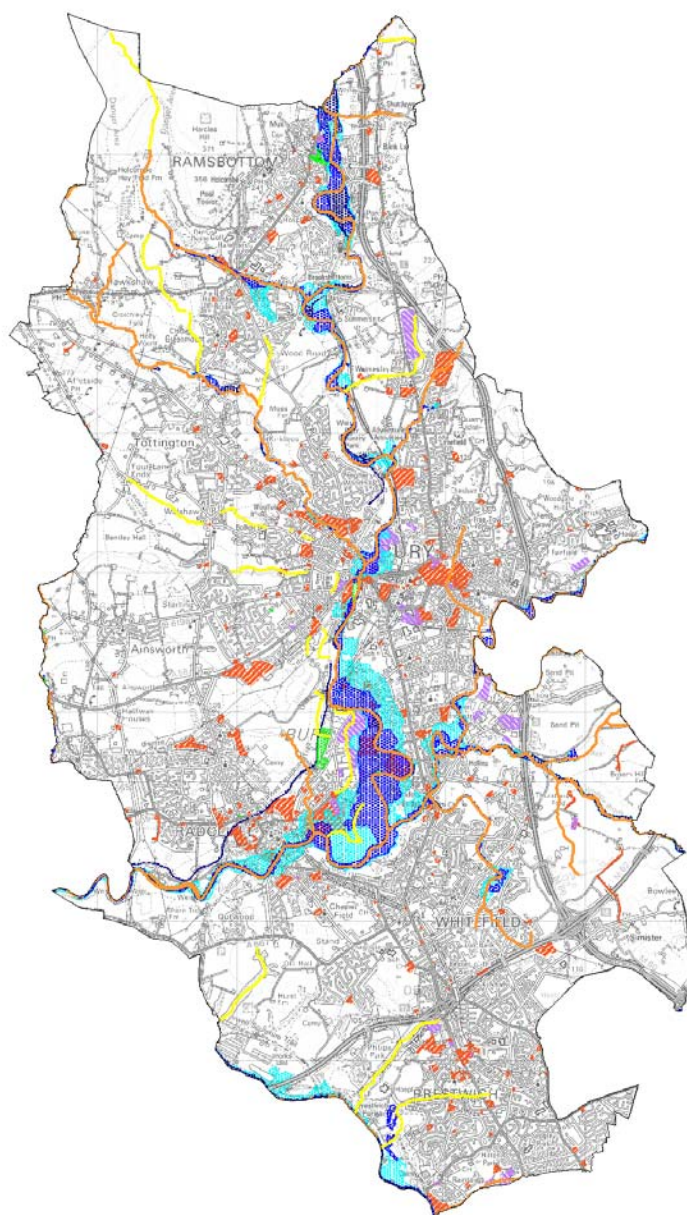


Bury Local Plan

Bury Publication Core Strategy Flood Risk Sequential Test

June 2013



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A PPS25 Sequential Test (June 2010) was carried out by Scott Wilson on Bury's Draft Publication Core Strategy (June 2010). However, this version of Bury's Core Strategy was subsequently withdrawn in May 2011.

A revised PPS25 Sequential Test was carried out by Bury Council on the Draft Publication Core Strategy (November 2011). This was reviewed and verified by URS Scott Wilson.

A revised sequential test was produced in September 2012 to accompany the Second Draft Publication Core Strategy (October 2012). This was reviewed and verified by URS Infrastructure & Environment UK Limited.

The Publication Core Strategy (July 2013) has now been prepared. Bury Council has carried out a revised Sequential Test.

The June 2013 Sequential Test produced by Bury Council has been reviewed and verified by URS Infrastructure & Environment UK Limited.

Copies of this document can be viewed or downloaded from the Council's website at: www.bury.gov.uk/5302

Copies are also available by contacting the Planning Policy and Projects team:

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1 Introduction

- 1.1 The Borough of Bury is situated in the North West of England within the Manchester City Region. The Borough lies broadly within the valley of the River Irwell, 12km from Manchester city centre. It is bounded by the boroughs of Rossendale, Blackburn with Darwen, Rochdale, Bolton, Salford and Manchester, and covers approximately 9,900 hectares or 38.3 square miles.
- 1.2 Bury forms a gateway between the thriving city centre of Manchester to the south and the more industrial and rural landscapes of Lancashire to the north and, as a result contains many features that are characteristic of both areas. The north of the Borough is characterised by stone built terraces and traditional industrial buildings surrounded by the rural upland areas of the West Pennine moors, while the south of the Borough is characterised by a more dense urban landscape, with typical 19th and early 20th century suburban settlements and gentler, lower lying countryside. In between these two extremes lie the towns of Bury and Radcliffe, both with origins in the manufacturing of textiles, paper and engineering.
- 1.3 The Borough is recognised as having six townships with the focus of each being their respective town or district centre. The township of Ramsbottom, Tottington and North Manor is situated in the more rural north, Bury West and Bury East are centrally located, Radcliffe is in the south west whilst Whitefield and Unsworth and Prestwich are in the south of the Borough.
- 1.4 Bury has a population of approximately 185,100¹, of which 46,200 (25%) are aged 0-19, and 29,500 (16%) are aged 65 and over. The population is set to increase to 213,900 by 2029². There were an estimated 78,100 households within the Borough in 2011³ and this is projected to rise to 87,200 households by 2029⁴.
- 1.5 Bury Council is currently preparing its Publication Core Strategy, which is the central document in the emerging Local Plan. The Core Strategy presents the spatial vision and strategic objectives for the Borough up to 2029, in tandem with broad guidance on the scale and location of future development. Following its adoption, the Core Strategy will provide the overarching guidance for other Development Plan Documents, including the Site Allocations DPD, and form the basis for determining planning applications.

¹ ONS 2011 Census

² Source: ONS 2010-based population projections. Population change is based on the indicative projected population for 2010 used in the 2010-based projections, rather than the mid-2010 population estimate.

³ ONS 2011 Census

⁴ ONS 2008-based household projections

- 1.6 In preparing the Publication version of the Core Strategy, policies have been developed in the context of:
- National planning policy;
 - Consultation responses to the Core Strategy Issues and Options, Preferred Options and Draft Publication stages;
 - The findings of a Sustainability Appraisal (SA) of the Draft Core Strategy;
 - The findings of various documents making up the evidence base for the Core Strategy; and
 - Development opportunities and constraints within the Borough

Sequential Approach

- 1.7 The National Planning Policy Framework and associated Technical Guidance (March 2012) sets out the national policy on managing flood risk and includes the requirement to apply the 'sequential approach'. The sequential approach is a decision making tool designed to ensure that areas at little or no risk of flooding are developed in preference to areas at higher risk of flooding. Local Planning Authorities are required to ensure the most appropriate use of land to minimise flood risk, where necessary substituting land uses so that development which is categorised as the most vulnerable to flooding is located in the lowest flood risk areas. A sequential approach should be used in areas known to be at risk of flooding.
- 1.8 The Flood Zones identified in the Technical Guidance to the NPPF are the starting point for the sequential approach.

Flood Zone 1 Low Probability – This zone comprises land assessed as having a less than 1 in 1000 annual probability of river or sea flooding in any year (<0.1%);

Flood Zone 2 Medium Probability – This zone comprises land assessed as having between a 1 in 100 and 1 in 1000 annual probability of river flooding (1%-0.1%) or between a 1 in 200 and 1 in 1000 annual probability of sea flooding (0.5%-0.1%) in any year;

Flood Zone 3a High Probability – This zone comprises land assessed as having a 1 in 100 or greater annual probability of river flooding (>1%) or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year;

Flood Zone 3b Functional Floodplain – This zone comprises land where water has to flow or be stored in times of flood.

- 1.9 Table 1.1 summarises the types of development that the Technical Guidance to the NPPF identifies as appropriate in different flood risk zones (see Tables 1 and 2 of the Technical Guidance to the NPPF).

Table 1.1: Flood Zones Vulnerability Classification

	Flood Zone 1	Flood Zone 2	Flood Zone 3a	Flood Zone 3b Functional Floodplain
Appropriate	All Uses	Flood defences, water and sewerage infrastructure, docks, marinas, wharves, open space		
Appropriate if no suitable alternative sites "reasonably available in Flood Zone 1"		Shops, financial and professional services, restaurants and cafes, drinking establishments, hot food take-away, business, general industrial, storage and distribution, non-residential institutions, assembly and leisure, waste treatment facilities, residential institutions, residential (excluding basement dwellings), road and utility infrastructure.	Shops, financial and professional services, restaurants and cafes, hot food take-away, business, general industrial, storage and distribution, non-residential institutions, assembly and leisure and waste treatment facilities.	None.
Appropriate only if Exception Test met		Basement dwellings, emergency service facilities needed to be operational during a flood.	Residential (excluding basement dwellings), residential institutions, drinking establishments, night clubs, hotels, health facilities, nurseries, educational facilities, toxic waste management facilities, road and utility infrastructure.	Essential road and utility infrastructure
Not Appropriate			Basement dwellings, emergency service facilities needed to be operational during a flood.	All uses other than essential infrastructure and water compatible development.

- 1.10 Under the Technical Guidance to the NPPF, certain classes of development are only permitted in Flood Zone 2 and Flood Zone 3 if no alternative sites are available in Flood Zone 1 and only where a FRA can demonstrate that a development will be safe during its lifetime, considering climate change.
- 1.11 In the absence of a Borough-wide sequential approach to site allocations, developers are currently required to provide sufficient information on a site by site basis to enable the sequential

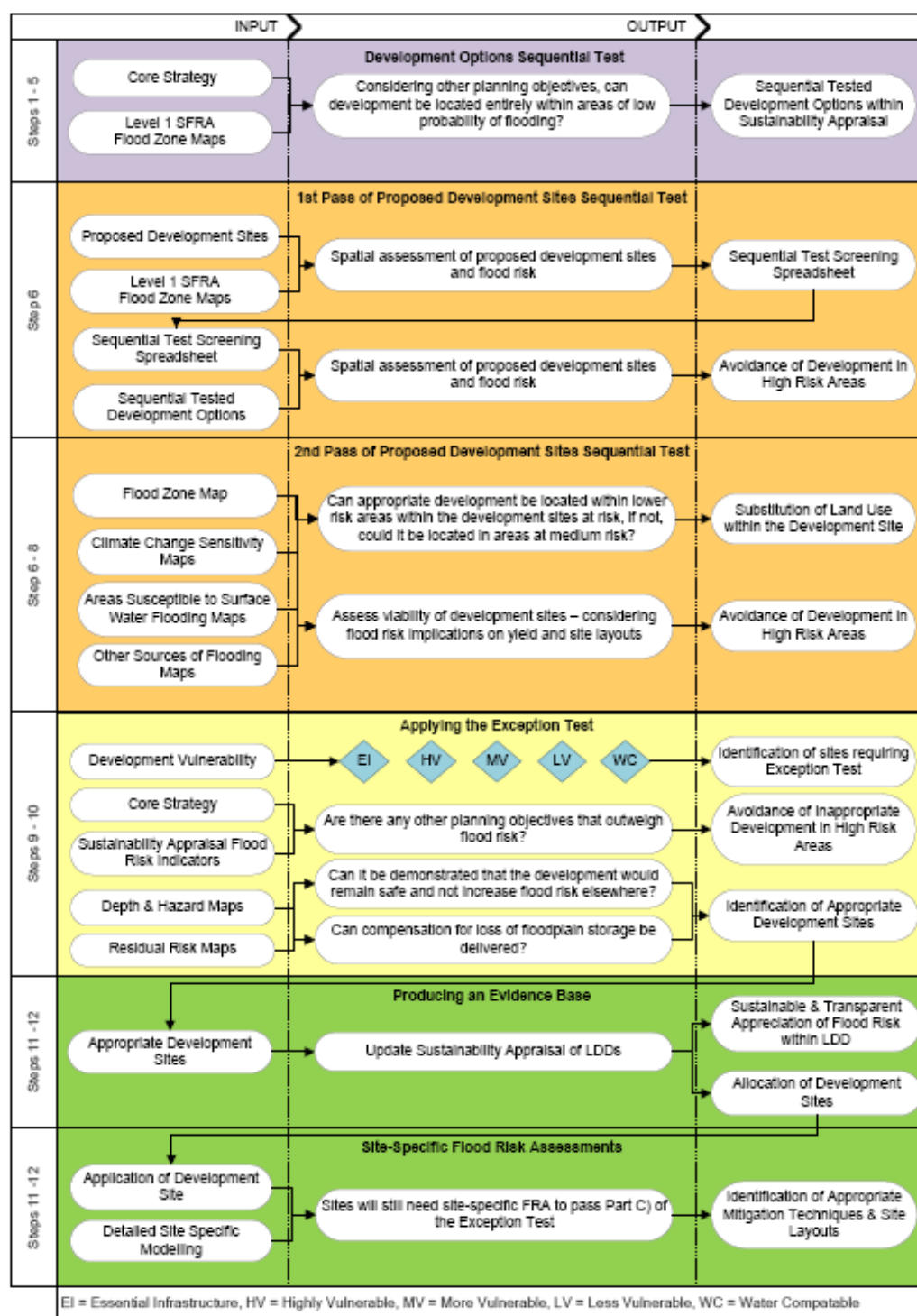
approach to be applied to individual development proposals. Developers are also required to submit a FRA, where appropriate.

- 1.12 The purpose of this report is to apply the sequential approach to each of the broad areas of development proposed in the Borough's Township's as identified in Bury's Publication Core Strategy (July 2013).
- 1.13 Through a comparison of development areas within each Township, with other areas of land within the Borough of a similar size, the report will consider whether there are any sequentially preferable development sites, in areas of equal or lower flood risk. This process is referred to as the 'Sequential Test'.
- 1.14 The report is based on the flood risk mapping that has been produced as part of the Bury, Oldham and Rochdale Level 1 and 2 Strategic Flood Risk Assessment (SFRA) and the Greater Manchester Surface Water Management Plan (SWMP)⁵. The SFRA, SWMP and accompanying maps build upon the Environment Agency flood zone mapping and take into account other sources of flooding such as surface water and the impact of climate change.
- 1.15 Figure 1.2 illustrates the Sequential Test as an input, process and output flow diagram. The main inputs are the evidence provided in both the Level 1 and Level 2 SFRA's (November 2009), SWMP (January 2013) and the Publication Core Strategy and accompanying SA (June 2013).
- 1.16 The flow diagram highlights that the Sequential Test begins with the Council assessing alternative development options at a strategic scale using the SA. Evidence provided in the Level 1 and Level 2 SFRA, is then used to avoid inappropriate development sites, substitute land uses within site boundaries and identify sites which will require the 'Exception Test'⁶. The flow diagram ends by revisiting and updating the SA with the allocation of development sites.
- 1.17 Figure 1.3 provides a more detailed descriptive step by step guidance to the flow process illustrated in Figure 1.2⁷.

⁵ For further information, please see www.bury.gov.uk/4515

⁶ The Exception Test builds on the Sequential Test and ensures that new development is only permitted in medium and high flood risk areas where flood risk is clearly outweighed by other sustainability factors and where the development will be safe during its lifetime. For further information, see Chapter 5.

⁷ Please note that Figure 1.1 is referred to as Figure 2-4 in Figure 1.2

Figure 1.2 – Sequential and Exception Tests Flow Diagram

Source: Bury, Oldham and Rochdale SFRA User Guide, 2009

Note: The NPPF Exception Test has only two parts. A site-specific FRA will be required to pass Part B of the NPPF Exception Test (see Section 5 for further details).

Figure 1.3: Sequential and Exception Tests Key Stages

<p>Applying the Sequential Test during the SA of Development Options</p> <p>Step 1 - State the geographical area over which the Sequential Test is to be applied. This can be over the entire LPA area but will usually be reduced to communities to fit with functional requirements of development or objectives within RSS or Core Strategy</p> <p>Step 2 - Identify reasonably available areas of strategic growth</p> <p>Step 3 - Identify the presence of all sources of risk using the evidence provided in this SFRA</p> <p>Step 4 - Screen available land for development in ascending order from Flood Risk Zone 1 to 3, including the subdivisions of Flood Risk Zone 3</p> <p><i>This can be achieved using the information provided in the Sequential Test Spreadsheet (See Volume II section 4). The screening spreadsheet provides a spatial assessment of each proposed development site provided by the LPA against Flood Zones and Environment Agency surface water susceptibility zones</i></p> <p>Step 5 - Could all development be located in lower risk areas? If not, move onto the next Steps</p>
<p>1st and 2nd Pass of the Proposed Development Sites Sequential Test</p> <p><i>Follow Figure 2-4 using the Sequential Test Spreadsheet to:</i></p> <p>Step 6 - Identify those sites which should be avoided where risk is considered too great and there is no strategic planning objectives identified in Core Strategy</p> <p>Step 7 - Identify those sites in which the consequence of flooding can be reduced through substitution within the site boundary</p> <p>Step 8 - Assess yield and layout issues for remaining high risk sites to check whether development is viable</p>
<p>Identify the Likelihood of passing the Exception Test</p> <p><i>Follow Key Questions imbedded within Figure 2-5 and SFRA evidence to identify the likelihood of those sites remaining at risk passing the Exception Test. The community risk review tables produced in Volume III section 8 can aid this process</i></p> <p>Step 9 - Assess the compatibility of the development vulnerability using Table D.2 of PPS25 and identify the requirement of passing the Exception Test using Table D.3 of PPS25</p> <p>Step 10 - Use the SA to assess alternative development options by balancing flood risk against other planning constraints. Proposed sites should be avoided and removed if it is unlikely to pass the Exception Test i.e. if:</p> <ul style="list-style-type: none"> • Key Questions in Figure 2-5 attributes a significant negative response • Where development will require significant mitigation measures to make the site safe and to reduce impacts downstream • Where the requirement of loss of floodplain compensation cannot be delivered
<p>Producing an Evidence Base</p> <p><i>The following steps should be used within the SA to produce the evidence that all tests have been applied:</i></p> <p>Step 11 - Produce a supporting stand alone document recording all decisions made during Steps 1 to 10. Each proposed development site should be referenced and the decisions made to avoid, substitute, or allocate the site and the evidence used. This can be incorporated within the appendix of the SA</p> <p>Step 12 - Allocated development allocations within the SA, including appropriate flood risk policies and development guidance on each allocated site. Guidance should include the need for appropriate site-specific FRAs.</p> <p><i>The Environment Agency and other relevant stakeholders (such as United Utilities or British Waterways) should be consulted on any policies drafted that inform the application of the Exception Test and the production of FRAs within the LPA area</i></p>

Source: Bury, Oldham and Rochdale SFRA User Guide, 2009

Please note Table D.2 and D.3 of PPS25 have been replaced by Table 1 and 2 of the Technical Guidance to the NPPF (March 2012)

2 Flood Risk in Bury

- 2.1 The Bury, Oldham and Rochdale Level 1 SFRA (November 2009) confirmed that the main source of flood risk for Bury is from the River Irwell and its tributaries, including Holcombe Brook, Pigs Lee Brook, Kirklees Brook and the River Roch. It also identified that three areas in particular face flood risk from rivers. These are Ramsbottom, an area to the west of Bury Town Centre and an area along the River Irwell between Bury and Radcliffe. These three areas were assessed in greater detail as part of the Level 2 SFRA and the key flood risk issues identified in each of these areas are summarised below.
- 2.2 The Greater Manchester Surface Water Management Plan (SWMP) identified a number of flow paths within the Borough, as surface water flows off the hillsides, collecting in small drains before flowing to the valley bottom. The SWMP highlighted this as a particular issue in Ramsbottom, causing flooding to major road networks and individual properties.

Ramsbottom

- 2.3 The main source of flooding in Ramsbottom is fluvial flooding from the River Irwell. Current defences in Ramsbottom provide a 1 in 100 year standard of protection (SOP). However, a key flood flow route originating upstream in Rossendale, places a large area west of the railway in Ramsbottom, at risk. The Drill Hall, north of Bridge Street, collects the majority of flood waters from this overland flow route, resulting large flood depths.
- 2.4 Bridge Street overtops during a 1 in 100 year plus climate change and 1 in 1000 year flood event, both of which would flood the employment sites south of Bridge Street.
- 2.5 There are key areas of functional floodplain along the right (west) bank of the River Irwell in Ramsbottom, which includes the football and cricket pitches at Acre Bottom and which flood to large depths over a range of return periods. Flood defences in this part of the town will overtop during an extreme 1 in 1000 year flood event.
- 2.6 There are a number of key surface water flow paths that have been identified which pose risk to properties within central Ramsbottom. Ramsbottom is surrounded by steep hillsides which encourage water to runoff quickly into the settlement and as such Ramsbottom has been defined as a Critical Drainage Area (CDA) in the SFRA. Current fluvial flood defences could potentially trap this surface water.
- 2.7 However, the main flood risk in Ramsbottom is largely related to the residual risks associated with current defences overtopping

during lower probability events such as a 1 in 100 year flood event and as a result of the River Irwell overtopping its bank upstream in Rossendale.

Chamberhall, west of Bury Town Centre

- 2.8 The SFRA identified that west of Bury town centre, there is significant flood risk from the River Irwell and a minor watercourse and mill lodge in the Western Waterside area. However, the SFRA concluded that a number of sites in this area have been subject to recent FRAs which have identified appropriate mitigation measures which would not increase flood risk elsewhere. This situation will need to be continually monitored to ensure that increased development does not increase flood risk within the area.

Bury – Radcliffe

- 2.9 The main source of flooding in the Bury-Radcliffe area is fluvial flooding from the River Irwell, as a result of insufficient channel capacity. The risk of fluvial flooding is widespread, with significant flood extents and depths covering the majority of the natural floodplain. Although the natural floodplain is urban in form, there are no formal flood defences and informal defences provide little protection to adjacent residential and commercial areas. For each flood event investigated, flood depths are high, reaching over 2m in some areas.
- 2.10 The area is also susceptible to flooding from a number of other sources including the Manchester, Bury and Bolton Canal, Elton Reservoir and a number of smaller disused mill reservoirs. Furthermore, the SFRA identified Radcliffe as a Critical Drainage Area (CDA) and it is known to have sewer network capacity problems, which may cause sewers to surcharge and increase the occurrence of surface water flooding⁸.
- 2.11 The junction of Water Street and Ainsworth Road in Radcliffe is identified as a surface water hotspot in the SWMP. Flooding at the site is as a result of the limited capacity of the stormwater culvert and the combined sewer system.

⁸ Surface water flooding occurs where high rainfall events exceed the drainage capacity in an area. Such events can lead to serious flooding of property and possessions where surface water flows and collects.

3 Bury's Core Strategy

- 3.1 Key objective's of Bury's Publication Core Strategy (July 2013) is to appraise flood risk from all sources, identify land at risk from flooding, manage flood risk and prioritise new development in low flood risk areas.
- 3.2 To support these objectives, the Publication Core Strategy incorporates a number of policies which address the issue of flood risk in the Borough.
- 3.3 Policy EN6: Managing Flood Risk identifies the broad locations within the Borough where flood risk issues are most severe and identifies a series of measures to manage flood risk. Policy EN7: New Development and Flood Risk, sets out the Councils approach to planning applications for new development within areas that are identified as being at risk of flooding.
- 3.4 Policy EN8: Surface Water Management and Drainage identifies the need to manage surface water through the incorporation of appropriate drainage methods in order to alleviate flood risk.
- 3.5 In addition to the policies mentioned above, policies CO2: Managing 'Windfall' Housing Development' and CO6: Meeting the Needs of Gypsies, Travellers and Travelling Showpeople, both include sections that ensure that flood risk is considered as part of locating new housing development in Bury.

Core Strategy Townships

- 3.6 Bury is recognised as having six 'Townships' with the focus of each being their respective town or district centre. The six townships are as follows:
 - **Ramsbottom, Tottington and North Manor** – which covers the north of the Borough and incorporates Ramsbottom town centre and Tottington district centre;
 - **Bury West** - which comprises the residential neighbourhoods to the west of Bury town centre and the Western Waterside development area;
 - **Bury East** – which includes Bury Town Centre, Chamberhall, Pilsworth Employment Development Area (EDA) and the East Bury Regeneration Area;
 - **Radcliffe** - which includes Radcliffe town centre, Inner Radcliffe Regeneration Area and Irwell Bank EDA;
 - **Whitefield and Unsworth** - which includes Whitefield district centre and Besses Regeneration Area; and
 - **Prestwich** - includes Prestwich town centre, Rainsough Regeneration Area and the Bury South EDA.

- 3.7 The Sequential Test carried out in this report, has been applied to these 'Townships'.

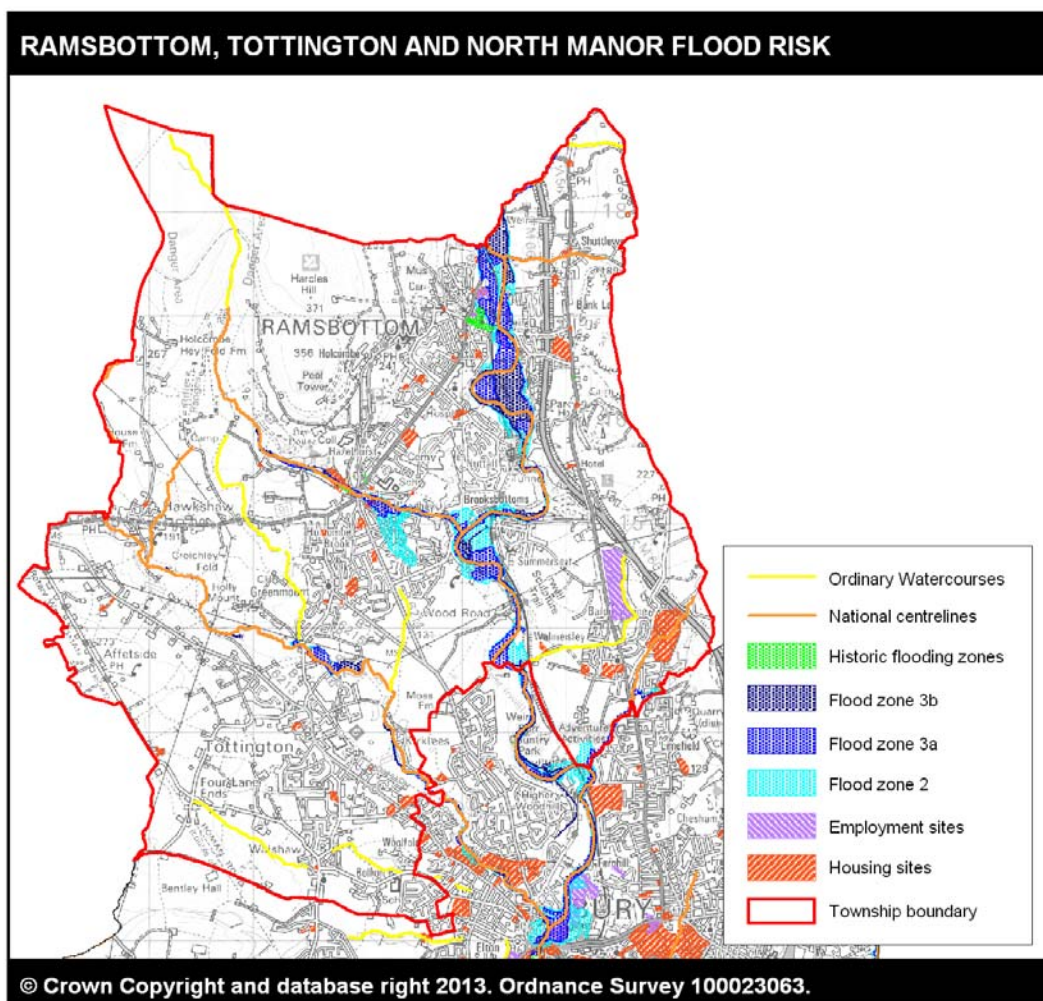
Targets and Land Availability across the Borough

- 3.8 The Core Strategy will set a minimum housing target of 400 new dwellings per annum (80% of which should be on previously developed land). Extrapolating this target forward, sets out a requirement of 6,800 new dwellings for the period 2012/13-2028/29.
- 3.9 Comparing this to land availability, the Bury Strategic Housing Land Availability Assessment (SHLAA) 2013 has identified 284 residential sites (6641 dwellings), totalling approximately 210.3 hectares.
- 3.10 In relation to employment land, the Core Strategy has identified a quantitative requirement for an additional 50-62 hectares of employment land for the period 2013-2029, along with a need to improve the quality and spatial distribution of the employment land supply.
- 3.11 Comparing this to land availability, the Employment Land Review (ELR) identifies 41 existing and potential employment sites, comprising 69 hectares. There are also 264 existing employment sites that are in use across the Borough, with an area totalling approximately 84.22 hectares and these may include sites where redevelopment or more efficient use of land can generate further land for new employment development. However, at this time, this contribution can not be quantified.
- 3.12 Given the constraints to land availability in the Borough (primarily the Green Belt), the approach in the Core Strategy has been to direct new development into the urban area and onto previously developed land. However, it is clear that virtually all available land in these areas is required to meet the needs and targets for residential and employment development, and so it will be difficult to find suitable alternative sites outside areas of flood risk and without developing on Green Belt land.

Description of and Proposals for the Townships

- 3.13 The Sequential Test is to be applied to the Borough's six Townships. These were outlined in paragraph 3.6 and include Ramsbottom, Tottington and North Manor, Bury West, Bury East, Radcliffe, Whitefield and Unsworth and Prestwich.
- 3.14 Each of the Townships are mapped and are described below in terms of proposed development and flood zone location. Each township is sequentially tested in Section 4.

Ramsbottom, Tottington and North Manor



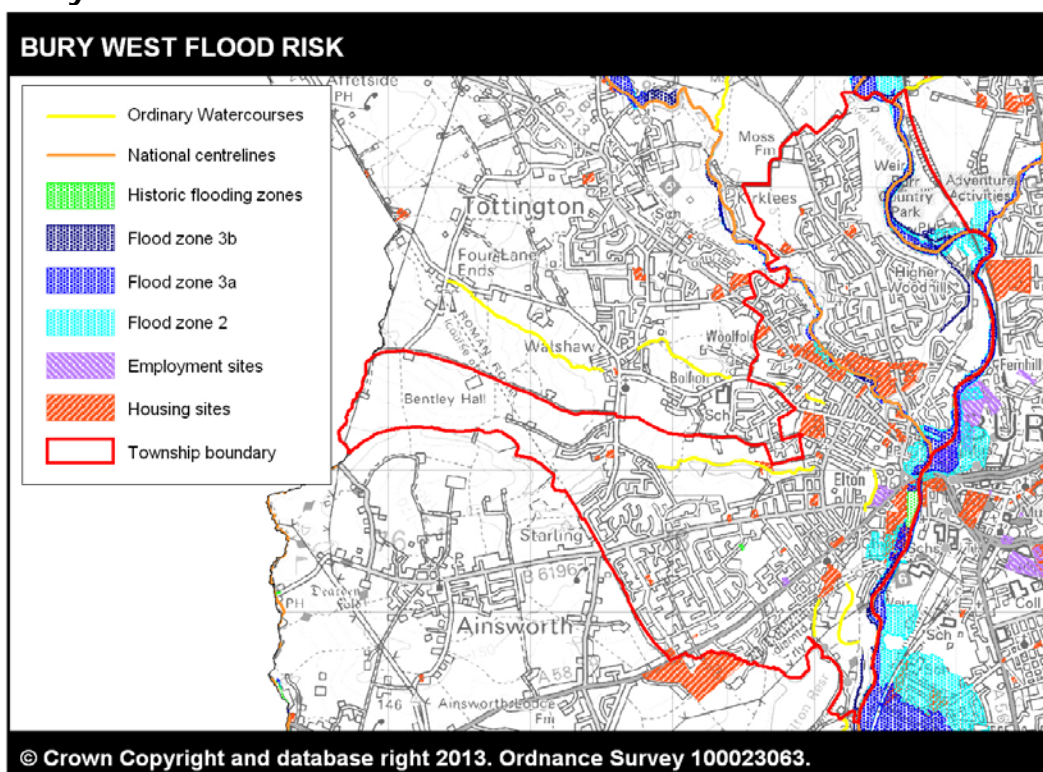
- 3.15 The Ramsbottom, Tottington and North Manor Township incorporates Ramsbottom town centre, Tottington district centre and the residential areas of Ramsbottom, Greenmount and Summerseat.
- 3.16 The SHLAA (2013) and ELR (2013) indicate that in the Ramsbottom, Tottington and North Manor Township there will be:
- 12.5% of new residential units required for the Borough over the plan period (832 units);
 - 3.4% of new employment land required for the Borough over the plan period (2.0 ha).
 - Provision at Gin Hall (10.3ha) could, subject to other policies, add to the level of employment land in this area (subject to very special circumstances to justify development in the Green Belt);
 - In addition, new leisure and tourism facilities are planned in conjunction with the redevelopment of Ramsbottom Town Centre.

Table 3.1 - Existing and Proposed Land Uses in Ramsbottom, Tottington and North Manor Township

Flood Zone	Existing Uses	Proposed Uses	NPPF Technical Guidance Vulnerability Classification
Includes all flood zones	Residential	Residential	More Vulnerable
	Retail	Retail	Less Vulnerable
	Industrial/Warehousing	Industrial/Warehousing	Less Vulnerable
	Offices	Offices	Less Vulnerable
	Leisure	Leisure	Less Vulnerable
	Education		More Vulnerable
	Transport Infrastructure		Essential Infrastructure

Note: No new education or transport infrastructure provision is proposed in the Ramsbottom, Tottington and North Manor Township.

Bury West



- 3.17 The Bury West Township comprises the residential neighbourhoods to the west of Bury Town Centre and the Western Waterside employment area.
- 3.18 The SHLAA (2013) and ELR (2013) indicate that in the Bury West Township there will be:
- 11.1% of new residential units required for the Borough over the plan period (737 units); and

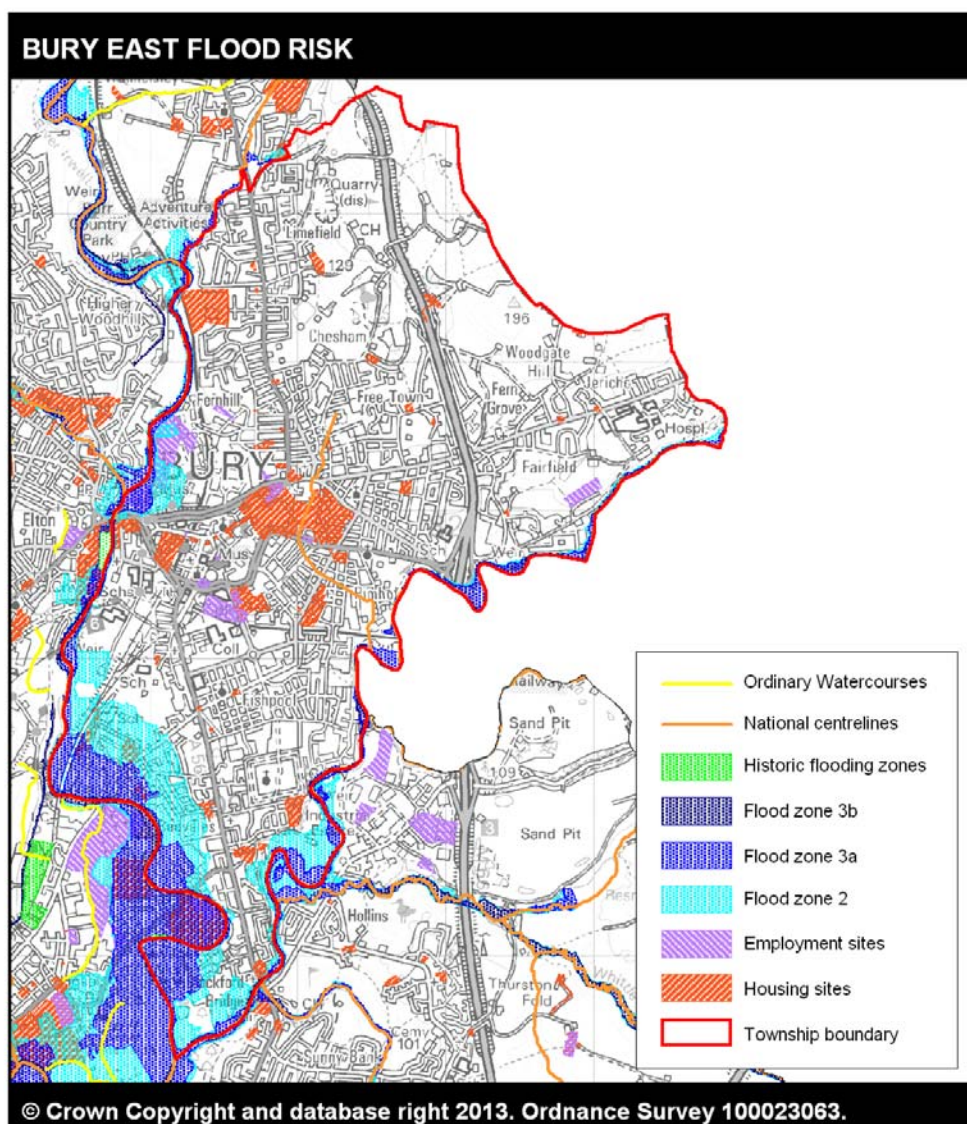
- 2.7% of new employment land required for the Borough over the plan period (1.6ha).

Table 3.2 - Existing and Proposed Land Uses in Bury West Township

Flood Zone	Existing Uses	Proposed Uses	NPPF Technical Guidance Vulnerability Classification
Includes all Flood Zones	Residential	Residential	More Vulnerable
	Retail	Retail	Less Vulnerable
	Industrial/Warehousing	Industrial/Warehousing	Less Vulnerable
	Offices	Offices	Less Vulnerable
	Leisure		Less Vulnerable
	Education		More Vulnerable
	Transport Infrastructure		Essential Infrastructure

Note: No new leisure, education or transport infrastructure provision is proposed in the Bury West Township.

Bury East



3.19 The Bury East Township incorporates:

- Bury Town Centre, the only sub-regional centre within the Borough and an area of significant new development;
- Chamberhall;
- The East Bury Regeneration Area, which covers the area to the east of Bury Town Centre and incorporates the Fernhill, Freetown, Fern Grove, Bell Lane, Wash Lane, Rochdale Road, Pimhole and Gigg areas of the town;
- The Pilsworth EGA at Junction 3 of the M66.

3.20 The SHLAA (2013) and ELR (2013) indicate that in the Bury East Township there will be:

- 28% of new residential units required for the Borough over the plan period (1,859 units);

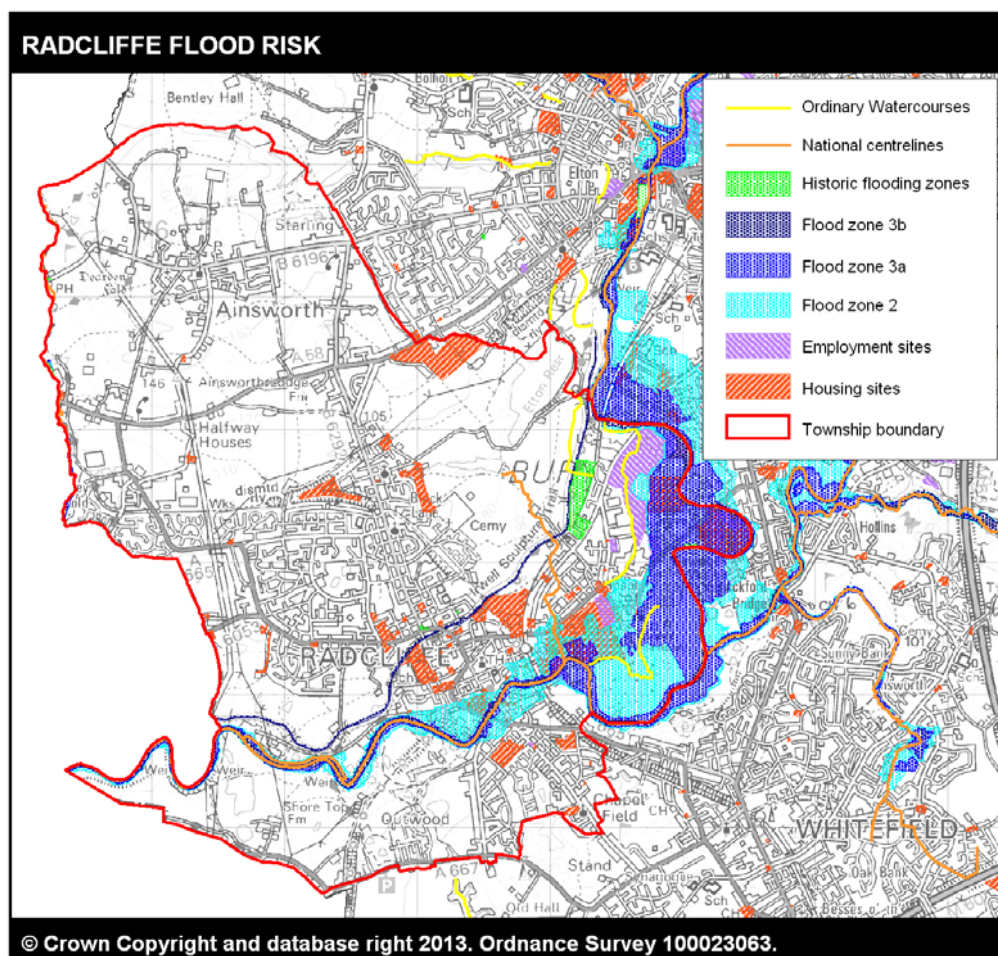
- 29.1% of new employment land required for the Borough over the plan period (17.1 ha);
- In addition, it is envisaged that new and enhanced leisure and tourism facilities will be provided within the Bury East Township.

Table 3.3 - Existing and Proposed Land Uses in Bury East Township

Flood Zone	Existing Uses	Proposed Uses	NPPF Technical Guidance Vulnerability Classification
Includes all flood zones	Residential	Residential	More Vulnerable
	Retail	Retail	Less Vulnerable
	Industrial/Warehousing	Industrial/Warehousing	Less Vulnerable
	Offices	Offices	Less Vulnerable
	Leisure	Leisure	More Vulnerable
	Education		Less Vulnerable
	Transport Infrastructure		Essential Infrastructure

Note: No new education or transport infrastructure provision is proposed in the Bury East Township.

Radcliffe



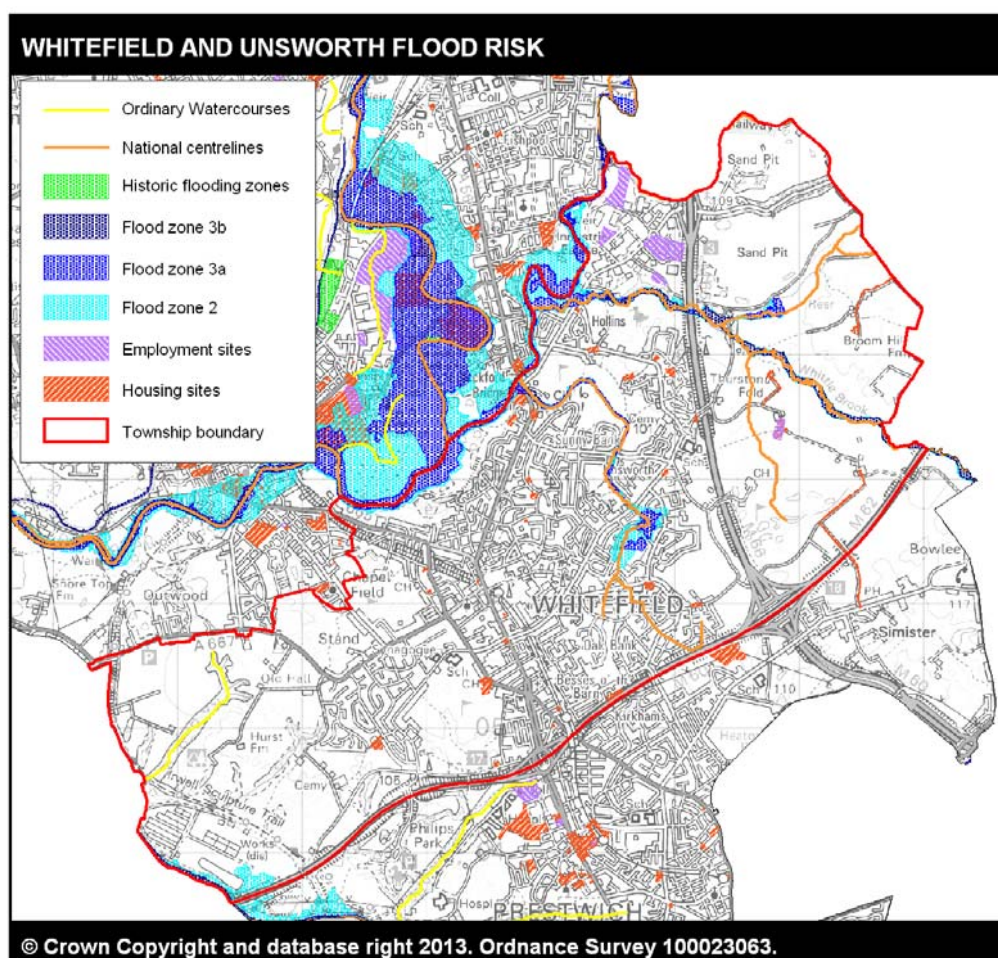
- 3.21 The Radcliffe Township incorporates Radcliffe Town Centre, the Inner Radcliffe Regeneration Area (a significant area of proposed new development and regeneration which includes the former East Lancashire Paper mill site) and the Irwell Bank EDA, which is one of the Borough's proposed major employment areas, stretching between Bury and Radcliffe alongside the River Irwell.
- 3.22 The SHLAA (2013) and ELR (2013) indicate that in the Radcliffe Township there will be:
- 34% of new residential units required for the Borough over the plan period (2,272 units);
 - 37.9% of new employment land required for the Borough over the plan period, largely within the Irwell Bank EGA (22.3 ha); and
 - Redevelopment of Radcliffe Town Centre will incorporate new retail, residential and a re-configured bus station in line with the on-going Radcliffe Town Centre Masterplan.

Table 3.4 - Existing and Proposed Land Uses in Radcliffe Township

Flood Zone	Existing Uses	Proposed Uses	NPPF Technical Guidance Vulnerability Classification
Includes all flood zones	Residential	Residential	More Vulnerable
	Retail	Retail	Less Vulnerable
	Industrial/Warehousing	Industrial/Warehousing	Less Vulnerable
	Offices	Offices	Less Vulnerable
	Leisure		More Vulnerable
	Education	Education	Less Vulnerable
	Transport Infrastructure	Transport Infrastructure	Essential Infrastructure

Note: No new leisure provision is proposed in the Radcliffe Township.

Whitefield and Unsworth



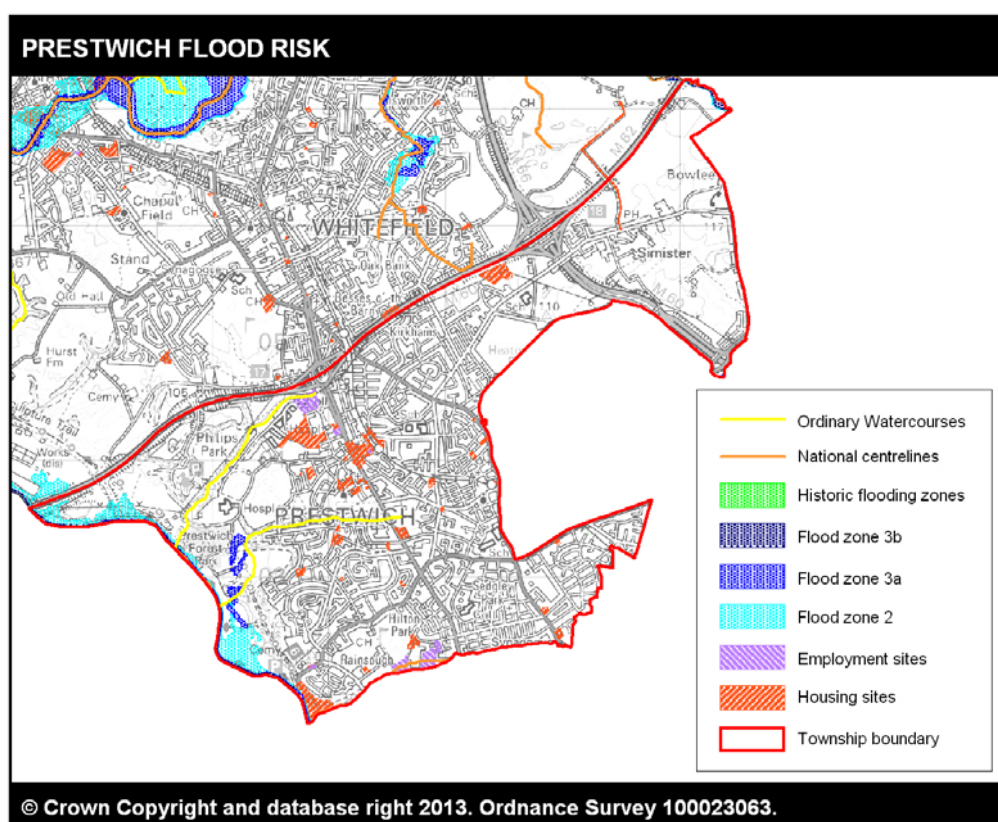
- 3.23 The Whitefield and Unsworth Township incorporates Whitefield district centre and Besses Regeneration Area.
- 3.24 The SHLAA (2013) and ELR (2013) indicate that in the Whitefield and Unsworth Township there will be:
- 3.5% of new residential units required for the Borough (231 units); and
 - 16.9% of new employment land required for the Borough over the plan period (9.9ha)

Table 3.5 - Existing and Proposed Land Uses in Whitefield and Unsworth Township

Flood Zone	Existing Uses	Proposed Uses	NPPF Technical Guidance Vulnerability Classification
Includes all flood zones	Residential	Residential	More Vulnerable
	Retail		Less Vulnerable
	Industrial/Warehousing	Industrial/Warehousing	Less Vulnerable
	Offices	Offices	Less Vulnerable
	Leisure		More Vulnerable
	Education		Less Vulnerable
	Transport Infrastructure		Essential Infrastructure

Note: No new retail, leisure, education or transport infrastructure provision is proposed in the Whitefield and Unsworth Township

Prestwich



- 3.25 The Prestwich Township incorporates Prestwich Town Centre, the Prestwich residential areas, Mountheath EGA and the Rainsough Regeneration Area.
- 3.26 The SHLAA (2013) and ELR (2013) indicate that in the Prestwich Township there will be:

- 10.7% of new residential units required for the Borough over the plan period (710 units); and
- 10.1% of new employment land required for the Borough over the plan period (5.9ha).

Table 3.6 - Existing and Proposed Land Uses in Prestwich Township

Flood Zone	Existing Uses	Proposed Uses	NPPF Technical Guidance Vulnerability Classification
1	Residential	Residential	More Vulnerable
	Retail	Retail	Less Vulnerable
	Industrial/Warehousing	Industrial/Warehousing	Less Vulnerable
	Offices	Offices	Less Vulnerable
	Leisure	Leisure	Less Vulnerable
	Transport Infrastructure		Essential Infrastructure

Note: No new transport infrastructure provision is proposed in the Prestwich Township.

4 Sequential Test

- 4.1 Each of the six Townships described in Section 3 have been sequentially tested below.

Sequential Test

1. Are the Proposed Townships in 'Flood Zone 1 – Low Probability of Flood Risk?	
Yes	<p>Townships wholly in Flood Zone 1 include:</p> <ul style="list-style-type: none"> • Prestwich <p>This township is sequentially appropriate.</p>
No	<p>Townships with land in Flood Zones 2 and 3 include:</p> <ul style="list-style-type: none"> • Ramsbottom, Tottington and North Manor; • Bury West; • Bury East; • Radcliffe; • Whitefield and Unsworth.
2. Could the proposed Townships in Flood Zones 2 and 3 alternatively be located in Flood Zone 1 Low Probability of flood risk? If no, identify alternative areas that were considered and explain why they were dismissed. Explain why the proposals can not be redirected to Flood Zone 1.	
No	<p>Ramsbottom, Tottington and North Manor</p> <p>Housing and Services</p> <p>30.2ha (14.3%) of proposed residential land is expected to delivered in the Ramsbottom, Tottington and North Manor Township.</p> <p>0.3ha (0.9%) of this land is located within Flood Zone 2, whilst a further 0.9ha (3.0%) is in Flood Zone 3a and 0.02ha (0.1%) is in Flood Zone 3b.</p> <p>2.8ha (9.4%) of future residential land in Ramsbottom, Tottington and North Manor is identified having a 1 in 30year vulnerability to surface water flooding. 3.5ha (11.7%) has a 1 in 100 year vulnerability, 4.0ha (13.4%) has a 1 in 200 year vulnerability and 4.9ha (16.2%) has a 1 in 200 year plus climate change vulnerability.</p> <p>Employment</p> <p>2.0ha (3.4%) of future employment land is expected to be delivered in the Ramsbottom, Tottington and North Manor Township.</p>

	<p>0.8ha (38.7%) of this land is located in Flood Zone 1.</p> <p>0.3ha (14%) of this land is located within Flood Zone 2, whilst a further 0.9ha (47.3%) is in Flood Zone 3a.</p> <p>0.4ha (18.1%) of future employment land in Ramsbottom, Tottington and North Manor is identified having has a 1 in 200 year plus climate change vulnerability to surface water.</p> <p>The Gin Hall site, which could add to the level of employment land in the area, subject to very special circumstances, is located entirely in Flood Zone 1. 0.3ha of the site is identified as being vulnerable to surface water flooding.</p> <p>The overall strategy seeks to provide increased employment opportunities across the Borough. This area includes Ramsbottom Key Centre, which is an accessible location particularly for communities living in the north of the Borough. Failure to provide additional employment sites within this area may result in the decline of the local economy, a missed opportunity to develop the knowledge economy in this area, and exacerbate the issue of high levels of commuting by car from this area. In addition, sustainability objective 8 in the Bury SA Framework seeks to reduce the need to travel and objective 18 seeks to foster balanced economic growth across Bury.</p> <p>Summary</p> <p>There are some significant flood risk threats in the Holcombe Brook part of this township and there is a considerable risk from surface water flooding.</p> <p>Alternative sites do not exist without encroaching into the Green Belt.</p> <p>Sites identified in Flood Zone 1 will be prioritised for development, allowing time for other options to come forward to replace those sites in Flood Zones 2 and in particular 3.</p> <p>Clearly, when bringing forward individual proposals in this area formal FRAs will be required. Flood risk mitigation for this area will form part of the Irwell Catchment Flood Management Plan and individual developers will need to provide flood mitigation where appropriate in this area.</p>
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	<p>Bury West</p> <p>Housing and Services</p> <p>The provision of housing in the Bury West Township is important to the achievement of sustainable communities in the Borough, delivering improved access to employment, services and facilities.</p> <p>28.9ha or 13.8% of new residential land is expected to be delivered in the Bury West Township over the plan period.</p> <p>The majority of this land (77.2%) is located within Flood Zone 1.</p> <p>2.7ha (9.4%) is located within Flood Zone 2, whilst 3.3ha (11.5%) is within Flood Zone 3a and 0.5ha (1.8%) is within Flood Zone 3b.</p> <p>4ha (13.7%) of future residential land in Bury West is identified having a 1 in 30year vulnerability to surface water flooding. 6.4ha (22.1%) has a 1 in 100 year vulnerability, 8.6ha (29.7%) has a 1 in 200 year vulnerability and 10.2ha (35.1%) has a 1 in 200 year plus climate change vulnerability.</p> <p>Western Waterside is an existing employment area located within the Bury West Township. This area has been identified as part of a mixed use waterside development which incorporates new residential uses. The area is adjacent to the River Irwell with some parts of the site located within Flood Zone 3.</p> <p>Employment</p> <p>1.6ha (2.7%) of future employment land is expected to be delivered in Bury West, however all of this provision is located within Flood Zone 1.</p> <p>0.2ha (13.1%) of future employment land in Bury West is identified having a 1 in 30year vulnerability to surface water flooding. 0.5ha (31.4%) has a 1 in 100 year vulnerability, 0.7 (44.4%) has a 1 in 200 year vulnerability and 0.8ha (52.7%) has a 1 in 200 year plus climate change vulnerability.</p> <p>Summary</p> <p>Alternative sites within the Bury West Township do not exist without encroaching into the Green Belt.</p>
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	<p>Sites identified in Flood Zone 1 will be prioritised for development, allowing time for other options to come forward to replace those sites in Flood Zones 2 and in particular 3.</p> <p>Clearly, when bringing forward individual proposals in this area formal FRAs will be required. Flood risk mitigation for this area will form part of the Irwell Catchment Flood Management Plan and individual developers will need to provide flood mitigation where appropriate in this area.</p> <p>Bury East</p> <p>Housing and Services</p> <p>46.6ha (22.2%) of future residential land is expected to be delivered in the Bury East Township over the plan period, the majority of this land is located in Flood Zone 1 (43.6ha or 93.4%).</p> <p>2.2ha (4.8%) is located in Flood Zone 2 and 0.8ha or 1.7% is located in Flood Zone 3a. 0.02ha is located in Flood Zone 3b.</p> <p>1.5ha (3.1%) of future residential land in Bury East is identified having a 1 in 30year vulnerability to surface water flooding. 3ha (6.3%) has a 1 in 100 year vulnerability, 4ha (8.5%) has a 1 in 200 year vulnerability and 5.5ha (11.8%) has a 1 in 200 year plus climate change vulnerability.</p> <p>The Bury East Township incorporates both Bury Town Centre and the East Bury Regeneration Area and as a result the township is expected to see an increase in population. Consequently, additional and improved services and facilities will be required. However, major improvements to the provision of retail and leisure facilities in Bury Town Centre have recently been completed with the opening of the Rock development. This scheme has increased the attractiveness of the town centre as a whole and has encouraged more residents to shop and meet their leisure needs locally without having to commute outside the Borough to Manchester, the Trafford Centre and Bolton. The Rock scheme is located within Flood Zone 1.</p> <p>Employment</p> <p>Flood risk in relation to proposed employment land is most pronounced in Bury East.</p> <p>17.1ha (29.1%) of proposed employment land is located within the Bury East Township.</p>
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	<p>11.4ha (66.6%) of this land is identified as being located within Flood Zone 1.</p> <p>2.8ha (16.2%) is identified as being in Flood Zone 2.</p> <p>2.9ha (17.0%) is in Flood Zone 3a and 0.03ha (0.2%) in Flood Zone 3b.</p> <p>0.63ha (3.7%) of future employment land Bury East is identified having a 1 in 30year vulnerability to surface water flooding. 1.0ha (6.1%) has a 1 in 100 year vulnerability, 1.3 (7.9%) has a 1 in 200 year vulnerability and 1.6ha (9.5%) has a 1 in 200 year plus climate change vulnerability.</p> <p>As Bury is the sub-regional centre and the primary focal point for the Borough as a whole, it is inevitable that it would continue to be the key centre for the Borough.</p> <p>Intensification of development within established town centre locations is appropriate from a planning perspective, given the high levels of public transport accessibility and concentration of facilities. The character of the area is more suitable to large scale commercial and cultural uses. In addition, sustainability objectives 7 and 8 in the Bury SA Framework require new development to be located in areas with good public transport links as well as good levels of access to a mix of essential services and facilities.</p> <p>Not identifying Bury East for new employment development or for intensification, expansion or redevelopment of existing employment use may result in a decline in the local economy and would fail to address current issues associated with poor quality and poorly paid employment within the Borough. The prospect of addressing such issues through the introduction of opportunities for high quality, knowledge based investment in a general location that is not only accessible to the Borough as a whole, but also to the East Bury regeneration area would be lost.</p> <p>Summary</p> <p>Alternative sites within the Bury East Township do not exist without encroaching into the Green Belt.</p> <p>Sites identified in Flood Zone 1 will be prioritised for development, allowing time for other options to come forward to replace those sites in Flood Zones 2 and in particular 3.</p>
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	<p>Radcliffe</p> <p>Housing and Services</p> <p>Flood risk in relation to proposed residential land is most pronounced in Radcliffe.</p> <p>76.4ha or 36.3% of future residential land is expected to be delivered in Radcliffe during the plan period.</p> <p>44.2ha (57.8%) of this land is located within Flood Zone 1.</p> <p>12.3ha (16.1%) of the total area of SHLAA sites is within Flood Zone 2.</p> <p>19.5ha (25.5%) is located within Flood Zone 3a and 0.4ha or 0.5% is located within Flood Zone 3b.</p> <p>2.8ha (3.6%) of future residential land in Radcliffe is identified having a 1 in 30year vulnerability to surface water flooding. 4.6ha (6.0%) has a 1 in 100 year vulnerability, 6.3 (8.2%) has a 1 in 200 year vulnerability and 8.4ha (11.0%) has a 1 in 200 year plus climate change vulnerability.</p> <p>Employment</p> <p>22.3ha (37.9%) of new employment land is expected to be delivered in Radcliffe.</p> <p>17.9ha (80.4%) of this land is located within Flood Zone 1.</p> <p>0.6ha (2.8%) of the total area of employment sites is within Flood Zones 2.</p> <p>3.0ha (13.5%) is within Flood Zone 3a, whilst the remaining 0.8ha (3.4%) is within Flood Zone 3b.</p> <p>1.3ha (5.9%) of future employment land in Radcliffe is identified having a 1 in 30year vulnerability to surface water flooding. 2.0ha (9.1%) has a 1 in 100 year vulnerability, 2.4ha (11.0%) has a 1 in 200 year vulnerability and 2.9ha (12.8%) has a 1 in 200 year plus climate change vulnerability.</p> <p>A significant amount of land in the Radcliffe Township prioritised for development, (particularly employment sites located along Irwell Bank), is situated in Flood Zones 2 and 3 and therefore has a medium-high probability of flooding.</p>
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	<p>One site, to the North of former Expert Logistics site does include land that falls within Flood Zone 3b. However, this site has planning permission and as part of the planning application undertook detailed flood risk assessments to show that these issues had been addressed.</p> <p>Not identifying Radcliffe as a focus for new employment development or for intensification, expansion or redevelopment of existing employment use may result in a decline in the local economy and would fail to address current issues associated with poor quality and poorly paid employment in the Borough. This is considered to be economically and socially unacceptable and would result in unsustainable development in the Borough. It could also direct replacement employment uses onto sites outside the urban area.</p> <p>Regeneration</p> <p>The 2010 Index of Multiple Deprivation indicates that Inner Radcliffe suffers from notable deprivation, particularly in relation to income, employment, health, education and crime, a key objective of the Core Strategy is to address this.</p> <p>The Core Strategy seeks to regenerate Inner Radcliffe with the introduction of new retail and residential uses and a remodelled bus station. The Core Strategy also seeks to protect existing and encourage new jobs in and around Radcliffe in order to encourage local wealth creation and potentially alleviate deprivation issues in the Inner Radcliffe area.</p> <p>The specific circumstances of Inner Radcliffe and, in particular, the need for regeneration means that to avoid investment in this area would be an unrealistic alternative. The consideration of alternatives that seek to avoid a focus for growth and development in locations that are beneficial to areas in need of regeneration, are considered to be unsustainable.</p> <p>Summary</p> <p>The interactions between different sources of flood risk in the Radcliffe Township are complex and include the River Irwell and River Roch and their tributaries, together with Hutchinson's and Bealey's Goits plus the Manchester, Bury and Bolton Canal, Elton Reservoir and surface water. The Level 2 SFRA has also identified a number of areas where the flood hazard is significant and dangerous.</p>
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	<p>However, alternative sites for large scale development within Radcliffe do not exist without encroaching into Green Belt.</p> <p>Therefore, Core Strategy Policy SDS1 indicates that an integrated, planned and engineered solution would be the most sustainable approach and would help deliver reductions in flood risk to both new and current developments.</p> <p>In response to this, the Environment Agency is in the process of producing a flood risk management strategy for the area. This strategy will determine the optimum flood risk management solution for the area, based on technical, environmental and economic considerations.</p> <p>Until this strategy is produced, a strategic approach to flood risk in Radcliffe has been adopted in the Core Strategy, whereby sites not in Flood Zones 2 or 3 will be prioritised for development, allowing time for other options to come forward to replace those sites in Flood Zones 2 and, in particular, 3.</p> <p>Whitefield and Unsworth</p> <p>Housing and Services</p> <p>8.3ha (4.3%) of new residential land is proposed for the Whitefield and Unsworth Township over the plan period.</p> <p>8.8ha (89.8%) of this land is located within Flood Zone 1.</p> <p>0.5ha (5.3%) is located in Flood Zone 2, whilst 0.4ha (4.7%) is located within Flood Zone 3a and 0.02ha (0.2%) in Flood Zone 3b.</p> <p>0.1ha (1.3%) of future residential land in Whitefield and Unsworth is identified having a 1 in 30year vulnerability to surface water flooding. 0.3ha (3.3%) has a 1 in 100 year vulnerability, 0.4ha (4.8%) has a 1 in 200 year vulnerability and 0.6ha (7.2%) has a 1 in 200 year plus climate change vulnerability.</p> <p>Employment</p> <p>9.9ha (16.9%) of proposed employment land is located within Whitefield and Unsworth. All of this land is located within Flood Zone 1.</p>
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0.01ha (0.08%) of future employment land in Whitefield and Unsworth is identified having a 1 in 30 year vulnerability to surface water flooding. 0.2ha (1.9%) has a 1 in 100 year vulnerability, 0.1ha (0.8%) has a 1 in 200 year vulnerability and 0.4ha (3.5%) has a 1 in 200 year plus climate change vulnerability.

Summary

Alternative sites for large scale development within Whitefield and Unsworth do not exist without encroaching into Green Belt.

Those sites not in Flood Zones 2 or 3 will be prioritised for development, allowing time for other options to come forward to replace those sites in Flood Zones 2 and, in particular, 3.

Strategic Overview

The Core Strategy has taken into account the important social, economic and environmental issues to arrive at a strategy that will achieve mixed and balanced sustainable communities in Bury, a judgement which is supported by the Sustainability Appraisal report for the Publication version of the Core Strategy (July 2013).

Where possible the Council will seek to locate new development to support this strategy in areas of Flood Zone 1. However, it is considered that developing outside Flood Zones 2 and 3 would not achieve development aims of importance to Bury's economy and local communities.

Strategic Level Alternatives

The Core Strategy Second Stage Issues and Options Report considered three options for the future spatial distribution of growth and development within the Borough, namely:

- Option 1 – Focus Growth on Regeneration Areas;
- Option 2 – Spread Growth Throughout the Borough;
- and
- Option 3 – Concentrate Growth in the South with Restraint in the North.

In considering the strategic level options for the Core Strategy the following conclusions were reached:

- a) Option 1 scored similarly to Option 2 in respect of the SA and in meeting the identified Objectives of the Core Strategy. However, Option 1 did involve a greater degree of conflict with national planning policies as well as less positive implications for the Community Strategy's ambitions and the community's aspirations expressed through responses to the Issues and Options. It is because of these less favourable results that Option 1 has been rejected.
- b) Option 2 seeks to spread growth and development throughout the Borough and this Option performed best in relation to its consistency with the Core Strategy's Strategic Objectives, national planning policy and the ambitions of the Community Strategy and consequently emerged as the favoured Option following consultation.
- c) The consideration of Option 3 displayed the poorest results of the three options with only one distinctly positive impact in relation to meeting the ambitions of the Community Strategy. Areas of conflict were identified in all other respects and emerged as the least favoured Option following consultation. For these reasons Option 3 was also rejected.

It was also considered that developing Green Belt sites outside the urban areas would not facilitate development of previously developed land, would increase travel and would impact on the openness of the Borough's countryside.

Brownfield Land and Green Belt

There is wide recognition in national policy that growth pressures should be accommodated within existing urban boundaries without encroaching on open space. This means the reuse and regeneration of brownfield land and increasing densities where appropriate.

Bury is a relatively densely developed area, especially in the southern half of the Borough. However, approximately 60% of the Borough is classified as open land and most is currently designated as Green Belt, largely to the North of the Borough.

The majority of remaining large urban brownfield areas within the Borough are either substantially or partially within Flood Zones 2 and 3. However, alternative sites for large scale development within Bury do not exist without encroaching into the Green Belt.

The approach taken to new development in the Core Strategy, encouraging development into the urban areas, is considered the most sustainable because it makes the best use of brownfield land.

Housing

Bury's Core Strategy has identified a housing target of 400 new dwellings per annum (equating to 6,800 new dwellings over the plan period). This target could be provided without encroaching on the Green Belt. In addition, the target provides an element of flexibility in the event that some of the sites identified in SHLAA do not come forward as envisaged.

The SHLAA (2013) indicates that there is the potential to deliver 6,641 new residential units on 284 sites.

The majority of these sites are brownfield sites located within the urban area, particularly in and around the inner areas of Bury and Radcliffe.

The majority of proposed residential sites are located within Flood Zone 1, however some are located within or partly within Flood Zones 2 or 3.

Not developing those sites located in Flood Zones 2 and 3 for housing may work against the objective of providing additional better quality affordable housing in mixed tenure communities and may also result in Bury failing to meet its housing target.

Employment

Bury's Core Strategy has identified a quantitative employment land requirement of 50-62 hectares, plus a qualitative need to make provision for improvements to the quality of the employment land supply and its spatial distribution. This requirement will allow for developer choice and reflects the Council's aims for improved economic performance and higher quality job opportunities in the Borough.

The ELR (2013) indicates that this requirement can be met through a combination of existing employment land and sites which remain suitable for employment use (30.9) and 27.8ha of new employment land and sites, in addition to the identification of Land at Gin Hall (10.3ha) to provide for qualitative improvements to the employment land supply (subject to very special circumstances being demonstrated to justify development in the Green Belt).

	<p>The Core Strategy has identified a number of key broad locations where it will seek to focus additional employment growth and development:</p> <ul style="list-style-type: none"> • Bury Central; • Irwell Bank; • Pilsworth; • Bury North; and • Bury South. <p>These locations are identified as Employment Development Areas (EDAs) and are based on aspirations for a more dispersed pattern of employment land and to improve the quality of job opportunities within the Borough. Some areas within EDAs (particularly in Irwell Bank) are located within Flood Zones 2 or 3 but the majority are located within Flood Zone 1.</p> <p>In accordance with national policy, the Core Strategy seeks to locate new development in locations that are accessible by more efficient modes of transport. Not developing sites in Flood Zones 2 and 3 for employment uses and industry may work against the objective of supporting business creation and growth and improving access to jobs for local people in the future.</p> <p>If the Township is in 'Flood Zone 2 Medium Probability' proceed to Question 3.</p> <p>Some parts of the Borough's Townships are classified as being in Flood Zone 2.</p> <p>If the Township is in 'Flood Zone 3 High Probability' proceed to Question 4.</p> <p>Some parts of the Borough's Townships are classified as being in Flood Zone 3.</p>
3. For Townships in 'Flood Zone 2 Medium Probability':	
	<ul style="list-style-type: none"> • Ramsbottom, Tottington and North Manor • Bury West • Bury East • Radcliffe • Whitefield and Unsworth
3a. Are the proposed uses in Water Compatible, Less Vulnerable, More Vulnerable or Essential Infrastructure Flood Risk Vulnerability Classifications set out in Table 2 (Technical Guidance to NPPF)?	
Yes	List the Townships and proposed uses in these classifications:

	<p><i>Water Compatible:</i> None</p> <p><i>Less Vulnerable:</i> Industrial, Commercial, Retail, Offices, Community Uses (Bury East and Radcliffe)</p> <p><i>More Vulnerable:</i> Residential (Bury East, Bury West, Radcliffe, Ramsbottom Tottington and North Manor and Whitefield and Unsworth)</p> <p>These proposals are appropriate if located in Flood Zone 2 and there is no need to proceed with the Exception Test. However, due to the potential flood risks in Bury East, Bury West, Radcliffe, Ramsbottom, Tottington and North Manor and Whitefield and Unsworth detailed Flood Risk Assessments (FRAs) will be required for applications in these areas to address mitigation and access and egress issues.</p> <p>It should be noted that without the implementation of a flood alleviation scheme, it may be a challenge to produce a FRA which is able to demonstrate that the development is 'safe'.</p>
No	<p>List the Townships and proposed uses in these classifications:</p> <p><i>Water Compatible</i> None</p> <p><i>Less Vulnerable</i> None</p> <p><i>More Vulnerable</i> None</p>
<p>3b. Can the more flood sensitive development types (Highly Vulnerable and More Vulnerable) be directed to parts of the Borough where the risks are lower for both the occupiers and the premises themselves. If yes, identify how risks have been reduced.</p>	
Possibly	<p>It is possible that the more flood sensitive development types can be located in areas where the risks are lower for both the occupiers and the premises themselves. The most vulnerable uses could be located away from flood risk. This will be determined through a site specific FRA for any planning applications submitted in an area of flood risk.</p> <p>The Core Strategy and any Development Management decisions made by the Council will adopt a sequential approach, building on the information available in the Level</p>

	<p>2 SFRA with respect to the location of highly vulnerable and more vulnerable development in the Borough.</p> <p>All proposals on sites at risk of flooding will be expected to be accompanied by a site specific FRA at the Development Management stage, detailing compliance with the NPPF sequential/exception tests and addressing localised flood risk issues/mitigation measures.</p> <p>Proceed with Exception Test for Highly and More Vulnerable uses</p>
No	<p>Explain why the development types cannot be relocated</p> <p>Development needs to be located in areas of flood risk to achieve mixed and balanced sustainable communities in Bury. The justification for development in flood risk areas is outlined in Question 2 above. Alternative sites for large scale development within Bury do not exist without encroaching into Green Belt.</p> <p>Proceed with Exception Test for Highly and More Vulnerable uses</p>
4. For sites in 'Flood Zone 3a High Probability':	
	<ul style="list-style-type: none"> • Ramsbottom, Tottington and North Manor • Bury West • Bury East • Radcliffe • Whitefield and Unsworth
4a. Are the proposed uses in Water Compatible or Less Vulnerable Flood Risk Vulnerability Classifications set out in Table 2 (Technical Guidance to NPPF)?	
Yes	<p>List the Townships and proposed uses in these classifications:</p> <p><i>Water Compatible</i> None</p> <p><i>Less Vulnerable</i> Industrial, Commercial, Retail, Offices, Community uses (Bury East, Radcliffe, Ramsbottom, Tottington and North Manor)</p> <p>These proposals are sequentially appropriate in Flood Zone 3a and there is no need to proceed with the Exception Test. It will be necessary to prepare a Flood Risk Assessment for these developments and consideration should be made early in the planning process with respect to flood risks, mitigation and access and egress issues.</p>

	<p>It should be noted that without the implementation of a flood alleviation scheme, it may be a challenge to produce a FRA which is able to demonstrate that the development is 'safe'.</p>
No	<p>List the Townships and proposed uses in these classifications:</p> <p><i>More Vulnerable</i> Residential (Bury East, Bury West, Radcliffe, Ramsbottom, Tottington and North Manor and Whitefield and Unsworth).</p> <p>For these proposed uses proceed to Question 4b.</p>
4b. Is the development proposal in the Highly Vulnerable Classification?	
No	Proceed to Question 4c.
4c. Can the more flood sensitive development types (Highly Vulnerable and More Vulnerable) be directed to parts of the Borough where the risks are lower for both the occupiers and the premises themselves.	
Possibly	<p>Where possible a sequential approach will be used, to build on the information available in the Level 2 SFRA and to direct the most vulnerable uses away from the sources of flooding and closer to areas of lower flood risk where variation exists within a site or areas.</p> <p>In all cases it must be shown that the development is safe, through the production of a site specific FRA, and will comply with the Environment Agency requirements and the Exception Test if applicable.</p> <p>Proceed to the Exception Test.</p>
No	<p>Explain why the development types cannot be relocated</p> <p>Development needs to be located in areas of flood risk to achieve mixed and balanced sustainable communities in Bury. The justification for development in flood risk areas is outlined in Question 2 above. Alternative sites for large scale development within Bury do not exist without encroaching into Green Belt.</p> <p>Proceed with the Exception Test.</p>
5. For sites in 'Flood Zone 3b – Functional Floodplain':	
	<ul style="list-style-type: none"> • Bury East • Bury West • Radcliffe • Ramsbottom, Tottington and North Manor • Whitefield and Unsworth
5a. Are the proposed uses in Water Compatible Flood Risk Vulnerability Classifications set out in Table 2 (Technical Guidance	

to NPPF)?	
Yes	<p>List the Townships and proposed uses in these classifications:</p> <p><i>Water Compatible</i> None</p>
No	<p>List the Townships and proposed uses in these classifications:</p> <p><i>Less Vulnerable</i> Industrial, Commercial, Retail, Offices, Community Uses (Bury East and Radcliffe.)</p> <p><i>More Vulnerable</i> Residential (Bury East, Bury West Radcliffe, Ramsbottom, Tottington and North Manor and Whitefield and Unsworth)</p> <p>For these proposed uses proceed to Question 5b.</p>
5b. Can the development be redirected to 'Flood Zone 2 – Medium Probability?	
Possibly	<p>Explain Why</p> <p>Where possible the Council will seek to locate new development to areas of Flood Zone 1 and 2 which exist within the Borough.</p> <p>There will be opportunities within individual sites (including existing sites already classified as Flood Zone 3b) to either relocate these uses to areas of a lower flood risk or make these developments more resilient to flood events.</p> <p>In all cases it must be shown that the development is safe, through the production of a site specific FRA, and will comply with the Environment Agency requirements and Exception Test if applicable.</p> <p>Proceed to Question 5c.</p>
No	<p>Explain why the development types can not be relocated</p> <p>Development needs to be located in areas of flood risk to achieve mixed and balanced sustainable communities in Bury. The justification for development in flood risk areas is outlined in Question 2 above. Alternative sites for large scale development within Bury do not exist without encroaching into Green Belt.</p> <p>Proceed to Question 5c.</p>

5c. Can the development proposal be redirected to Flood Zone 3a High Probability	
Possibly	<p>Explain why</p> <p>Where possible, the Council will seek to locate and relocate development to areas of Flood Zone 1, 2 and 3a and away from Flood Zone 3b.</p> <p>In all cases it must be shown that the development is safe, through the production of a site specific FRA, and will comply with the Environment Agency requirements and Exception Test if applicable.</p> <p>Proceed to the Exception Test.</p>
No	<p>Explain why the development types cannot be relocated</p> <p>Development needs to be located in areas of flood risk to achieve mixed and balanced sustainable communities in Bury. The justification for development in flood risk areas is outlined in Question 2 above. Alternative sites for large scale development within Bury do not exist without encroaching into Green Belt.</p> <p>Proceed to the Exception Test.</p>

Summary

- 4.2 Adapting to the reality of flood risk in Bury requires ensuring that risks of flooding in the future are integrated into the planning process through the Core Strategy and other LDF documents and through the determination of individual proposals at planning application stage. Planning has a vital role to play in avoiding and reducing flood risk that could otherwise arise in the future.
- 4.3 It is important that the Core Strategy can deliver growth and meet economic, social and environmental objectives in both the short term as well as the long term, to meet the needs of future generations. However it is also important that flood risk to people, property, the economy and the environment from flooding, is factored into the planning system.
- 4.4 The Sequential Test has demonstrated that in terms of residential development, Radcliffe has a significant proportion of land identified for residential use located within Flood Zones 2 and 3 (42.1%). In addition, 22.1ha of land identified for residential development in Radcliffe is at risk from surface water flooding. However, vulnerability to surface water flooding is higher in Bury West, where 29.1ha of residential land is at risk.

- 4.5 The Sequential Test has demonstrated that 33.4% of the total area of employment sites in Bury East is within Flood Zones 2 and 3 and 4.6ha is at risk from surface water flooding.
- 4.6 Nevertheless, from a strategic point of view, as described in Question 2 in the Sequential Test above, there are many arguments why development should be considered within Flood Zones 2 and 3 in Bury:
- Developing outside Flood Zones 2 and 3 in the Borough will not assist the regeneration of deprived areas;
 - Developing outside Flood Zones 2 and 3 in the Borough would not achieve development aims of importance to the local and wider sub-regional economy and community;
 - Not developing sites in Flood Zones 2 and 3 in the Borough for housing will work against the objective of providing new better quality affordable housing in mixed tenure communities and may result in Bury failing to meet its housing target, as it is unlikely that enough suitable sites will become available by 2029 solely in Flood Zone 1;
 - Not developing in Flood Zones 2 and 3 in the Borough for employment uses and industry will work against the objective of supporting business creation and growth and improving access to jobs for local people. It may also prevent the development of important services required by the local community; and
 - Even where sites do become available in Flood Zone 1, their development capacity is likely to be generally limited, given the low level of transport access and more greenfield/Greenbelt nature of these areas.
- 4.7 Spreading growth and development throughout the Borough is a key aim of the Core Strategy's locational approach and has been found to be consistent with the Core Strategy's strategic objectives, national planning policy and the ambitions of the Community Strategy. It is considered that developing outside Flood Zones 2 and 3 would not achieve development aims of importance to Bury's economy and local communities.
- 4.8 This is not to say that all development in Flood Zones 2 and 3 will be appropriate and should be permitted. All applications in flood risk areas will need to provide site specific FRAs which set out in detail the arguments for locating a particular scheme in Flood Zones 2 and 3. In particular a FRA will need to set out how the development has been located and designed to minimise the probability and consequences of flooding. More vulnerable uses will also need to meet the two parts of the NPPF Exception Test, as set out in national policy and outlined in Section 5 of this report.

- 4.9 It is recommended that the Sequential Approach is applied to individual sites in areas of flood risk to ensure sites of lowest flood risk are developed first. Where necessary, the Exception Test would provide a valid means of justifying sustainable exceptional development in flood risk areas, ensuring that the development is safe for its lifetime and will not increase flood risk elsewhere, and where possible, reduces risk overall.

5 Exception Test

- 5.1 The Exception Test provides a method of managing flood risk while still allowing necessary development to occur. The Exception Test is only appropriate for use when there are large areas in Flood Zones 2 and 3.
- 5.2 The purpose of the Exception Test is to ensure that new development is only permitted in medium and high flood risk areas where flood risk is clearly outweighed by other sustainability factors and where the development will be safe during its lifetime, considering climate change.
- 5.3 The Exception Test comprises two criteria:

- | |
|--|
| (a) Wider Sustainability Benefits to the Community |
| (b) Safe from Flood Risk |

- 5.4 Both criteria must be satisfied before a development may be considered appropriate within an area of medium or high flood risk (Flood Zones 2 and 3). The Council have identified the factors that need to be considered for part (a), however part (b) of the Exception Test must be demonstrated through a site specific Flood Risk Assessment produced by the developer and approved by the Environment Agency.

Part (a) Wider Sustainability to the Community

- 5.5 Part (a) of the Exception Test requires new development to demonstrate that it provides wider sustainability benefits to the community that outweigh flood risk, informed by the SFRA where one has been prepared.
- 5.6 The Sustainability Appraisal (SA) of the Core Strategy uses a framework of objectives to assess any aspect of the Core Strategy and the sustainability impacts of the Plan as a whole. These are included in Table 1.4 below. Individual developments should be scored against these sustainability criteria to determine whether they will provide wider sustainability benefits to the community that outweigh the flood risk and satisfy part (a) of the Exception Test. Where a development fails to score positively against the SA, the Council may consider planning conditions or Section 106 Obligations.

Table 1.4 Bury's Sustainability Appraisal Framework

Bury Sustainability Appraisal Objectives	
1	To reduce poverty and social exclusion
2	To improve physical and mental health and reduce health inequalities
3	To improve the education and skills of the overall population and to provide opportunities for life long learning
4	To improve access to good quality, affordable and resource efficient housing
5	To reduce crime, disorder and the fear of crime
6	To offer everybody the opportunity for quality employment
7	To improve accessibility for all to essential services and facilities
8	To reduce the need to travel, improve choice and use of sustainable transport modes and encourage efficient patterns of movement in support of economic grow
9	To protect and improve the quality of controlled waters in Bury and to sustainably manage water resources
10	To protect and improve air quality
11	To protect, enhance and restore biodiversity, flora and fauna, geological and geomorphological features
12	To protect and enhance and make accessible for enjoyment, the diversity and distinctiveness of landscapes, townscapes, the countryside and the historic environment
13	To reduce contributions to and promote adaptation to the impacts of climate change
14	To reduce vulnerability to and sustainably manage and adapt to flood risk in Bury
15	To minimise the requirement for energy use, promote efficient energy use and increase the use of energy from renewable resources
16	To manage waste sustainably, minimise waste, its production and increase re-use, recycling and recovery rates?
17	To conserve soil resources and reduce land contamination
18	To support a strong, diverse, vibrant and sustainable local economy to foster balanced economic growth across Bury

Part (b) Safe from Flood Risk

- 5.7 Part (b) of the Exception Test requires submission of a Flood Risk Assessment (FRA) which 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.
- 5.8 There are a number of ways a new development can be made safe:
- Avoiding flood risk by not developing in areas at risk from flooding;
 - Substituting higher vulnerability land uses for lower vulnerability uses in high flood risk locations and locating higher vulnerability uses in areas of lower risk on a strategic scale, or on a site basis;
 - Ensuring safe access and egress;
 - Providing adequate flood risk management infrastructure which will be maintained for the lifetime of the development; and
 - Mitigating the potential impacts of flooding through design and resilient construction.
- 5.9 National guidance on flood risk provides guidance for providing safe development.
- 5.10 The definition of 'safe' should be clarified and agreed between the Council and the Environment Agency and may require additional considerations, depending on the precise nature of the proposed development and flood risk, on a site by site basis.

6 Conclusions and Recommendations

Sequential Test

Summary of Findings

- 6.1 All types of future development within Prestwich are sequentially appropriate in accordance with the NPPF.
- 6.2 The Ramsbottom, Tottington and North Manor, Bury West, Bury East, Radcliffe and Whitefield and Unsworth Townships are located in Flood Zones 1, 2 and 3. The majority of areas proposed for new development are located in Flood Zones 1.
- 6.3 Alternative areas have been considered, to accommodate the development proposed for those areas in Flood Zones 2 and 3, however it has been demonstrated that whilst the Townships identified for growth in the Core Strategy contain some sites that are not sequentially preferable sites in flood risk terms, the delivery of these sites have a vital role to play in ensuring that residential and employment land requirements are met in the Borough and to help achieve mixed and balanced sustainable communities in Bury.
- 6.4 The Sequential Test results also indicate that given the Green Belt constraints in Bury and the limited availability of alternative regeneration sites in urban areas, directing development onto previously developed land in the identified urban areas offers the most sustainable approach to development in the Borough.
- 6.5 Overall the results of the Sequential Test provide strategic justification for why development in Bury needs to occur within areas at risk of flooding.
- 6.6 However, in the light of the flood risk posed to the Ramsbottom, Tottington and North Manor, Bury West, Bury East, Radcliffe and Whitefield and Unsworth Townships it is highly likely that passing of both elements of the Exception Test will be required for a number of future development sites within these areas.

Windfall Sites

- 6.7 Windfall Sites are sites which become available for development unexpectedly and are therefore not included as allocated land in a planning authority's development plan.
- 6.8 Should a windfall site come forward in Bury, the Sequential Test should be applied on an individual site basis and the developer will need to provide evidence to Bury Council that they have adequately considered other reasonably available sites. This will involve considering windfall sites against other sites allocated as suitable for development and included within this report.

- 6.9 The following steps should be taken for windfall sites:
- Identify if the sequential test is required – the NPPF states that if the application is minor development or for a change of use, the Sequential and Exception Test are not required. The application will still need to meet the requirements of an FRA as set out in national guidance;
 - If the Sequential Test is required, identify which Flood Zone the site is located within;
 - Agree scope and considerations for the site specific Sequential Test (and Exception Test if necessary), with Bury Council and Environment Agency.

Recommendations

- 6.10 From a strategic viewpoint it has been demonstrated that there are no suitable alternative areas of low flood risk (Flood Zone 1) that can address the important social, economic and environmental issues within the Borough and achieve mixed and balanced sustainable communities in Bury in line with national policy.
- 6.11 It is clear that virtually all available land in the urban area is required to meet the targets for residential and employment development and so it will be difficult to find suitable alternative sites outside areas of flood risk, without developing on Green Belt land. As such, as much as 20% of new residential and employment development could ultimately be located within Flood Zones 2 or 3, meaning flood mitigation will become crucial. However, it is recommended that those sites not in Flood Zones 2 or 3 should be prioritised for development, allowing time for other options to come forward to replace those sites in Flood Zones 2 and, in particular, Flood Zone 3.
- 6.12 For proposals identified as More or Highly Vulnerable on sites in Flood Zone 2 or 3, the Exception Test should be carried out, in order to demonstrate that the development will be safe in the event of a flood and that the benefits of the development outweigh the flood risk. The Exception Test will have to be passed to permit development.
- 6.13 Within each flood zone, new development should be directed to sites with the lowest probability of flooding. In addition, the flood vulnerability of the intended use should be matched to the flood risk of the site, e.g. higher vulnerability uses should be situated in those parts of the site with the lowest probability of flooding.

Bury Core Strategy

- 6.14 The flood risk strategy for Bury identified in the Publication Core Strategy (July 2013) reflects the recommendations identified above and incorporates the flood risk management hierarchy as described in Figure 1.5.

Figure 1.5: Flood Risk Management Hierarchy

Step 1	Step 2	Step 3	Step 4	Step 5
Assess	Avoid	Substitute	Control	Mitigate
Appropriate flood risk assessment	Apply the sequential approach	Apply the sequential test at site level	e.g. SuDs, design, defences	e.g. flood resilient construction

- 6.15 Core Strategy Policy EN7: New Development and Flood Risk, seeks to ensure that new development complies with the flood risk management hierarchy, is not subject to unacceptable levels of risk, does not result in increased flood risk elsewhere and, where possible, achieves reductions in flood risk overall.
- 6.16 The Core Strategy states that all proposals for new development are:
- in accordance with the principles set out in national policy and practice guidance;
 - in line with the recommendations set out in the SFRA; and
 - supported by a detailed Flood Risk Assessment (FRA) where it involves:
 - Development within fluvial flood zones 3 and 2;
 - Development on sites of 1 hectare or above within fluvial flood zone 1;
 - Development of a site of 0.5 hectares or above within a Critical Drainage Area (CDA) as identified by the SFRA;
 - Development within the Manchester, Bolton Bury Canal Hazard Zone; or
 - A change of use to a more vulnerable use within an identified area of flood risk.

- 6.17 Policy EN7 indicates that the scope of any FRA should accord with the requirements set out in national policy and technical guidance on flood risk.
- 6.18 Where a site becomes unexpectedly available for development as a windfall site, the sequential test area of search should follow the broad development locations outlined within Core Strategy Policy SF1: Bury's Spatial Framework.

Flood Risk Regulations (2009) and Flood and Water Management Act 2010

- 6.19 The Flood Risk Regulations (2009) required the Council to produce a Preliminary Flood Risk Assessment and identify flood risk areas in 2011⁹. In addition, the Council is required to produce flood hazard maps and flood risk management plans by 2015.
- 6.20 As part of its duty under the Flood and Water Management Act 2010, the Council as 'Lead Local Flood Authority' is required to manage local flood risk and produce a Local Flood Risk Management Strategy. A draft Strategy has been produced and will be consulted upon in the Autumn.
- 6.21 It is recommended that the information collated to meet these responsibilities is used to increase knowledge of flood risk throughout the Borough and begin to identify how this risk can be managed.

Emergency Planning

- 6.22 It is recommended that the Bury Emergency Planning Team are involved throughout the planning process to ensure that, where necessary, strategies are put in place and the Emergency Plan adapted in order to direct people to safety during times of flood.
- 6.23 Flood evacuation plans for individual developments should also be developed through liaison with the emergency planners and emergency services.

⁹ Bury Council Preliminary Flood Risk Assessment, JBA Consulting, May 2011



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