sites*	99	36	9
Proposed Mixed Use Areas	10	9	2

* The sites assessed total to more than the number of site allocations due to a number of sites being combined for allocation

E Those sites which are identified as green and amber (which represents the majority of sites) require no further assessment; it is considered that development can, in principle, take place subject to further Flood Risk Assessment and appropriate mitigation as may be required.

F Further investigation is required for those sites identified as red.

Table 13: Consideration of red rated sites sets out the comments provided by Streetpride (drainage). It is not considered that the surface water flood risks are such that they would preclude development on these sites, although some areas within sites may not be suitable for development. Compliance with Local Plan policies and site specific development principles will ensure that surface water flood risk is taken into account in the design and layout of any proposed new development, and appropriate mitigation put in place as required.

Table 14: Surface water assessment of mixed use areas sets out the surface water comments for mixed use areas.

G For allocated development sites detailed site development principles relating to flood risk have been included in Chapter 5 of the Sites and Policies document, which will be taken into account by developers when developing proposals and by the Council in determining planning applications. Development principles are not included in the Sites and Policies document for mixed use areas (with the exception of two areas which contribute specific amounts of development towards the employment land requirements).

Table 13: Consideration of red rated sites

Allocation ref	Site name	Comment
E11	Phoenix Business Park, Sheffield Road, Templeborough	This site lies within the Rotherham Regeneration area and the Rotherham Flood Risk Toolkit applies. This site lies within flood zone 3 and a Flood Risk Assessment will be required including river and surface water flood risk. Some surface water flood risk however the greater flood risk is associated with the river
H10	Land Off Westfield Road	Site has an extant planning permission for residential use.Some parts of this site are predicted to be at high risk of surface water flooding. A Flood Risk Assessment will be required for any development on this site. Surface water flood risk is particularly bad in the southern part of the site.
H18	Land Off Symonds Avenue	Some parts of this site are predicted to be at high risk of surface water flooding. A Flood Risk Assessment will be required for any development on this site. Surface water flood risk identified in the north west of the site; development of the eastern half of the site may be viable.
H27	Land To The North Of St Gerard's Catholic Primary School	A culverted watercourse crosses this site. The risk of flooding from this watercourse should be assessed. There is a high risk of surface water flood risk through the centre of the site
H51	Croda Site, Swinton	Development of this site is underway.
H59	Land Off Fairways	A culverted watercourse crosses this site. The risk of flooding from this watercourse should be assessed. Surface water flood assessment shows the central section is at risk of deep flooding
H83	Land Between Sheffield Road And Mineral Railway	Some parts of this site are predicted to be at high risk of surface water flooding. A Flood Risk Assessment will be required for any development on this site. Surface water assessment shows that the northern part of the site may not be developable, although the south may be developable if designed carefully.
H91	Chapel Way	Watercourses are present on this site. Flood risk from these watercourses should be assessed. If development causes any loss of potential flood storage volume, compensatory storage should be provided. Surface water assessment shows a large area at risk of flooding in the centre of the site
R6	Harding Avenue / Symonds Avenue, Rawmarsh	Some parts of this site are predicted to be at high risk of surface water flooding. A Flood Risk Assessment will be required.
MU02	North of Wath Town Centre	Some parts of this site are predicted to be at high risk of surface water flooding. A Flood Risk Assessment will be required for any development on this site. Early Consultation with the LLFA is recommended. Surface water assessment shows very high flood risk in the north west section of the site
MU11	Effingham Street (North of Centenary Way), Rotherham	This site lies within the Rotherham Regeneration area and the Rotherham Flood Risk Toolkit applies. This site lies within flood zone 2 and a Flood Risk Assessment will be required including river and surface water flood risk.

Table 14: Surface water assessment of mixed use areas

Mixed Use Area Reference	Category	Comment
MU01	Green	This site lies within flood zone 2 and a Flood Risk Assessment will be required including river and surface water flood risk. Risk of surface water flooding is identified around the south and eastern boundaries
MU02	Red	Some parts of this site (the north west section) are predicted to be at high risk of surface water flooding. A Flood Risk Assessment will be required for any development on this site. Early Consultation with the Local Lead Flood Authority is recommended.
MU03	Green	Minor surface water flood risk on road
MU04	Green	Minor surface water flood risk on road
MU05	Amber	There is an overland flood route affecting the eastern half of site. Overland flood routes need to be considered in any development proposals.
MU06	Amber	This site lies within the Rotherham Regeneration area and the Rotherham Flood Risk Toolkit applies. The risk of surface water flooding should be assessed for this site. Flooding is predicted along the south east boundary adjacent to railway line.
MU07	Amber	This site lies within the Rotherham Regeneration area and the Rotherham Flood Risk Toolkit applies. This site lies within flood zone 2 and a Flood Risk Assessment will be required including river and surface water flood risk. There is a culverted watercourse beneath the site. An overland surface water flood route has been identified. Layout, floor and ground levels need careful consideration.
MU08	Amber	This site lies within the Rotherham Regeneration area and the Rotherham Flood Risk Toolkit applies. This site lies within flood zone 2 and a Flood Risk Assessment will be required including river and surface water flood risk. River flood risk affecting various parts of the site is identified, although surface water flood risk is only identified at the 1 in 1000 year level. Layout, floor and ground levels need careful consideration.
MU09	Amber	This site lies within the Rotherham Regeneration area and the Rotherham Flood Risk Toolkit applies. This site lies within flood zone 2 and a Flood Risk Assessment will be required including river and surface water flood risk. There is surface water and river flood risk affecting various parts of the site. Layout, floor and ground levels need careful consideration.
MU010	Amber	This site lies within the Rotherham Regeneration area and the Rotherham Flood Risk Toolkit applies. This site lies within flood zone 2 and a Flood Risk Assessment will be required including river and surface water flood risk. There is surface water and river flood risk affecting the western part of the site. Layout, floor and ground levels need careful consideration
MU011	Red	This site lies within the Rotherham Regeneration area and the Rotherham Flood Risk Toolkit applies. This site lies within flood zone 2 and a Flood Risk Assessment will be required including river and surface water flood risk.
MU012	Green	Minor surface water flood risk on road
MU013	Green	No comment required
MU014	Amber	Some parts of this site are predicted to be at risk of surface water flooding. The part of the site south of the M1 is at risk of surface water flooding. Flow paths beneath embankments might not be considered in the model. A Flood Risk Assessment will be required.

Mixed Use Area Reference	Category	Comment
MU015	Green	No comment required
MU016	Green	No comment required
MU017	Amber	Overland flood routes need to be considered: there is a flood route across the west and east ends of the site. Layout, floor and ground levels need careful consideration
MU018	Amber	Overland surface water flood routes need to be considered. Predicted flood patterns may be due to existing development.
MU019	Green	No comment required

Note: Comments relating to Mixed Use Areas 20 and 21 are set out in the Site Development Principles chapter of the Sites and Policies document.

If you or someone you know needs help to understand or read this document, please contact us:

Telephone: 01709 823869 Email: planning.policy@rotherham.gov.uk

Ak vy alebo niekto koho poznáte potrebuje pomoc pri pochopení alebo čítaní tohto dokumentu, prosím kontaktujte nás na vyššie uvedenom čísle alebo nám pošlite e-mail.

ئەگەر تۆ یان کەسێک کە تۆ دەیناسی پێویستی بەیارمەتی هەبێت بۆ ئەوەی لەم بەڵگەنامە یە تێبگات یان بیخوێنێتەوە، تکایە پەیوەندیمان پێوە بکە لەسەر ئەو ژمارەیەی سەرەوەدا یان بەو ئیمەیڵە.

إذا كنت انت أواي شخص تعرفه بحاجة إلى مساعدة لفهم أوقراءة هذه الوثيقة، الرجاء الاتصال على الرقم اعلاه، أو مراسلتنا عبر البريد الإلكتروني

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