Mansfield
District Council

Addendum to the Strategic Flood Risk Assessment

March 2018

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Mansfield
District Council

Contents

1 About the Mansfield District SFRA

What is a Strategic Flood Risk Assessment?

1.1 Local Planning Authorities like Mansfield District Council (MDC) are required to produce a Strategic Flood Risk Assessment (SFRA) as determined by the National Planning Policy Framework (NPPF). An SFRA is a necessary evidence document used to inform where development should go (as informed by the 'Sequential Test') and to inform policy and policy guidance formulation for the Local Plan. As part of the preparation of developing the Local Plan, information in the SFRA is also used to inform the Sustainability Appraisal process used to ensure that the Local Plan is sound[(1)].

1.2 The Mansfield District SFRA was written in 2008 by the consultancy RPS, as commissioned by Mansfield District Council's Planning Policy team, and in partnership with the Environment Agency; Severn Trent Water, Nottinghamshire Wildlife Trust, and the Mansfield District Citizen's Panel (2007). The Mansfield District Council SFRA includes a 'Guide for Planners and Developers' and a 'Technical Report'. For more detailed information on Strategic Flood Risk Assessments and planning policy, please see the National Planning Policy Guidance website: planningguidance.planningportal.gov.uk.

1.3 The 2008 SFRA covers the following issues as guided by National Planning Policy Guidance and the National Planning Policy Framework:

A) SFRA Guide for Planners and Developers

- Sets out and applies the guidance and legislation required to inform the SFRA (Section 3).
- Identifies the areas of flood risk from rivers and streams considering the presence and absence of flood defences and flood risk from other sources, consolidating these into maps in order to facilitate the application of the Sequential Test (Various sections and appendices). Section 5.2 addresses the Sequential Test.
- Considers the of risk of flooding from reservoirs (Section 4.5)
- Considers the impacts from climate change (Sections 4.5 and 4.8)

1 The Sustainability Appraisal's role is to promote sustainable development by assessing the extent to which the emerging plan, when judged against reasonable alternatives, will help to achieve relevant environmental, economic and social objectives. This process is an opportunity to consider ways by which the plan can contribute to improvements in environmental, social and economic conditions, as well as a means of identifying and mitigating any potential adverse effects that the plan might otherwise have. The SA should guide the application of the 'Sequential Test'

- Summarises the flood risk along River Maun and River Meden and constraints to development (Section 4.4 & Table 4.4 - River Meden and Section 4.5 & Table 4.5 - River Maun).

- Addresses Water Framework directive objectives by, for example, identifying opportunities where culverts could be reinstated as open channels for improved biodiversity and where surface water run-off from development could assist to replenish areas of low flow (Section 4).

- Sets out a 'Flood Risk Assessment Code of Practice' (Section 5.3 & Figure 5.2) and a 'SuDS Code of Practice' (Section 5.4 & Figure 5.3).

B) The SFRA Technical Report

- Explains the how the historic and computer modelled data informed the SFRA and gives a more in-depth look at how this information was applied (Sections 2 & 3).

- Includes a 'Biodiversity Enhancement Strategy' identifying a range of opportunities to improve wetland habitats and overall health of the water environment including water quality (Section 4).

C) Appendices

1.4 There is also a series of Appendices that demonstrate the following:

- Maps showing where flood risk has been identified (D to F) including Environment Agency Flood Risk Zones and indicative areas of flood risk from water courses and areas prone to significant areas of surface water run-off.
- Location and description of culverts (Appendix G - Key Structures)
- Map showing water courses with low flow water issues (Appendix H)
- Map showing designated sites for nature conservation and culverts identified for specific enhancement needs (e.g. to restore to open water courses to improve movement for wildlife) (Appendix I - Ecology)
- Map showing key areas within the Biodiversity Enhancement Strategy (Appendix J - Biodiversity Enhancement Strategy)

1.5 A summary of flood risk from a district-wide perspective can be found in Section 4.7 of the SFRA - 'Guide to Planners and Developers'.

2 Why are we doing an addendum report?

2.1 The following addendum to the Mansfield District Council (MDC) Strategic Flood Risk Assessment (SFRA) June 2008 is to ensure that:

- The SFRA evidence base for the MDC Local Plan is consistent with changes in the National Planning Policy Framework (NPPF 2012) and other relevant government policy, guidance and legislation;
- The strategic issue of flood risk with regards to Duty to Co-operate[2] is sufficiently addressed; and
- The overall document is up-to-date and adequately addresses strategic flood risk and related issues in the district.

2.2 This addendum was originally produced in October 2014 and was circulated as part of a targeted consultation (October -December 2014) with statutory consultees such as the Environment Agency, Nottinghamshire County Council and Natural England and adjoining local authorities and parish councils. Responses are summarised in Appendices 5-7 of this Addendum. In addition, changes to national guidance (occurring between December 2014 and January 2016) have been incorporated into this addendum, helping to inform the consultation draft of the Local Plan (January 2016).

2.3 Further amendments were made to the document in January 2018 to take account of comments submitted by the Lead Local Flood Risk Authority (Nottinghamshire County Council) during the Local Plan consultation (2016) and updates to the Environment Agency's Climate Change Allowances (2016).

2.4 A separate flood risk review of the Mansfield Central Area also provides essential SFRA updates. This was a response to comments from the Environment Agency during the 2016 local plan consultation. This area covers a section of the the River Maun from the historic railway viaduct at Quarry Lane to Sandy Lane near Carr Bank Park. It includes the Mansfield town centre and regeneration areas in and around the following areas: White Hart Street/Bridge Street, the former Mansfield Brewery and Riverside (a culverted section of the River Maun between the A60 ring road, Littleworth and Great Central Road and the A6191). A map of the study area is provided in Appendix 8. The approach to the flood risk review based on a holistic study of flood risk including fluvial flooding, flooding from other sources and impacts as a result of climate change allowances. This involved 1D/2D hydraulic modelling of the River Maun, a river channel survey and flood risk and environmental enhancement opportunities.

2.5 Further Environment Agency updates to flood zones within the River Maun corridor are expected in 2018/2019.

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2 http://planningguidance.planningportal.gov.uk/blog/guidance/duty-to-cooperate/what-is-the-duty-to-cooperate-and-what-does-it-require/

2.6 As part of the 2014 consultation on this SFRA Addendum, a mandatory question was asked of all consultees (Section 8). This focused on identifying any cross-boundary and/or strategic issues that had not been addressed through the SFRA and the draft Addendum. This was also important for helping identify ways of working together, as part of the Council's obligations under the 'Duty to Cooperate'. It is the 'common sense' approach needed to adequately address flood risk and improvements to river health and the its wildlife.

2.7 This SFRA Addendum should be read alongside the Mansfield District SFRA published in June 2008 (www.mansfield.gov.uk/localplan). It is an important evidence base and guidance document for informing decisions taken as part of the Mansfield District Local Plan and planning applications.

2.8 The SFRA Addendum covers the following points:

- a summary of what the Mansfield Strategic Flood Risk Assessment (SFRA) contains
- updates to the SFRA resulting from significant changes in legislation, policy and/or important guidance documents, including climate change allowances
- demonstrating regard for the Water Framework Directive and the Humber River Basin Management Plan
- updates to two SFRA Codes of Practice (Sustainable Drainage Systems & Flood Risk Assessment) and the Biodiversity Enhancement Strategy
- updates to Mapping Evidence and Corresponding SFRA Appendices Maps and
- updates to River Meden and River Maun Catchments and Surface Water Flooding in the District and adjoining areas.

3 Updates to the SFRA resulting from significant changes in legislation, policy and important guidance documents

3.1 The following documents are important for guiding the SFRA approach and for informing its overall content as an evidence base for the Mansfield District Council Local Plan, that have changed or did not exists at the time the SFRA was written.

A) The National Planning Policy Framework (NPPF) 2012 & the National Planning Policy Guidance (NPPG) 2014 (and as updated)

3.2 Policy in the NPPF and policy guidance in the NPPG replace previous policy and guidance in Planning Policy Statement (PPS) 25.

3.3 Fundamentally, PPS25 and NPPF/NPPG appear to have similar policy approaches, and as such, the Mansfield SFRA (2008) planning guidance on flooding is still based on relevant principles. **Nonetheless, the National Planning Policy Framework (NPPF) and its companion web-based guidance NPPG, replace all PPS25 references and guidance in the Mansfield SFRA (2008). Planned updates to the NPPF (draft March 2018) will need to be considered, as and when they are adopted. Please note that these changes may replace some wording quoted below from the NPPF 2012 version.**

3.4 There is one notable change to the 2008 SFRA that should be highlighted. In the SFRA's - Guide to Planners, wording in Section 5 indicates that 'flooding must be addressed as a material planning consideration for all major developments greater than 1 ha and for all development within Flood Zones 2 & 3.'

3.5 Rather, the approach should focus on applying the Sequential Test to most development (see below) and consider flooding from all sources, including surface water run-off. Any reference to specific size thresholds in the NPPF/NPPG is associated with requirements for site specific flood risk assessments (Paragraph 103, footnote 20). This is supported by NPPF paragraph 101 that emphasises that the '*sequential approach should be used in areas known to be at risk from any form of flooding.*'

3.6 Most minor developments and changes of use, with exceptions[3], are not subject to the Sequential or the Exceptions tests 'but should still meet the requirements for site-specific flood risk assessments' (paragraph 104 and footnote 22). The requirement for site specific flood risk assessments (FRAs) is guided by Paragraph 103.

3.7 NPPF paragraph 103 states that:

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3 *'Except for proposals involving a change of use to a caravan, camping or chalet site, or to a mobile home or park home site, where the Sequential and Exception tests should be applied as appropriate'*

3.8 '*When determining planning applications, local planning authorities should ensure flood risk is not increased elsewhere and only consider development appropriate in areas at risk of flooding where, informed by a site-specific flood risk assessment following the Sequential Test, and if required the Exception Test, it can be demonstrated that:*

- *within the site, the most vulnerable development is located in areas of lowest flood risk unless there are overriding reasons to prefer a different location; and*
- *development is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed, including by emergency planning; and it gives priority to the use of sustainable drainage systems.*'

3.9 Guidance for planning applications regarding safe access to emergency services is available in Appendix 4 of this SFRA Addendum.

3.10 Footnote 20 to Paragraph 103 defines when site specific FRAs are required. This includes development proposals of:

- '*1 hectare or greater in Flood Zone 1 [surface water flood risk]*
- *all proposals for new development (including minor development and change of use) in Flood Zones 2 and 3, or in an area within Flood Zone 1 which has critical drainage problems (as notified to the local planning authority by the Environment Agency) and*
- *where proposed development or a change of use to a more vulnerable class may be subject to other sources of flooding.*'

3.11 As quoted above, the NPPF prioritises the integration of sustainable drainage systems in all development (para. 103). Section 5 of this Addendum provides further detailed information regarding sustainable drainage system (SuDS) in relation to new development.

3.12 If an Exception Test is required, one of the requirements is to demonstrated that development can provide wider sustainability benefits to the community that outweigh flood risk overall (NPPF paragraph 102). The SFRA (2008) and the Mansfield Central Area Flood Risk Review (Feb 2018) provide recommendations for consideration when applying the Exception Test. Additionally, the Council's Sustainability Appraisal and Green Infrastructure Study should also be used to inform the process.

B) Trent River Catchment Flood Management Plan (CFMP)

3.13 The SFRA (Guide for Planners and Developers Section 3) refers to the draft Trent River CFMP version. This is now replaced by the final Trent River CFMP (December 2010).

3.14 Mansfield District still sits within the Sherwood sub-area (Policy Unit 2) and falls within selected Policy Option 3, indicating that flood risk in the district has not changed and is still low to moderate.

3.15 The selected policy for this unit is states: '*Continue with existing or alternative actions to manage flood risk at the current level (accepting that flood risk will increase over time from this baseline)'.* Changes to this baseline are likely to be impacted by climate change and cumulative impact from development.

3.16 Required actions for Policy Option 3 are presented in an action plan summary table in the Trent River CFMP (pages 324 to 326). This final table should now be considered instead of the draft Trent CFMP summary action table in the SFRA (as shown in Table 3.1 – Extract from the River Trent CFMP).

3.17 Overall, the policy actions in the 2010 Trent River CFMP, of which principally relate to local authorities, are similar to the previous 2007 draft version and, thus the SFRA recommendations remain unchanged.

C) Climate Change Guidance

3.18 Making allowances for climate change in flood risk assessments helps to minimise vulnerability and provides resilience to flooding and coastal change in the future. The climate change allowances are predictions of anticipated change for:

- peak river flow by river basin
- district peak rainfall intensity
- sea level rise
- offshore wind speed and
- extreme wave height.

3.19 They are based on climate change projections and different scenarios of carbon dioxide (CO_2) emissions to the atmosphere.

3.20 The NPPF and NPPG require that flood risk assessments (FRAs) demonstrate how flood risk will be managed now and over the development's lifetime, taking climate change into account. This is an important consideration when preparing local plans and also determining planning applications.

3.21 The most up-to-date climate change allowance guidance was issued by the Environment Agency in February 2016. The guidance includes new peak river flow allowances by river basin district. The Mansfield District administrative area lies within the Humber river basin district as the Rivers Maun and Meden and tributaries of the River Idle which converges with the River Trent at West Stockwith and ultimately drains into the North Sea via the Humber.

3.22 The new guidance provides a range of allowances on fluvial flows for the Humber River Basin District as set out in the table below. Guidance is provided on the allowance to be used based on the vulnerability classification of the proposed development (as set out in Table 2 of the NPPG) and the location of the development in terms of flood zones.

River Basin	Allowance catergory	Total potential change anticipated for the 2020s (2015 to 2039)	Total potential change anticipated for the 2050s (2040 to 2069)	Total potential change anticipated for the 2080s (2070 to 2115)
Humber	Upper end	20%	30%	50%
	Higher central	15%	20%	30%
	Central	10%	15%	20%

3.23 This updates overall guidance considering impacts from climate change on flood risk for the SFRA. It replaces '*Table 4.12: Considerations of Climate Change*' in the SFRA.

3.24 The emerging Mansfield District Local Plan 2013-2033 allocates sites for development, of which the majority of preferred sites are outside Flood Zones 2 and 3 (i.e. 1 out of 64); thus, the risk of flooding from rivers is very low. For the one site that is within the fluvial flood zones, it has been concluded the net developable area can be reasonably located outside flood zones 2 and 3. This has been confirmed with the Environment Agency during October-November 2017 public consultation on preferred sites. The Site Selection Paper (2018) for the Mansfield District Council Local Plan include further information as to the above sites.

3.25 Additionally, the Mansfield Central Area Flood Risk Review and Mansfield Central Area Hydraulic Modelling Report, which update the SFRA with regards to flooding issues within centrally located regeneration areas, takes into account these updated climate change allowances.

Conclusion

3.26 It is considered that, at this time, no SFRA mapping updates (i.e. Appendix Map E - 100 yr modelled flood considering climate changes) are required as there are no significant fluvial flood risk issues identified and there are no preferred sites planned for allocation of which are particularly sensitive to flood risk or located within a vulnerable location. Where new development is located within or within close proximity to flood zones 2 and 3, the up-to-date climate change allowances must be applied through site specific FRAs as part of the planning application process on a site-by-site basis.

D) The East Midlands Regional Plan

3.27 The East Midlands Regional Plan (RSS8) published in September 2006 was abolished on 12th April 2013, therefore the policy references and related regional targets as stated in the Guide for Planners and Developers Section 3 are out of date and no longer relevant.

3.28 The issues covered by the RSS8 are still important but are sufficiently addressed through the requirements as stated in the NPPF and NPPG and through the application of the Sustainability Appraisal process.

E) The Flood Estimation Handbook (FEH)

3.29 The SFRA states that 'where proposed developments are considering the impact of surface water run-off, it is important that they consider an appropriate increase in rainfall intensity, based on the design of the proposed development' and that 'this percentage increase should be applied to the design rainfall obtained from the FEH' (SFRA Section 4, paragraph 4.8.3). This is a large and technical document. The Environment Agency now provides a more user-friendly guidance document for planners and developers and also provides an on-line tool for estimating storm water storage design requirements. The whole process is aimed at avoiding having to reference other documents or use other software design packages when first considering these impacts. The following guidance and web-based tool can be used alongside the guidance provided in the FEH when more detailed modelling is necessary at a more advanced design stage of a planning application.

3.30 The following guidance and tool should be referenced and used to address impacts from surface water run-off: '*Rainfall runoff management for developments (Environment Agency Report – SC030219) October 2013*[4]' and the website http://www.uksuds.com. Please note that this does not address flood risk from rivers or changes in flood storage and that this is an assessment tool to be used at the initial design and planning stage to assist with estimating indicative volumes. Additional software may be required to provide more technical design solutions.

3.31 This update does not fundamentally impact the findings or advice in the SFRA, but merely improves upon the guidance within it. Please see also Section 5 (B) regarding peak flow and volume standards for sustainable drainage system.

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4 *Environment Agency. October 2013. Rainfall runoff management for developments (Report – SC030219). Flood and Coastal Risk Management Research and Development Programme.*

F) Preliminary Flood Risk Assessment (2011), Flood Risk Management & Surface Water Management Plans

Preliminary Flood Risk Assessment

3.32 Nottinghamshire County Council, as an upper tier local authority, is required by the Flood Risk Regulations (2009) to prepare a Preliminary Flood Risk Assessment (PFRA). The PFRA is a high level screening exercise for identifying areas where there is significant flood risk, in national terms, for reporting to Europe. These significant areas are known as Flood Risk Areas (FRA). The PFRA covers the risk of flooding from local sources, namely ordinary watercourses, surface water (overland runoff) and groundwater. It does not directly consider flooding from main rivers. The Environment Agency defines the Maun and River as 'main rivers'.

3.33 According to the Nottinghamshire PFRA (June 2011), Mansfield district does not fall within a nationally significant Flood Risk Area (neither for surface water or ordinary water course). This means that **there are no areas of national concern related to any recognised significant impacts from flood risk.**

Flood Risk Management Plans

3.34 Flood Risk Management Plans (FRMPs) highlight the hazards and risks of flooding from rivers, the sea, surface water, groundwater and reservoirs. They also set out how Risk Management Authorities (RMAs) should work together with organisations and communities to manage flood risk. The RMAs covering issues related to Mansfield district include: Nottinghamshire County Council, as lead local flood authority for Nottinghamshire, and the Environment Agency.

3.35 The Nottinghamshire (Local) FRMP is focused at the county level. It considers flood risk across the county, the measures needed to manage flooding and how such measures will be funded. Nottinghamshire County Council (NCC) has prepared the Nottinghamshire Local Flood Risk Management Strategy (LFRMS) 2016-2021 for the county. Mansfield District Council has worked closely with NCC as a member of the steering group for this strategy and will continue to do so as the Local Plan progresses. An overall partnership approach is taken within the LFRMS to address flood issues. NCC sets out a LFRMS action plan, including identifying capital schemes to address specific flood issues; this is monitored and reviewed by NCC. The following table summaries the Nottinghamshire LFRMS outcomes relation to flood risk for Mansfield district:

Issue explored in Nottinghamshire LFRMS 2016-2021	Summary of comments in relation to Mansfield District	SRFA Addendum actions
Surface water and sewer flooding	Within heavily urbanised areas, there is rapid surface water runoff and complicated interactions with the private sewer and highway networks and culverted and unculverted water courses which can cause further surface water flooding.	Acknowledge the Appendix F and LFRMS comments in relation to surface water flood risk as part of this SFRA Addendum.

Issue explored in Nottinghamshire LFRMS 2016-2021	Summary of comments in relation to Mansfield District	SRFA Addendum actions
	During 2014-2015, Mansfield, Hucknall and Retford where areas identified as having the greatest number of reported flooding events (2014-2015) from blocked manhole covers and drains based on NCC customer service centre records (Highways Assessment Management System). The majority of properties affected by surface water flooding (those falling within EA flood surface water flood risk mapping) fall within low risk (73.1%), followed by 20.2% in areas of medium surface water flood risk and 6.7% within low surface water flood risk. NCC identifies that all districts have significant numbers of properties at high risk of surface water flooding. Appendix F details the number of properties affected by surface water flood risk (2015 EA data).	This SFRA Addendum's Section 7 and Appendices 1 and 2 further identify specific areas in Mansfield district where surface water flooding should be more specifically addressed.
Historic flooding	Various events are identified in relation surface water, sewer and river flooding incidents within Mansfield district. Historic events (up to 2011) are recognised in a county-scaled map within the document (Figure A7a). Recent flood records (2012 to February 2015) are identified in Figure A7b. NCC's assessment identified 40 recorded flood incidents of multiple or combined sources between January 2012 and February 2015 based on records held by NCC. These are recorded on a map within the document.	Recognise these historic events in relation to the SRFA Addendum.
Groundwater flooding	No specific comments in relation to Mansfield district are made. NCC doesn't consider that groundwater flooding is a significant issue at a county level.	No specific updates to report in relation to the LRFMS.
Flooding from Rivers	No specific comments in relation to Mansfield district are made, as this generally falls within the remit of the Environment Agency	No specific updates to report in relation to the LRFMS.
Priority Flood Risk Locations	These were identified across Nottinghamshire based on where the greatest numbers of flood events have been recorded during 2012-2015 as well as those with longer records of historical flooding. The sources of flooding are largely attributed to a combination of surface water and ordinary watercourse flooding, although main river, groundwater and sewer flooding incidents have also been recorded. No specific areas within Mansfield District found other than within comments listed above. These are identified in Appendix A through various maps at a broader county scale.	Recognise maps within Appendix A. The EA surface water flood risk maps (2015) are also incorporated within this SFRA Addendum (see Section 7 and Appendices 1 and 2).

3.36 In addition to the 2016-2021 Nottinghamshire LRFMS, NCC produced a Section 19 Report in response to related flooding incidents 10th June 2016 from a heavy rainfall event, saturated ground conditions (due to general ground conditions, topography and increases in impermeable surfaces) and blocked drains within the western area of the district (e.g. Ladybrook and Penniment areas). Overall, the report recognises that the majority of the overall surface water drainage system in Mansfield has the capacity to cope, ensuring water is drained without causing flooding. This helps inform historic flooding incidents.

3.37 The Environment Agency (EA) is responsible for producing Flood Risk Management Plans (FRMP) covering main rivers, the sea and reservoirs. Mansfield district is contained within the Humber River Basin District, and within this the Idle and Torne River Catchment. The EA completed its consultation on a draft Humber River Basin District FRMP (October 2014 to January 2015) and it is imminently due to be published at the time of writing this report.

3.38 The Humber River Basin District FRMP, in its final form, will help deliver the requirements of the National Flood and Coastal Erosion Risk Management Strategy in England by setting out the measures to manage flood risk now and in the future. The FRMP will:

- Help develop and promote a better understanding of flood and coastal erosion risk.
- Provide information about the economic and environmental benefits to inform decision makers.
- Identify communities with the highest risk of flooding so that investment can be targeted at those in most need.

3.39 Findings from the draft Humber River Basin District FRMP relevant to the district highlight the following:

- Mansfield is affected by surface water and sewer flooding. These are reflected in the EA's surface water flooding maps.
- Across the catchment, changes in weather patterns with respect to impacts from climate change (e.g. localised heavy rainfall events), are likely to increase surface water flood risk and smaller rivers.
- Across the catchment, siltation and excessive nutrients from agriculture and sewer treatment inputs, within water courses, is a concern. This can, in turn, have negative impacts on flood risk management.
- Across the catchment, areas of low flows and higher temperatures can increase vegetation growth. This can, in turn, have negative impacts on flood risk management.
- Across the catchment, drainage works and dykes have created poor habitat for wildlife. For example, creating obstacles for fish to migrate effectively through rivers.

3.40 In relation to the above, there are no measures proposed over and above the EA's existing flood risk work, as it relates to Mansfield district.

3.41 In summary, there are no significant flood risk issues identified within Mansfield district. Rather, the Humber River Basin FRMP, recognises catchment-wide issues relating to surface water flooding, silting, areas of low flow and habitat improvement needs for the wider Idle and Torne River Catchment. These issues are sufficiently addressed in the Mansfield District SFRA and this SFRA Addendum. This conclusion has been confirmed through

discussions with the Environment Agency (as a result of the consultation on this document in December 2014 and other discussions) that there are no additional significant impacts on the SFRA to date.

Surface Water Management Plans

3.42 There are currently no Surface Water Management Plans in Nottinghamshire.

SFRA Summary Updates - Table 1

Overall Impact: Based on updates to the key policy and guidance documents (since 2008) as discussed in Section 3, it is concluded that the main principles of the SFRA are not significantly affected. The minor updates listed below improve the SFRA's role as a guidance document on both strategic and site-specific scales.

1. National Planning Policy Framework (NPPF) 2012 & Nationals Planning Policy Guidance 2014 (NPPG) replaces all references to the National Planning Policy Statement 25 (PPS25).

2. Unless exceptions in the NPPF are noted, development regardless of size needs to consider flooding from all sources and, where applicable, should address requirements through a site-specific flood risk assessment. See paragraphs 100 to 104 and applicable footnotes in the NPPF.

3. The 'action plan summary table' (Trent River CFMP, pages 324-326) for the Sherwood policy unit in the final Trent River Catchment Flood Management Plan (CFMP December 2010) replaces the draft Trent CFMP summary action table (as shown in Table 3.1 in the SFRA).

4. Updated Environment Agency (EA) climate change allowances (February 2016) replace Annex B from the Planning Policy Statement (PPS) 25 as referenced in Section 4.8 and table 4.12 of the SFRA. This more recent guidance is designed for planners and developers to implement NPPF policy and NPPG practice with regards to flood risk.

5. The East Midlands Regional Plan (RSS8) published in September 2006 was abolished on 12th April 2013, therefore the policy references and related regional targets as stated in the Guide for Planners and Developers Section 3 are out of date and no longer relevant.

6. The *Rainfall runoff management for developments (Environment Agency Report – SC030219) October 2013* publication document and the following website http://www.uksuds.com should be used in the initial planning design stage when considering the impact of surface water run-off. This considers the appropriate increase in rainfall intensity and greenfield run-off rates. This combined guidance and web-based tool provides a more user-friendly version to the Flood Estimation Handbook.

7. According to the Nottinghamshire Preliminary Flood Risk Assessment (PFRA), Mansfield does not fall within a nationally significant Flood Risk Area.

8. There is currently no *Surface Water Management Plan* produced for Nottinghamshire.

9. The Nottinghamshire FRMP (2016-2021) provides additional information with regards to historic flooding events and surface water flood maps which provide updates background information to the 2008 SFRA.

10. There are a few guidance documents currently available in draft form (e.g. Humber River Flood Risk Management Plan and Nottinghamshire FRMP). These final versions should be referred to as and when available. MDC will endeavour to monitor changes as they relate to significant changes to information in the 2008 SFRA and this Addendum.

Three: Updates to the SFRA resulting from significant changes in legislation, policy and important guidance documents

4 Demonstrating regard for the Water Framework Directive and the Humber River Basin Management Plan

What is the Water Framework Directive and the Humber River Basin Management Plan and why are they important?

4.1 The Water Framework Directive (WFD) came into effect in December 2000 and was enacted into law in December 2003. The Humber River Basin Management Plan (RBMP) was published in 2009 with a scheduled update in 2016. The WFD and Humber RBMP documents are material planning considerations.

4.2 The WFD sets out the requirement that nothing should be done to a water body (e.g. river, stream, and reservoir) that would cause its status to deteriorate. The status is based on its chemical health, biological health and physical characteristics.

4.3 The Humber RBMP is the main document that sets out actions or measures required to meet the WFD through a whole river catchment approach[5]. This is a very large and complex document. In summary, it identifies that Mansfield District sits within the Idle and Torne catchment which stretches from Ashfield district to southern Yorkshire and includes both the rivers Maun and Meden which are greatly affected by the urban areas they flow through. The Humber RBMP identifies that point source discharges of sewage from sewage works are key reasons for failure. Over abstraction and the fact that rivers and lakes have been straightened and altered for development, recreation and land drainage are also influencing factors that contribute to their reduced health.

4.4 The Environment Agency recognises that local government has a major role to play in implementing the the Humber RBMP. The plan identifies actions in which local planning authorities have a key role to play. These include:

- promoting water efficiency in local plans informed through a water cycle study;
- taking into account the objectives of the Humber RBMP;
- reducing the physical impacts of urban development on those watercourse that are heavily modified; and
- promoting the use of sustainable drainage systems (SuDS) in new development and retrofitting SuDS in priority areas.

4.5 Except for 'promoting water efficiency' these are all actions that the Mansfield SFRA and this Addendum address.

5 A 'river catchment' includes a main river and all the areas that drain into it and the environment that surrounds this area (i.e. watershed). A 'whole river catchment approach' involves looking at the whole health of this area and the influencing factors that influence this, for better and worse.

4.6 The Humber RBMP 'Annex C' explains these actions in more detail and 'Annex B' describes the status or health of each main watercourse and its tributaries (smaller sections that branch off from the main rivers).

4.7 The WFD includes the following objectives:

1. To achieve 'good' status for all water bodies by 2015 (or later dates of 2021 or 2027 subject to criteria set out in the directive)
2. Preventing deterioration in the status of water bodies
3. Reducing pollution from priority polluting substances
4. Preventing and/or limiting pollution input into groundwater
5. Conserving aquatic ecosystems, habitats and species
6. Mitigating the effects of floods and droughts on water bodies
7. Promoting sustainable use of water as a natural resource, and balancing abstraction and recharge.

4.8 As stated above, the role of the Humber RBMP is to further advance these objectives on a 'river catchment scale'.

4.9 Even though the SFRA doesn't explicitly reference the Water Framework Directive. **Together this Addendum and the 2008 SFRA, adequately address its main objectives, where feasible[6]. This part of the Addendum shows how the WFD and Humber RBMP have been considered and addressed. This is mainly achieved through the following areas of the SFRA.**

The Biodiversity Enhancement Strategy (BES) in the SFRA Technical Report

A) Restoring heavily modified sections of the River Maun

4.10 The BES prioritises particular culverts for restoration back to open watercourses to improve these areas for wildlife. This is primarily where a particular culvert acts as a barrier for movement for protected species such as water voles, white-clawed crayfish and (as per this Addendum) European otter. See Section 4.5 of the SFRA Technical Report and Appendix map F. The culverts identified in the SFRA are along the River Maun which is identified as River – R6 as indicated in the Humber RBMP Annex B. The River Maun (R6) is described as 'heavily modified' and its current and potential (by 2015) ecological status are assessed as 'moderate'.

4.11 Through consultation with the Environment Agency, this Addendum recognises that the following additions are required for the SFRA to demonstrate regard to the Water Framework Directive (WFD):

1. In addition to culverts, restoration of river courses should also address the removal of weirs and other redundant flood-related structures which have

6 The Mansfield District Council 'Water Cycle Scoping Study (2009)' further addresses water quality, supply and abstraction related WFD issues.

potential to affect flows. Weirs pose a significant barrier to fish and eel migration and the cause for failure reports for the River Maun have indicated that this is a major reason for failure. This applies to Section 4.5 of the SFRA Guide for Planners and Developers and Section 4.5 in the SFRA Technical Report and any other relevant SFRA references addressing the benefits of structure removal as it applies to biodiversity enhancements.

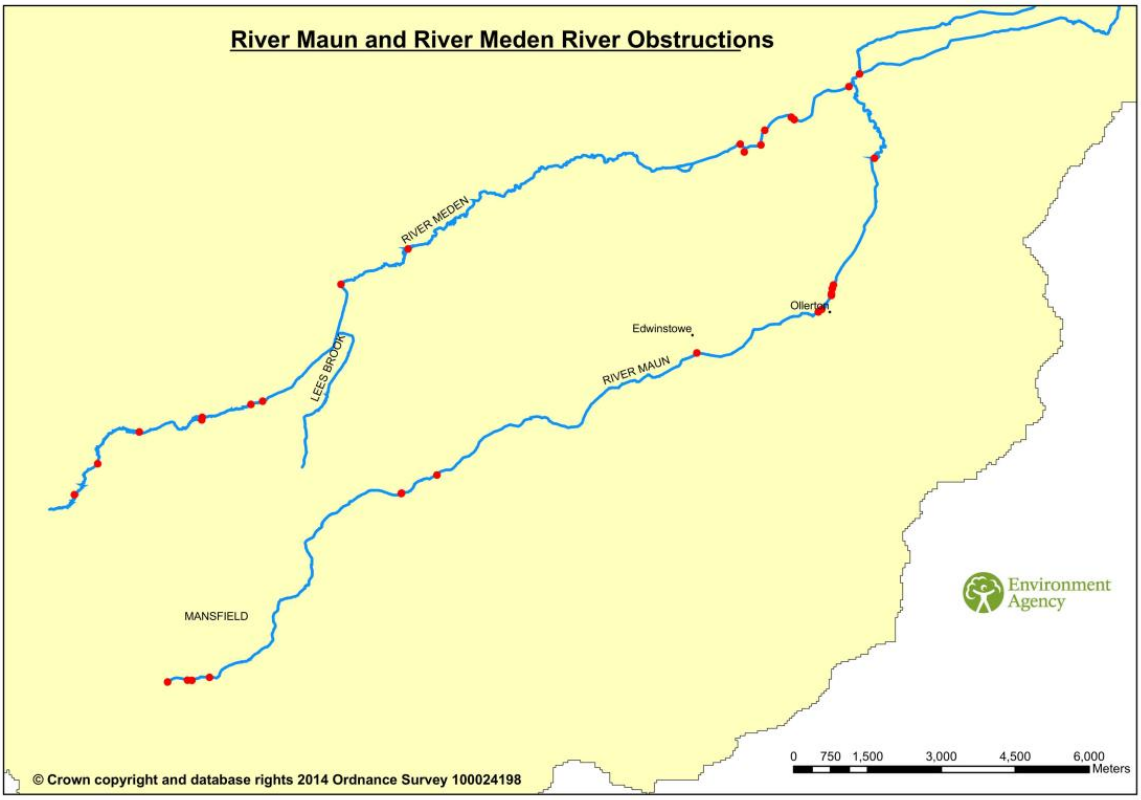
2. As noted above, culverts and weirs can act as barriers to fish and eel migration. As such, the removal and/or restoration of culverts and weirs, as part of river restoration measures, should consider the movement of fish and eel species. This applies to Section 4.5 of the SFRA Guide for Planners and Developers and Section 4.5 (namely Table 4.3) in the SFRA Technical Report and any other relevant SFRA references addressing the benefits of structure removal as it applies to biodiversity enhancements.
3. The WFD seeks to re-naturalise all rivers, regardless of cost and perceived feasibility. Therefore, prioritisation of watercourses shouldn't solely rely on what is currently there BUT should be based upon what is expected to be in a healthy river environment. In the case of the River Maun, the Environment Agency has identified that trout and eel BAP priority species are likely to be found within the areas indicated in paragraph 4.6.3 of the SFRA Technical Report (Section 4.5). Therefore, it would be expected that all areas of the river should be prioritised for restoration to benefit these species and any other affected species.

4.12 Consultation with the Environment Agency and Natural England should be sought regarding the above in order to ensure which priority species to consider and to comply with relevant standing advice, in their most up-to-date and relevant forms.

4.13 The restoration of all modified areas, regardless of costs and perceived feasibilities, of the River Maun will improve both the chemical and biological water quality (WFD Obj. 1), whilst conserving and enhancing habitats and species (WFD Obj. 5). Emphasis should be placed on expected biodiversity enhancements with positive benefits for restoring and enhancing all relevant species within a river. The removal of culverts, weirs and other redundant flood-related structures are also likely to provide an opportunity to mitigate flood risk in the long-term (WFD Obj. 6), in combination with the retrofitting of sustainable drainage systems (SuDS).

4.14 The image below shows existing river obstructions on the rivers Maun and Meden, as identified by the Environment Agency. The geographical coordinates are detailed after the Flood Risk Updates in this SFRA Addendum. This is an update to Appendix G in the SFRA.

Maun and Meden river obstructions



B) Restoring areas of low flow

4.15 Areas of low flows and opportunities to restore these flows have been identified as part of the BES (Section 4.7). Low water levels in watercourses can result in higher pollution levels and less water to successfully support plants and wildlife. These areas include Vicar Water, Rainworth Water and Foul Evil Brook, all tributaries (branches) of the River Maun. Also see Appendix map J. These are part of the River Maun identified as River – R6 and Rainworth Water to source – R5 as indicated in the Humber RBMP Annex B. R5 current ecological status is 'poor'.

4.16 Restoring flows to these areas would improve both the chemical and biological water quality (WFD Obj. 1), whilst conserving habitats and species (WFD Obj. 5). It is also likely to prevent further deterioration (WFD Obj. 2), mitigate the effects of droughts (WFD Obj. 6) and promote the sustainable use of water as a natural resource, and balancing abstraction and recharge (WFD Obj. 7).

C) Priority Areas for Green Sustainable Drainage System (SuDS)

4.17 The SFRA (Section 4.8) identifies priority areas for restoring habitats and enhancing water quality along sections of the Maun and Meden. These sections include:

1. River Maun between Kings Mill Reservoir and Cauldwell Brook

2. River Maun within the Maun Valley Local Nature Reserve (LNR) and
3. River Meden between Hills and Holes and Sookholme Brook SSSI and The Carrs Local Nature Reserve.

4.18 Also see Appendix map J. The River Meden is recognised as River - R7 in Annex B of the Humber RBMP. R7's current and potential (by 2015) ecological statuses are assessed as 'moderate' but the Annex gives no clear reasons for this status or actions for improvement.

4.19 The creation of green SuDS are likely to address WFD Obj. 1, 2 5 & 6.

Sustainable drainage system (SuDS) code of practice

4.20 Section 4.8 of the SFRA 'Technical Report', and sections 4.3 and 5.4 and Figure 5.3 of the SFRA 'Guide for Planners and Developers' promote the need for sustainable drainage systems (SuDS) with the need to demonstrate further detailed design techniques through the application of site specific FRAs, where required. These SFRA sections discuss the different types of SuDS and their general and individual benefits. This makes up the 2008 SFRA's SuDS Code of practice, as referred to in this Addendum (please see Section 5 of this Addendum for updates).

4.21 Section 4.8 in the Technical Report discusses that soakaway SuDS may not be suitable in areas sensitive to groundwater pollution (groundwater protection zones). The SuDS Code of Practice guides users through a process to help select an appropriate SuDS type (including green SuDS). It also aids design and considers, for example, infiltration, soil permeability, and land contamination.

4.22 In relation to areas of 'low flow' in the SFRA, it should be noted that care should be taken when designing SuDS in and around these areas. Design measures need to ensure that water quality is improved.

4.23 Designing in SuDS within new development early on in the planning process is essential, but the retro-fitting of SuDS may be appropriate within older developments, especially with where biodiversity gains can also be achieved. Appendix 1 - 'Flood Risk Updates' acknowledges where retro-fitting would likely bring positive benefits.

4.24 The SuDS Code of Practice and associated sections are likely to help address all WFD objectives listed above.

SFRA Summary Updates - Table 2

Overall Impact: The main principles of the SFRA are not significantly affected. The SFRA adequately addresses the key objectives set out in the Water Framework Directive (WFD) and the Humber River Basin Managment Plan (RBMP).
The following areas are likely to have positive impacts on the ecological status of the Rivers Maun and Meden and support WFD and Humber RBMP delivery: 1. Promoting and setting out guidance for the use of Sustainable Drainage Systems (SuDS) within new development through a SuDS Code of Practice. The Biodiversity Enhancement Strategy also identifies areas in which the

Overall Impact: The main principles of the SFRA are not significantly affected. The SFRA adequately addresses the key objectives set out in the Water Framework Directive (WFD) and the Humber River Basin Managment Plan (RBMP).
retrofitting of SuDS (e.g. Green SuDS Priority Areas and locations for prioritising culvert restoration) would be beneficial. 2. Identifying areas to restore heavily modified sections of the River Maun, to help restore connections for wildlife and improve the overall ecological health and flood alleviation. 3. Recognising the presence of ground water protection areas and how this needs to inform SuDS design. 4. Addressing the need for removing redundant flood structures (e.g. Culverts, weirs) to enhance river quality and species movement including migration. 5. Prioritising river re-naturalisation for the benefit of all species representative of a healthy river system in consultation with the Environment Agency and Natural England. 6. Identifying areas for improvement within sections of the River Maun with low flow problems resulting in improved water quality and new habitat creation for wildlife. 7. New development will need to show it considers the Water Framework Directive and the Humber River Basin Management Plan.

5 Updates to the SFRA Codes of Practice and the Biodiversity Enhancement Strategy

5.1 The following Codes of Practice are important tools included in the SFRA - 'Guide for Planners and Developers' (Section 5) and SFRA - 'Technical Report' (Section 4). These are designed to inform where development should go, its design and how flood risk can be avoided and mitigated. The Biodiversity Enhancement Strategy in the SFRA informs what is needed to improve the health of rivers and the wildlife it supports.

A) Flood Risk Assessment Code of Practice (COP)

5.2 This Flood Risk Assessment (FRA) Code of Practice was detailed in Section 5 and Figure 5.2 in the 2008 SFRA. An updated version of this can be found in Appendix 3 of this SFRA Addendum as noted below.

5.3 As noted in Section 3 of this Addendum, the National Planning Policy Framework (NPPF) and its companion web-based guidance NPPG, replace all former policy and guidance references in the Mansfield SFRA (2008).

5.4 Fundamentally, this change in policy reference doesn't significantly affect the findings in the SFRA, but does have minor implications for the Flood Risk Assessment COP in the SFRA Guide for Planners and Developers when relating this advice to the sequential test and site-specific flood risk assessment (FRA) requirements. See below.

5.5 There have also been flood risk mapping updates for the River Meden (zones 2 & 3) and flood risk associated with surface water run-off (zone 1) for the whole district. These are available on the Environment Agency's 'What's In Your Backyard' website[7]. This is explained in more detail in Section 6 of this SFRA Addendum.

5.6 Likewise, this change doesn't significantly affect the findings in the SFRA. There is a need for minor changes to the FRA COP flow chart relating to where key sources of information are now found. Changes are noted in the summary table below.

5.7 Overall, development should take into account flooding from all sources. The NPPG guidance urges that 'where surface water or other local flood risks are likely to significantly affect a proposed development site, early discussions between the planning authority and the developer will help to identify the flood risk issues that the authority would expect to see addressed in the planning application and accompanying site-specific flood risk assessment [as specified in the NPPF]'.

5.8 Footnote 20 to paragraph 103 in the National Planning Policy Framework (NPPF) states that '*a site-specific flood risk assessment is required for proposals of 1 hectare or greater in Flood Zone 1; all proposals for new development (including*

7 http://apps.environment-agency.gov.uk/wiyby/

minor development and change of use) in Flood Zones 2 and 3, or in an area within Flood Zone 1 which has critical drainage problems; and where proposed development or a change of use to a more vulnerable class may be subject to other sources of flooding.' **There are no known 'areas with critical drainage problems' in the district[8].**

5.9 An updated Flood Risk Assessment Code of Practice decision flow chart is available in Appendix 3 of this Addendum, taking into account minor changes in policy guidance and flood risk mapping since 2008. In addition, the National Planning Policy Guidance (NPPG) provides guidance on the sequential approach and also provides a site specific flood risk assessment check-list. Please see http://planningguidance.communities.gov.uk/. Table 4 below summarises the key updates to the FRA code of practice as originally described in the 2008 SFRA.

5.10 Guidance for planning applications regarding considerations for safe access to emergency services is available in Appendix 4 of this SFRA Addendum.

B) Sustainable Drainage Systems (SuDS) Code of Practice (COP)

5.11 Government guidance on SuDS is an evolving process. Following the Pitt Review (2007), proposals to increase the uptake of sustainable drainage systems in new developments were included in the Flood and Water Management Act 2010.

5.12 The National Planning Policy Framework (NPPF) and the National Planning Policy Guidance (NPPG) stress that new development should only be considered appropriate in areas at risk of flooding if priority has been given to the integration of SuDS (NPPG ref id: 7-051-20150323). SuDS are required for all major development[9], unless it is demonstrated to be inappropriate. Thus according to Government guidance, the integration of SuDS should be encouraged for all development but is specifically required for all major developments, unless demonstrated inappropriate.

5.13 In addition to the NPPF, the House of Commons: Written Statement (HCWS161) 18 December 2014 makes clear the Government's expectation that SuDS will be provided in new developments, wherever is appropriate, as stated above. This requirement took effect from 6th April 2015. It also states that local planning authorities should consult the relevant lead local flood authority on the management of surface water.

8 These are identified in Surface Water Management Plans in which Nottinghamshire County Council as the Lead Local Flood Risk Authority is responsible for writing.

9 This is defined in the Town and Country Planning (Development Management Practice) (England) order 2015. Major development is defined as the following: 1) residential development of 10 houses or more OR, where the number of houses is not specified, the area is 0.5 hectares or greater; 2) for non-residential the floor space to be built is 1,000 square metres and up; or 3) for non-residential where the site area is 1 hectare. Please see the order for more detail.

5.14 Footnote 21 to paragraph 103 in the NPPF states that county councils are the recognised SuDS approval bodies (as per the Floods and Water Management Act 2010). These SuDS Approval Bodies must '*approve drainage systems in new developments and re-developments before construction begins*'. Guidance from Nottinghamshire County Council is still currently outstanding at the time of writing this Addendum. From 6th April 2015, drainage and surface water management designs are required to be submitted as part of the planning process. Although the lead Local Flood Authority (LLFA) is a statutory consultee to local planning authorities (i.e. Mansfield District Council), final acceptance of drainage proposals is a matter for the local planning authorities.

5.15 The NPPG states that 'the decision on whether a sustainable drainage system would be inappropriate in relation to a particular development proposal is a matter of judgement for the local planning authority [LPA]' (NPPG ref id: 7-082-20150323). 'Appropriate' refers to, in part, what is considered 'reasonably practicable' and takes into account design and construction costs (NPPG ref id:7-079-20150415). **Thus, the process for defining a SuDS as '*inappropriate*' or '*appropriate*' as part of a planning application is a matter that relates to a site's circumstances as well as economic issues and therefore decisions need to be made on a site-by-site basis.**

5.16 In the absence of locally produced advice at the county level, the UK Government's Non-statutory Technical Standards for Sustainable Drainage Systems (April 2015) should be used. Additionally, it is expected that the following documents provide the necessary guidance for SuDS as required by new development:

- SFRA Code of Practice (SFRA Guide for Planners and Developers - Section 5.2 and Figure 5.3) and updates within this Addendum (as summarised in Table 3 below)
- SFRA Technical Report - Section 4.8 and updates within this Addendum (as summarised in Table 3 below)
- Defra publication, *Sustainable Drainage Systems: non-statutory technical standards for sustainable drainage systems (March 2015)*
- SuDS Manual (CIRIA C697) as referenced in the SuDS Code of Practice
- CIRIA C687 - Planning for SuDS: Making it Happen
- CIRIA C713 – Retrofitting for Surface Water Management
- National Planning Policy Guidance
- Any existing or future guidance produced by the Nottinghamshire Lead Local Flood Authorities (Nottinghamshire County Council and Derbyshire County Council)

5.17 SFRA updates as part of this Addendum are detailed in the table below.

Table 3 - Addendum updates to the SFRA SuDS Code of Practice and related sections

Guidance	Requirements	Impacts on the SFRA and Addendum updates
House of Commons: Written Statement (HCWS161) 18 December 2014[10]	1. This reinforces NPPF policy (paragraph 103). 2. The statement requires that all new developments in areas of flood risk should give priority to the use of SuDS. 3. SuDS will be required for all major development (e.g. 10 + houses) with drainage implications, unless demonstrated inappropriate. 4. It requires local planning authorities (i.e. Mansfield District Council) to consult with lead local flood authorities (i.e. Nottinghamshire and Derbyshire county councils) 5. Local councils should ensure that proposed minimum standards of operation are appropriate (see below) and that clear arrangements are in place for on-going maintenance over the lifetime of the development (taking into account climate change). These should be address through planning obligations/conditions.	No significant SFRA impact. This document gives additional guidance requirements in relation to local plan preparation and is a material planning consideration for new development, as of 6 April 2015. See Addendum update requirements detailed to left.
Sustainable Drainage Systems: non-statutory technical guidance for sustainable drainage systems (March 2015) Defra[11]	This document provides non-statutory technical guidance with minimum standards for the design of SuDS. It addresses design requirements relating to: 1. Peak flow 2. Volume control 3. Flood risk within development 4. Structural integrity 5. Maintenance considerations 6. Construction	No significant SFRA impact. This document gives additional guidance requirements for the design of SuDS. It is an update to the SFRA's SuDS Code of Practice found in Section 5.4 and Figure 5.3 (Guide for Planners and Developers). Also see updates in Section 3 (E) of this Addendum relating to the Flood Estimation Handbook, which considers the appropriate increase in rainfall intensity and green field run-off rates.
SuDS Manual (CIRIA C697) as referenced in the SuDS Code of Practice	SFRA '*SuDS Code of Practice'* state that the design of SuDS should be in accordance with CRIA publication C697. Additional guidance has become available that provides a user-friendly SuDS design advice on different	No significant SFRA impact. This document gives additional guidance requirements for the design of SuDS.

10 http://www.parliament.uk/documents/commons-vote-office/December%202014/18%20December/6%20DCLG-sustainable-drainage-systems.pdf
11 https://www.gov.uk/government/publications/sustainable-drainage-systems-non-statutory-technical-standards

Guidance	Requirements	Impacts on the SFRA and Addendum updates
CIRIA C687 - Planning for SuDS: Making it Happen CIRIA C713 – Retrofitting for Surface Water Management	SuDS features and their benefits ('Planning for SuDS – Making it Happen (CIRIA) 2010 which is available free from the CIRIA website). CIRIA also provides advice on retro-fitting of SuDS within an area of existing surface water drainage problems (CIRIA C713 – Retrofitting for Surface Water Management). These updates don't significantly affect the SFRA outcomes but do improve its effectiveness in meeting the Water Framework Directive objectives and supporting the wider sustainability requirements.	These CIRIA publications should be read alongside the SuDS Manual (CIRIA publication C697) to help inform design.
National Planning Policy Guidance (NPPG) references to SuDS	In addition to the above, the NPPG provides guidance for the design and mainenance requirements for SuDS. The following are key identified requirements: 1) The discharge of surface water should follow a hierarchy of drainage options. This is prioritised, firstly, through infiltration (into the ground). See NPPG Ref ID 7-080-20150323. 2) SuDS should be designed to ensure that maintenance and operation requirements are economically proportionate and reasonably practicable. See NPPG Ref ID 7-082-20150323, 7-083-20150323 and 7-085-20150323. 3) Planning for SuDS should ensure that the design takes into account construction, operation and maintenance requirements for both surface and sub-surface components. See NPPG Ref ID 7-085-20150323. 4) The design of SuDS should also take into account impacts from climate change and other likely changes to impermeable areas within the development over its lifetime, continuing to provide effective drainage properties. See NPPG Ref ID 7-085-20150323.	No significant SFRA impact. The NPPG gives additional up-to-date guidance requirements for the design of SuDS. The numbers below relate to key guidance referenced in the column to the left in this table. 1) The SFRA follows this hierarchy and gives additional guidance for ensuring biodiversity enhancements through design. 2) The NPPG should be referenced for detailed guidance on this matter. 3) As part of a planning obligations/Section 106 for new development, a SuDS maintenance plan would help meet this requirement. 4) This reinforces the approach taken in the SFRA.
Derbyshire County Council (DCC) guidance as the Derbyshire Lead Local Flood Authority:	These documents give additional guidance requirements for the design of SuDS in Derbyshire and as they relate to cross boundary issues.	No significant SFRA impact.

Guidance	Requirements	Impacts on the SFRA and Addendum updates
1) Derbyshire County Council Guidance Notes: environmental best practice (July 2015) *2) Derbyshire County Council Guidance Notes: planning and development (July 2015)* Similar replacement standing advice/guidance by DCC as Lead Local Flood Authority for Derbyshire should be referenced where and when appropriate.	It draws from the NPPF/NPPG and the Defra non-statutory technical guidance for sustainable drainage systems (March 2015). DCC strongly promotes SuDS for all development where an increase in surface flooding/impermeable areas is unavoidable The CIRIA SuDS management train should be followed, with an appropriate number of treatment stages. DCC requires that, prior to designing SuDS scheme for a development, a full ground investigation should be undertaken to fully explore the options of ground infiltration to manage surface water discharge in preference to discharging to a surface water body or public sewer system, as stipulated by Approved Document H of the Building Regulations.	These guidance documents should be referred to where cross boundary issues are concerned (e.g. Mansfield and Bolsover district boundaries).
Subsequent Nottinghamshire County Council standing advice/guidance as the Nottinghamshire Lead Local Flood Authority.	To be updated as and when available.	This guidance may further inform the appropriateness of SuDS and other design, maintenance, operational and adoption processes.

5.18 Mansfield District Council will continue to monitor changes to National and lead local flood authority guidance as and when relevant.

5.19 Appendix on 'Flood Risk Updates' acknowledges where the retro-fitting of SuDS would likely bring positive benefits.

C) Biodiversity Enhancement Strategy

5.20 Significant updates to Natural England Standing Advice for protected species (e.g. water voles, white-clawed crayfish, and European otter) have been produced since the SFRA was written. The Nottinghamshire Biodiversity Action Plan habitat and species action plans have also been updated. Recent records of European otter have been recorded in and around the district. As the Biodiversity Enhancement Strategy actions target habitat and species improvements, this information is significantly relevant.

5.21 Overall, the main findings and advice are still robust. Some minor changes should be incorporated to bring the SFRA in line with recent protected species standing advice[12], up-to-date species records and updates to the Nottingham Biodiversity Action Plan.

5.22 The following guidance should be read along-side the SFRA *Biodiversity Enhancement Strategy*.

1. Natural England Standing Advice and Nottinghamshire Biodiversity Action Plan Habitat and Species Action Plans should help inform the design of Green Sustainable Drainage Systems (SuDS) and the restoration of culverts to open watercourses and areas of low flow as they relate to European protected species and priority habitats and species (Natural Environment and Rural Communities (NERC) Act Section 41).
2. The presence and absence of species (plants and wildlife) is subject to change. Species records from the Nottinghamshire Biological and Geological Records Centre should be consulted to ensure the any decisions are based on the most up-to-date species information. Recent site-based ecological surveys should also inform the design of these enhancement measures.
3. Design requirements for SuDS, especially Green SuDS, should also consider European Otter (*Lutra lutra*).

5.23 Additional key updates are also included in Section 4 of this Addendum as they relate to the SFRA Biodiversity Enhancement Strategy and should be noted. These include:

1. Targeted removal of culverts, weirsand any other redundant flood-related structures to improve migration of species listed in the SFRA and also fish and eel species.
2. Seek to re-naturalise all rivers, regardless of cost and perceived feasibility. Prioritisation of watercourses shouldn't solely rely on what is currently there, ecologically speaking, BUT should be based upon what is expected to be in the environment.

5.24 In addition to funding from planning obligations (Section 106), it is recognised that a combination approach is needed to ensure biodiversity enhancements are realised. This would need to include funding from various sources, coordinated partnership working and dedicated MDC officer resources.

SFRA Summary Updates - Table 4

Overall Impact: Based on updates to the key policy and guidance documents (since 2008) as discussed in Section 5, it is concluded that the main principles of the SFRA are not significantly affected. The minor updates listed below improve the SFRA's role as a guidance document on both strategic and site-specific scales.
A) Mansfield District SFRA Flood Risk Assessment Code of Practice (COP)

12 This is advice from Natural England on European protected wildlife and plants and how they should be considered in planning matters.

Overall Impact: Based on updates to the key policy and guidance documents (since 2008) as discussed in Section 5, it is concluded that the main principles of the SFRA are not significantly affected. The minor updates listed below improve the SFRA's role as a guidance document on both strategic and site-specific scales.

1. The updated Mansfield District Flood Risk Assessment Code of Practice is available in the Appendix section of this SFRA Addendum.
2. Unless exceptions in the NPPF are noted, development regardless of size needs to consider flooding from all sources and, where applicable, should address requirements through a site-specific flood risk assessment. See paragraphs 100 to 104 and applicable footnotes in the NPPF.
3. For development outside Flood Zones 2 or 3 and is of 1 ha or greater, a site specific flood risk assessment will be required in line with paragraph 103 (footnote 20) of the National Planning Policy Framework (NPPF). The National Planning Policy Guidance (NPPG) provides a site specific flood risk assessment check-list.
4. There are no areas with critical drainage problems identified in or adjacent to the district. This may be subject to change over time and Nottinghamshire County Council as the Lead Local Flood Risk Authority should be consulted to either confirm or rule out their presence.
5. The Environment Agency's 'What's In Your Backyard' website and Geostore computer-based mapping library replaces 'Appendix D' as it shows the most up-to-date information on Flood Zones 2 & 3 in the district. Appendix F, which shows indicative flood risk, should still be used to inform the sequential test as discussed in SFRA 'Section 6'.
6. In addition to 'Appendix F' in the SFRA, the Environment Agency's 'What's In Your Backyard' website should be used to locate areas susceptible to surface water flooding.

B) Mansfield District SFRA SuDS Code of Practice

1. This SuDS code of practice is made up of three parts:

   - Section 5.4 and Figure 5.3 in the SFRA - 'Guide for Planners and Developers'. Please note that Appendix D in the SFRA is replaced by updated Environment Agency Flood Zone maps.
   - Section 4.8 in the SFRA - 'Technical Guide'. This provides additional COP guidance relating to designing in and prioritising biodiversity enhancements, where appropriate.
   - Section 5 (B) of this Addendum (specifically Table 3) also provides further detailed guidance.

   Combined, these make up the Mansfield District SuDS Code of Practice that should also be considered as part of planning requirements for new development.

2. Mansfield District Council will continue to monitor changes to National and lead local flood authority SuDS guidance as and when relevant.

C) Biodiversity Enhancement Strategy

1. Relevant Natural England Standing Advice and Nottinghamshire Biodiversity Action Plan Habitat and Species Action Plans should inform the design of Green Sustainable Drainage Systems (SuDS) and the restoration of culverts to open watercourses and areas of low flow. Standing advice is currently available on www.gov.uk/guidance/protected-species-and-sites-how-to-review-planning-proposals. Please note this link may be subject to change and the most up-to-date standing advice will need to be referenced.
2. The presence and absence of species (plants and wildlife) is subject to change. Species records from the Nottinghamshire Biological and Geological Records Centre should be consulted to ensure the any decisions are based on the most up-to-date species information. Recent site-based ecological surveys should also inform the design of these enhancement measures.
3. Design requirements for SuDS, especially Green SuDS, should also consider European Otter (Lutra lutra)
4. Section 4 of this SFRA Addendum also identifies important updates to the 2008 SFRA, of which are significant as they relate to requirements of the Water Framework Directive and subsequence compliance.
5. Areas for protection and enhancement as referenced in relevant Green Infrastructure and Biodiversity strategies from neighbouring local authorities should also inform relevant biodiversity and green infrastructure improvements as they relate to cross boundary issues.

6 Updates to the SFRA flood risk mapping evidence

6.1 There have been more recent flood mapping data produced since the SFRA was written in 2008. These include updates to the Environment Agency's Flood Zones 2 & 3 for the River Meden and flood risk from surface water flooding for the whole of the district. Please see Addendum Table 4 for details.

6.2 The Appendices in this SFRA Addendum identify locally specific flood risk findings in and around the district. These are updates to Tables 4.4 and 4.5 in the 2008 SFRA.

SFRA Summary Updates - Table 5

Overall Impact: Upon reviewing the updated flood risk mapping data since 2008, there appears to be no further significant flood risk in the district, although there are some minor changes. These are discussed in more detail in the addendum section 7.

The following data sources should be considered alongside the Mansfield District SFRA to inform the Sequential Test and for informing the scoping stage for Site Specific Flood Risk Assessments (FRAs):

1. **Risk of flooding from rivers and streams** should be informed by the Environment Agency's (EA's) Flood Zone 2 and 3 maps that can be viewed on the EA's website 'What's in Your Backyard' interactive maps (http://maps.environment-agency.gov.uk/wiyby/). This replaces Appendix D map 'Environment Agency Flood Zone Maps'. Appendix F map 'Indicative Flood Risk' in the SFRA should also be considered as this shows the likelihood of structures being overtopped.

2. **Impacts associated with climate change** are found in Appendix E for the River Maun ('100-yr modelled flood considering climate change'). The Environment Agency's recommended climate change allowances and guidance were updated in February 2016. Risk associated with climate change, should consider these updates on a site by site basis.

3. **Risk of flooding from surface water run-off** should be informed by Appendix F, notably 'Indicative Areas of Concentrated Run-off', 'Low Permeability Areas' and 'Coal Tips' and the Environment Agency's 'Updated Risk of Flooding from Surface Water' maps that can be viewed on the EA's website 'What's in Your Backyard' interactive maps (http://maps.environment-agency.gov.uk/wiyby/).

4. Flood risk from **ground water, reservoirs and historic flooding** locations along the Maun and Meden identified in the SFRA should also be considered as per sections 4.4 and 4.5 of the SFRA '*Guide for Planners and Developers*'. In addition, Mansfield District Council's planning team, Nottinghamshire and Derbyshire Lead Local Flood Authorities and other relevant bodies will need to be consulted in order to ensure the most up-to-date information is considered for informing site specific flood risk assessments, planning decisions and design considerations.

5. The SFRA discusses **flooding from sewers** in SFRA Section 4.7 of the '*Guide for Planners and Developers*' and SFRA Section 3 of the '*Technical Report*'. Flooding is expected when sewer capacity is exceeded (i.e. for events greater than the 5-year to 40-year return period design standard). This is dependent on design standards of the public sewer in the local area. Severn Trent Water should be consulted. Also see Section 7 of this Addendum.

6. SFRA Addendum Appendices on updates to the flood risk findings and surface water flooding as reported in Tables 4.4 and 4.5 in the 2008 SFRA.

7. For development near to other local authority areas (e.g. Rainworth, Clipstone, Pleasley, etc), neighbouring Local Authority's Strategic Flood Risk Assessment (SFRAs) findings and guidance must also be considered where there is a likelihood of cross boundary flood risk issues. This should help inform planning decisions.

Six: Updates to the SFRA flood risk mapping evidence

7 Review and conclusions on flood risk in the district

Flooding from Rivers

7.1 As indicated in Section 6 of this Addendum, updated flood risk maps (Flood Zones 2 & 3) have been produced by the Environment Agency for the River Meden since the SFRA was written in 2008. Flood Zones 2 & 3 for the River Maun have remained unchanged.

7.2 Based on the review of up-dated flood risk information, it can be concluded that the flood risk from rivers remains low, as previously reported in the SFRA.

Flooding from Surface Water

7.3 The objective of a SFRA, as stated in the National Planning Policy Guidance (NPPG), should be to '*identify areas at risk from surface water flooding and drainage issues, taking into account the Environment Agency surface water flood risk maps*'. The NPPG states that a SFRA should identify the 'types of measures which may be appropriate to manage risk and identify opportunities and constraints'.

7.4 The information provided in the Mansfield District SFRA and this Addendum meet these requirements.

7.5 The SFRA identifies areas with low permeability soils and indicative areas of concentrated run-off (Appendix map F). Further to this, updated maps for Surface Water Flooding have been released from the Environment Agency Flood post publication of the SFRA in 2008.

7.6 These updated EA maps were used to review the SFRA (as per mapping available from September 2014) conclusions on flood risk identified from the SFRA surface water run-off evidence (as indicated the 'Indicative Areas of Concentrated Run-off' and 'Low Permeability Areas' in Appendix F). The '1 in 30 risk of flooding' from the Environment Agency's 'Updated Risk of Flooding from Surface Water' mapping data was used to identify any additional significant flood risk within Flood Zone 1, as identified in the Appendices of this Addendum.

7.7 Based on the review of up-dated flood risk information, it can be concluded that the flood risk from rivers remains moderate with expected moderate incidents of higher risk, as previously reported in the SFRA.

Flooding from the Sewer Network

7.8 The SFRA considered that sewer flooding in the district would occurs during moderate rainfall events. The indicative flood risk from the sewer network is expected to have an annual probability of occurrence between 2.5% and 20% based on the design standard of the public sewers. Severn Trent Water (STW) is responsible for

the operation and maintenance of the sewer network in the county. The SFRA concluded that urban flooding would be expected when sewer capacity is exceeded due to surcharging of sewers, ponding and surface water flooding.

7.9 Developers should consult with STW early on in the planning process in order to satisfy themselves that flooding from the sewer network and appropriate sewer capacity issues are addressed.

7.10 There have been no further updates on flood risk from sewers to report in this Addendum.

Flooding from Groundwater

7.11 The SFRA concludes that the risk of flooding from ground water sources remains low, with the risk increasing proximate to streams and spring lines. Groundwater conditions can vary significantly even on a local scale. A site specific flood risk assessment should always be made to assess any potential flooding risk, particularly where basement structures are proposed. **The Environment Agency should be consulted on groundwater flooding issues.**

7.12 There have been no further updates on flood risk from groundwater to report in this Addendum.

7.13 Please see the Appendix in this Addendum for the review and conclusions on flood risk in the district and opportunities for enhancement.

SFRA Summary Updates - Table 6

Overall Impact: Based on a review of the SFRA findings alongside the updated mapping evidence (Environment Agency Flood Zones 2 & 3 for the River Meden and district-wide surface water flood risk maps) discussed in Addendum Sections 6 & 7, it is concluded that the main findings in the SFRA are not significantly affected.

Overall Flood Risk Across the District

- As reflected in the final Trent River Catchment Flood Management Plan (CFMP) the overall flood risk in the district remains low. This conclusion is confirmed in this Addendum after reviewing updated flood risk maps for zones 1, 2 & 3 as produced by the Environment Agency since the SFRA was published in 2008. Thus, the main conclusions in the SFRA remain relevant.
- It is noted that flood risk from any source is subject to change. As such, updated information sources as indicated in Section 6 of this Addendum should always be consulted.

Flood Risk Zones 2 & 3 River Meden

- There are some minor, localised flood risk updates and these are noted below. These changes are informed by the updated Environment Agency flood risk (zones 2 & 3) information for the River Meden.
- It is noted that flood risk from any source is subject to change. As such, information sources as indicated in Section 6 of this Addendum should always be consulted.

Flood Risk Zones 2 & 3 River Maun

- No changes noted.
- It is noted that flood risk from any source is subject to change. As such, updated information sources as indicated in Section 6 of this Addendum should always be consulted.

Flood Risk from Surface Water Run-off

- The SFRA concludes that flood risk from surface water run-off in Mansfield District is generally associated with large areas of impermeable soils or low permeability surfaces where topography tends to concentrate flows. This includes areas along major roads, former quarries and colliery sites, and dense urban areas. This observation has been informed through modelling, a 2007 Citizen Panel consultation and incidents of historic flooding. In light of the updated Environment Agency mapping evidence, it is concluded that this is still the case and that the overall conclusions in the SFRA haven't been significantly affected.
- It is important to note that, even areas that are considered to be positively drained through the sewer network may be subject to risk of surface water flooding when drainage is exceeded. This remains the case after consideration of the Environment Agency's updated map on flood risk from surface water flooding.
- It is noted that flood risk from any source is subject to change. As such, updated information sources as indicated in Section 6 of this Addendum should always be consulted.

Flood Risk from Sewers

- There are no changes in this Addendum with regards to flooding from the sewer network.
- New development should consult Severn Trent Water at the earliest possible stage of the planning application process.

Flood Risk from Ground Water

- There are no changes in this Addendum with regards to flooding from ground water.
- Groundwater flooding can vary significantly even on a local scale depending on the hyrdo-geological conditions. Conditions can also vary from year to year. There aren't specific ground water related flood risk areas identified on the SFRA Appendix maps. Rather, locations are loosely addressed in paragraph 4.4.4 in the SFRA - Guide for Planners and Developers.
- There are Groundwater Protection Zone maps (Appendix J) which identify zones showing the risk of contamination from any activities that might cause pollution in the area.
- The Environment Agency should be consulted on groundwater flooding issues. The most up-to-date information source is the Environment Agency's 'What's in Your Backyard' website.

Tables in Appendix 1, of this SFRA Addendum, identify minor changes to flood risk as a result this addendum review and should be consulted alongside Sections 4.4 and 4.5 in the SFRA 'Guide for Planners and Developers'.

Seven: Review and conclusions on flood risk in the district

8 Summary & Required Comments to Address Duty to Cooperate

8.1 Overall, Mansfield district is considered to be at low risk of flooding and there is sufficient land available in areas of low risk to prevent the need for extensive development in areas of high or moderate flood risk.

8.2 The information provided in the 'SFRA Summary Update' tables in Sections 3-7 and Appendices of this SFRA Addendum are the actions required to bring the Mansfield District Strategic Flood Risk Assessment (SFRA) up-to-date and fit for purpose. This provides the necessary guidance for addressing flood risk and Water Framework Directive issues in the district as they relate to new development and the re-development of areas.

8.3 Please note that flood risk in the district is subject to change due to a number of factors (e.g. climate change, changes in development or land use, etc.). In addition to the findings in the SFRA and the SFRA Addendum, flood risk at the site development level will need to be assessed on an individual basis.

8.4 It is viewed (as per consultation with the Environment Agency) that only a Level 1 SFRA Assessment of the District is required to inform the Local Plan. This is reflected in the fact that flooding is not a major issue, as confirmed by the Trent Catchment Flood Management Plan (Final report 2010) and that pressure for development within areas of high and medium flood risk is low.

8.5 The SFRA was always intended to be an evidence base to inform the allocation of development in the Local Plan. It has been used in this respect alongside the Sustainability Appraisal process. In accordance with the NPPF [(13)] the Council has used the SFRA to assess potential development allocations in relation to flood risk and has steered proposed housing and employment development sites to areas of lowest possible flood risk in accordance with the Sequential Test.

8.6 Alongside the SFRA, we recognise that the Water Framework Directive (WFD) and the Humber River Basin Management Plan (RBMP) are both important evidence base documents. Both the WFD and Humber RBMP are also being embedded into the Sustainability Appraisal framework, policy wording, Green Infrastructure evidence base, and the Infrastructure evidence base.

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13 The National Planning Policy Guidance (NPPG) to the NPPF states that: *'A Level 1 Assessment should be carried out in local authority areas where flooding is not a major issue and where development pressures are low. The Assessment should be sufficiently detailed to allow application of the Sequential Test to the location of development and to identify whether development can be allocated outside high and medium flood risk areas, based on all sources of flooding, without application of the Exception Test.'*

Consultation summary

8.7 Below is the question asked as part of the consultation (20th October - 1st December 2014) on this SFRA Addendum. This was a targeted consultation with statutory bodies (e.g. Environment Agency) and neighbouring local authorities. See Appendix 5 for more details.

8.8 Responses to this question helped to identify outstanding cross boundary flood risk issues and actions as part of this SFRA Addendum update under the Duty to Cooperate requirement of the Local Plan.

Question 1

Consultation comments required to address cross-boundary issues under the Duty to Cooperate

Simply put, Duty to Cooperate is about understanding the key issues likely to impact on people and places in and around our district and how we can best work with our strategic partners to address them. It is a legal duty for us to all work together.

Does this Addendum adequately address strategic and cross-boundary issues within your area?

If so, where and how.

Please be as specific as possible so that we can understand how things could be improved further (e.g. if a partnership approach is required, who would be involved and what steps should we take to explore this in more depth?)

If not, why not and how could be address these better?

Even if you have no specific comments, it is still important that you declare this.

8.9 Overall, consultees were satisfied that this SFRA Addendum met requirements as set out in the national policy and guidance. Further comments received as part of the Mansfield District Local Plan 2016 public consultation (Regulation 18) from the Environment Agency and Nottinghamshire County Council have also been incorporated into this update. Thus, issues under the Duty to Cooperate have been addressed.

8.10 As a result of consultation comments submitted, some minor amendments have been made to this Addendum in order to ensure that it is fit for purpose (i.e. that it provides a robust and up-to-date evidence base for the Local Plan).

8.11 Consultations with Severn Trent Water is on-going as part of the Local Plan.

8.12 Results from the 2014 and 2016 consultations are detailed in Appendices 5 and 7 of this Addendum document.

Eight: Summary & Required Comments to Address Duty to Cooperate

Appendix 1 Flood Risk Updates

Update to the River Meden Catchment and Surface Water Flooding as reported in Section 4.4 and Table 4.4 of the SFRA - Guide for Planners and Developers

General Location & Adjoining Local Authority(ies)	Fluvial Flood Risk (rivers and streams)	Surface Water Flood Risk (1 in 30 risk)	Possible Development Constraints & Improvements
Pleasley (and Pleasley Vale) Bolsover District /Derbyshire County Council (Pleasley Village)	**SFRA Potential Flood Risk summary**: Properties in the vicinity of Pleasley/Meden Square are to be considered to be at a high risk of fluvial flooding due to insufficient capacity of the structure at the pond outfall. Flood water flows across Pleasley/Meden Square before rejoining the main river channel.	**SFRA Potential Flood Risk summary:** Surface run-off risk is evident in this area although this would normally be mitigated by the storm drainage in the Square which will discharge surface water into the River Meden.These areas are indicated in: Appendix F showing 'areas of indicative concentrated run-off are reflected in the updated EA Flood Map from Surface Water (2013).	**SFRA conclusion (Possible Development Constraints):** New development should be avoided in this area.
	Addendum Update: There is a reduction in Flood Zone 3 and a slight increase in Flood Zone 2, but there is no overall significant change to flood risk in this area. Derbyshire County Council also notes areas of historic flooding across the Mansfield/Bolsover district boundary line, of which are highlighted in this Addendum. These include areas in and around the following: - Area north of Littlewood Quarry/northeast of Northfield Plantation/south of a farm and residential property within flood zones 2/3 (OS grid reference 453136, 365308). - Blocked culvert/drain on the eastern edge of Pleasley Mills Business Park where the river feeds into a mill pond within flood zone 2/3 (OS grid reference 451559, 364933). - Area near to Church Lane in Pleasley within flood zone 2/3 (OS grid reference 450500, 364500). In 2004 and 2007 the river over-topped its banks.	**Addendum Update:** There are additional locations at risk from surface water run-off (outside Flood Zones 2 & 3), identified from the EA mapping within the Pleasley and Pleasleyhill areas. These include: a) Chesterfield Road in Pleasley and the A617 (MARR route) b) Disused railway lines (now public rights of way) within Bolsover and Mansfield Districts. c) Historic sewer flooding incident near to Church Lane in Pleasley (Bolsover district)	**Addendum Update:** No overall significant change. Any development along Chesterfield Road and the MARR route (A617) will need to incorporate SuDS. Retro-fitting of SuDS would bring positive benefits.

General Location & Adjoining Local Authority(ies)	Fluvial Flood Risk (rivers and streams)	Surface Water Flood Risk (1 in 30 risk)	Possible Development Constraints & Improvements
Mansfield Woodhouse	**SFRA Potential Flood Risk summary:** There are considered to be no significant flood risks in this general location. The fluvial floodplain is characterised by fields approximately 1km from the north of Mansfield Woodhouse.	**SFRA Potential Flood Risk summary:** The combination of dense urbanisation and low permeability soils (as indicated in Appendix Map F) will contribute to an increased risk of surface water run-off, although no significant flow concentrateions have been identified.	**SFRA conclusion (Possible Development Constraints)**: None identified
	Addendum Update: No significant changes.	**Addendum Update:** Updated risk from surface water flooding include: a) Roads: High St/Station St; Welbeck Rd/Church Hill; Debdale Lane; b) Localised Areas: intersection of High St/ Portland St/ and Albert St; Sandgate Ave/Kingsley Ct; Millennium Business Park; Park Hall Farm; Longmeadow; Manor Rd and area around Manor Park. Manor Park and the playing field between Portland Street and Warsop Road are both areas of urban green space. Park Hall Farm is an area of arable land. All have potential flood risk issues.	**Addendum Update:** Most areas identified through the EA Surface Water Mapping are concentrated around existing areas of development. There may be opportunities for retrofitting SuDS. Any new development within areas of existing greenfield sites should address flooding through appropriate SuDS design. The area around Manor Park would benefit from creating green SuDS to enhance biodiversity and amenity value. Manor Park is recognised in the strategic green infrastructure network as an area in need of protection and enhancement.
Sookholme & Spion Kop Bolsover District /Derbyshire County Council (Shirebrook)	**SFRA Potential Flood Risk summary**: Historic fluvial flooding has affected properties and across routes in this area. The prevalence of springs is associated with shallow groundwater in this area.	**SFRA Potential Flood Risk summary:** Extensive areas of low permeability soils (as indicated in Appendix F) contribute to an increased risk of surface water run-off, although no significant concentrations have been identified.	**SFRA conclusion (Possible Development Constraints)**: Development should avoid areas defined as Flood Zone 2 and 3 due to the availability of land elsewhere at lower risk.
	Addendum Update: Significant changes for Flood Zone 2 and 3 extending over Nettleworth Farm and onto Sookholm Road south of the sports complex. But overall, no change to general comment in the SFRA.	**Addendum Update**: No further significant areas of surface water run-off identified through the EA mapping.	**Addendum Update:** No further comments.

General Location & Adjoining Local Authority(ies)	Fluvial Flood Risk (rivers and streams)	Surface Water Flood Risk (1 in 30 risk)	Possible Development Constraints & Improvements
Market Warsop	**SFRA Potential Flood Risk summary**: The north of Market Warsop is adjacent to the River Meden and has experienced historic flooding, in particular on the A60 and Church Road. Some existing properties and roads are within Flood Zone 3 at a high risk of fluvial flooding.	**SFRA Potential Flood Risk summary:** The SFRA identifies areas of low permeability in Appendix map F. This includes the areas around Windsor Sr, Saville Way and Rutland Close; Wood Street; The Carrs and Church Street. The SFRA notes that this area will contribute to an increased risk of surface water run-off, although no significant concentrations have been identified.	**SFRA conclusion (Possible Development Constraints)**: Development should avoid areas to the north of Market Warsop defined as Flood Zone 2 and 3 due to the availability of land elsewhere at lower risk.
	Addendum Update: The updated EA Flood Risk map of Flood Zone 3 is very similar to the indicative area of flood risk on Appendix map F (100 year flood). The up-dated EA Flood Risk maps (from rivers and streams) show a general reduction in Flood Zone 3 so that there are no longer any existing roads or buildings within this zone, although some houses that are currently being built are very close to flood zone 3 (former Goosefarm). Flood Zone 2 increases in size east of the A60 near The Carrs Recreation Ground and Local Nature Reserve (LNR). This area is described in more detail in notes relating to Church Warsop. An area extending northwards along the River Meden to The Carrs is identified in the SFRA as a 'Green SuDS Priority Area'.	**Addendum Update:** Further to the SFRA, there are small areas south of High Street that are identified as 1 in 30 risk of surface water flooding. These include: - The main road (B6035) running southeast from High Street; -Sports ground and surrounding development around Little John Ave and Sherwood Street; - Area south of mineral railway on arable land south of Robin Hood Ave; - Area around Meden Farm.	**Addendum Update:** There are noted changes in Flood Zones 2 (minimal increase in risk) & 3 (minimal decrease in risk). Any development within areas identified as risk of surface water flooding should address these issues through appropriate SuDS design. The green spaces along the River Meden nr Market Warsop e.g. The Carrs LNR and Recreation Ground have the ability to act as flood storage areas if properly managed and enhanced. Further actions are identified in the SFRA's Biodiversity Enhancement Strategy. The Carrs is recognised in the strategic green infrastructure network as areas in need of protection and enhancement.
Church Warsop	**SFRA Potential Flood Risk summary:** The majority of Church Warsop is unaffected by flooding, except for a small area in the south east which is adjacent to the River Meden.	**SFRA Potential Flood Risk summary:** There is an area with low permeability soils (see Appendix Map F) in the eastern area of Church Warsop.	**SFRA conclusion (Possible Development Constraints)**: Development should avoid areas defined as Flood Zone 2 and 3 due to the availability of land elsewhere at lower risk.

General Location & Adjoining Local Authority(ies)	Fluvial Flood Risk (rivers and streams)	Surface Water Flood Risk (1 in 30 risk)	Possible Development Constraints & Improvements
	Addendum Update: As above (Market Warsop), the current EA Flood Zone 3 is reduced in area. The updated EA Flood Risk map of Flood Zone 3 is very similar to the indicative area of flood risk on Appendix map F (100 year flood). There is an increase in area for Flood Zones 2 & 3 across the A60 adjacent to The Carrs Recreation Ground & LNR and within a local amenity area south of Barn Owl Close. There is a slight increase in Flood Zone 3 for existing properties off Manor Rd and Glannis Square.	**Addendum Update:** No further significant areas identified from the EA updated flood risk from surface water run-off mapping outside the 'Low Permeability Areas' in the SFRA Appendix map F.	**Addendum Update**: There are noted changes in Flood Zones 2 (minimal increase in risk) & 3 (minimal decrease in risk). Any development within areas identified as risk of surface water flooding should address these issues through appropriate SuDS design. The green spaces along the River Meden nr Market Warsop e.g. The Carrs LNR and Recreation Ground have the ability to act as flood storage areas if properly managed and enhanced. Further actions are identified in the SFRA's Biodiversity Enhancement Strategy. This is identified within the strategic green infrastructure network for protection and enhancement.
Meden Vale	**SFRA Potential Flood Risk summary:** There are no specific comments in the SFRA on flooding form the River Meden for this part of the district. Existing properties are not currently affected but there is potential flooding south of Neitherfield Lane.	**SFRA Potential Flood Risk summary:** Parts of Meden Vale are subject to a high risk of flooding from surface water run-off. Rain falling on the low permeability surface of the coal tip is known to exceed the capacity of the drainage system and flow towards the western side of Meden Vale. The land south of Netherfield Lane is also characterised by low permeability soils. The discharge is likely to flow into the River Meden without affecting existing properties but may be a problem for additional development.	**SFRA conclusion (Possible Development Constraints)**: There are no grounds to preclude development in the high-risk [surface water run-off] area, however development proposals must consider opportunities to fully mitigate flooding from this source. Development to the south of Netherfield Lane should avoid land identified to be within Flood Zone 3 due to the availability of land elsewhere at lower risk.
	Addendum Update: Again, as in Market and Church Warsop, there is a significant reduction in Flood Zone 3 along the Meden of which the current Flood Zone 3 is very similar to the indicative area of flood risk on Appendix map F (100 year flood).	**Addendum Update:** There are no significant updates form the EA's flood risk from surface water. The information within the SFRA Appendix F for Meden Vale, is based on first hand flooding information (2007 floods). This	**Addendum Update:** No further updates.

General Location & Adjoining Local Authority(ies)	Fluvial Flood Risk (rivers and streams)	Surface Water Flood Risk (1 in 30 risk)	Possible Development Constraints & Improvements
Bassetlaw District Council (countryside along the River Meden and former Meden Vale Colliery)		is more likely to better inform surface water flooding issues than the EA mapping. A solar farm has been built on the Meden Vale side of the former coal tip. It is not known how this may affect surface water run-off at this time.	

Update to Surface Water Flooding for the Mansfield Urban Area as Reported in Section 4.5 and Table 4.5 of the SFRA- Guide for Planners and Developers

General Location & Adjoining Local Authority(ies)	Additional significant Surface Water Flood Risk and fluvial flood risk as identified through the EA 'Updated Flood Map for Surface Water' and the Mansfield District Central Area Flood Risk Review (Feb 2018).	Possible Development Constraints & Improvements
Kings Mill Reservoir to Hermitage Ponds Ashfield District Council	The SFRA identifies an area of indicative surface water run-off from Skegby Lane to Morrison's superstore. Additional surface water flooding is identified from the EA maps (1 in 30) that extend this risk across Sutton Road (between Kings Mill Reservoir Morrison's).	**SFRA conclusion (Possible Development Constraints):** The SFRA recommends that new development should be avoided on the downstream toe of the reservoir.
		Addendum Update: Appropriate SuDS systems would need to be incorporated into any future development to address surface water flooding and sewers. This may include the retro-fitting SuDS, as appropriate.
Bleak Hills Ashfield District Council	There are small pockets of surface water flooding (1 in 30) identified by the EA maps within the Hermitage Lane Depot/Industrial Estate and Oakham Business Park. No significant flooding issues were identified in the SFRA in this area and it is not known to historically flood here. This section of the River Maun is identified as a 'Green SuDS Priority Area'. The culvert at Cauldwell Brook is identified as a 'high' conservation priority. This would enable restoration of water vole and white-clawed crayfish habitat.	**SFRA conclusion (Possible Development Constraints)**: Development in the vicinity of the culverted section of Cauldwell Brook must appropriately consider the risk of flooding from Cauldwell Brook.
		Addendum Update: Appropriate SuDS systems would need to be incorporated into any future development. If this is a significant issue, this may be an area in which retro-fitting SuDS may be appropriate. See Biodiversity Enhancement Strategy for information on the Green SuDS Priority Area near Cauldwell Brook and culvert restoration to open watercourse needs. These are recognised in the strategic green infrastructure network as areas in need of protection and enhancement.
Sheepbridge Lane to Field Mill Pond	The SFRA doesn't identify any specific surface water flooding issues within this area, whilst there are small areas of surface water flooding identified through the EA maps. This is namely: - Along A60/Nottingham Road and its secondary roads south of the River Maun - A disused quarry between Sainsbury's and Quarry Lane LNR	**SFRA conclusion (Possible Development Constraints)**: None
		Addendum Update: Appropriate SuDS systems would need to be incorporated into any future development. If this is a significant issue, this may be an area in which retro-fitting SuDS may be appropriate.

General Location & Adjoining Local Authority(ies)	Additional significant Surface Water Flood Risk and fluvial flood risk as identified through the EA 'Updated Flood Map for Surface Water' and the Mansfield District Central Area Flood Risk Review (Feb 2018).	Possible Development Constraints & Improvements
	Additionally, refer to the Mansfield District Central Area Flood Risk Review (Feb 2018) for further information regarding flood risk and river corridor enhancements. Additionally, refer to the Mansfield District Central Area Flood Risk Review (Feb 2018) for further information regarding flood risk and river corridor enhancements.	Additionally, refer to the Mansfield District Central Area Flood Risk Review (Feb 2018) for further information regarding flood risk and river corridor enhancements.
Field Mill Pond to Bath Street **& Bath Street to St Peters Way** **& St Peters Way to Bridge Street**	The SFRA doesn't identify any specific surface water flooding issues within this area, whilst there are small areas of surface water flooding identified through the EA maps. This is namely: -Nottingham Road parallel to Titchfield Park. - B&Q superstore - An area off Bums Lane - Main roads: Littleworth Lane, Ratcliff Gate -Depot and residential areas near to Great Central Rd. As identified in the SFRA Biodiversity Enhancement Strategy, there are existing issues of excessive silting in the Field Mill Pond. The culvert at Field Mill Pond Outfall is identified as an opportunity for restoration. Additionally, refer to the Mansfield District Central Area Flood Risk Review (Feb 2018) for further information regarding flood risk and river corridor enhancements.	**SFRA conclusion (Possible Development Constraints)**: Site specific flood risk assessments are needed in these areas and appropriate mitigation is required. **Addendum Update:** Appropriate SuDS systems would need to be incorporated into any future development. The area along the A60 and Nottingham Road parallel to Titchfield Park may be an area in which retro-fitting SuDS could be an appropriate solution, as it historically floods in heavy downpour, sloping towards Titchfield Park. Watermeadows Leisure Centre has also been known to flood. Retrofitting a green SuDS design at Titchfield Park would bring additional biodiversity and amenity benefits. It may be beneficial to address the issues around Field Mill Pond at the same time. These are recognised in the strategic green infrastructure network as areas in need of protection and enhancement. Additionally, refer to the Mansfield District Central Area Flood Risk Review (Feb 2018) for further information regarding flood risk and river corridor enhancements.
Bridge Street to Rock Valley culvert **&**	No significant areas identified outside Flood Zones 2 & 3 and SFRA Indicative Flood Risk areas.	**SFRA conclusion (Possible Development Constraints)**: Development within the 100-year indicative outline should be avoided where possible. Where development is proposed, flood resilient construction methods should

General Location & Adjoining Local Authority(ies)	Additional significant Surface Water Flood Risk and fluvial flood risk as identified through the EA 'Updated Flood Map for Surface Water' and the Mansfield District Central Area Flood Risk Review (Feb 2018).	Possible Development Constraints & Improvements
Rock Valley culvert to Bath Lane	The SFRA Biodiversity Enhancement Strategy identifies 2 culverts 1) Rock Valley and 2) downstream from Rock Valley for restoration to open watercourses, with opportunities to restore the natural channel to improve amenity and environmental quality. Additionally, refer to the Mansfield District Central Area Flood Risk Review (Feb 2018) for further information regarding flood risk and river corridor enhancements.	be employed, floor levels must be situated approximately above the 100-year flood level, and floodplain compensation provided as appropriate. **Addendum Update:** Appropriate SuDS systems would need to be incorporated into any future development. If this is a significant issue, this may be an area in which retro-fitting SuDS may be appropriate. Address Biodiversity Enhancement Strategy opportunities through development and partnership working. Additionally, refer to the Mansfield District Central Area Flood Risk Review (Feb 2018) for further information regarding flood risk and river corridor enhancements.
Bath Lane to Old Mill Lane	The SFRA doesn't identify any specific surface water flooding issues within this area, whilst there are small areas of surface water flooding identified through the EA maps. This is namely: - Main roads: Ravensdale Rd, Sandy Lane, Old Mill Lane - Old Mill Lane industrial estate - Localised areas off Barringer Road Most of the area along this length of the river Maun has been identified as a 'Green SuDS Priority Area' within the SFRA.	**SFRA conclusion (Possible Development Constraints)**: Development within the extreme flood outline should undertake an assessment of the flood risk from the River Maun. **Addendum Update:** Appropriate SuDS systems would need to be incorporated into any future development. If there are significant issues, this may be an area in which retro-fitting SuDS may be appropriate. Address Biodiversity Enhancement Strategy Green SuDS opportunities through development and partnership working.
Old Mill Lane to Snake Hill	The SFRA identifies surface water flooding issues from New Mill Lane to Spa Ponds. This is also an area identified through the EA mapping.	**SFRA conclusion (Possible Development Constraints)**:

General Location & Adjoining Local Authority(ies)	Additional significant Surface Water Flood Risk and fluvial flood risk as identified through the EA 'Updated Flood Map for Surface Water' and the Mansfield District Central Area Flood Risk Review (Feb 2018).	Possible Development Constraints & Improvements
(Area between Old Mill Lane, New Mill Lane, Newlands/Clipstone and Spa Ponds) Newark and Sherwood DC	There are additional areas of surface water flooding identified through the EA maps. This is namely: - Greenfield site north of new housing development on Sandlands Way - Holly Road to Lark Hills open space - Warren Farm to New Mill Lane	No development should be permitted within the floodplain. Grassland between Old Mill Lane and New Mill Lane could be opened up to provide enhanced flood storage function.
		Addendum Update: Appropriate SuDS systems would need to be incorporated into any future development. If there are significant issues, this may be an area in which retro-fitting SuDS may be appropriate.
West Mansfield (Area including Penniment Farm, A617 (MARR), Skegby Lane/Fishpond HIll, and Bull Farm) Ashfield District Council	Risk of flooding from surface water run-off is identified in the SFRA Appendix F through the mapping of areas of 'Low Permeability' and 'Indicative areas of concentrated run-off'. This captures most of the EA mapping on surface water flooding which is mainly associated with the MARR (A617) and areas around Penniment Farm and Pleasley Hill.	**SFRA conclusion (Possible Development Constraints)**: There are no grounds to preclude development in the high run-off risk area; however, development proposals must consider opportunities to fully mitigate flooding form this source.
		Addendum Update: No further comments to add. In general, appropriate SuDS systems would need to be incorporated into any future development. This may be an area in which retro-fitting SuDS may be appropriate. Outline planning permission has be approved for residential and employment development at Penniment Farm.
Mansfield Town Centre	Mansfield Town Centre including its market place, Four Season's shopping centre and the main roads leading into the town centre e.g. Stockwell Gate, Church Street, Bridge Street, West Gate, Westfield Lane area identified as high risk (1 in 30) of surface water flooding.	**SFRA conclusion (Possible Development Constraints)**: The SFRA did not specifically address this area.
		Addendum Update:

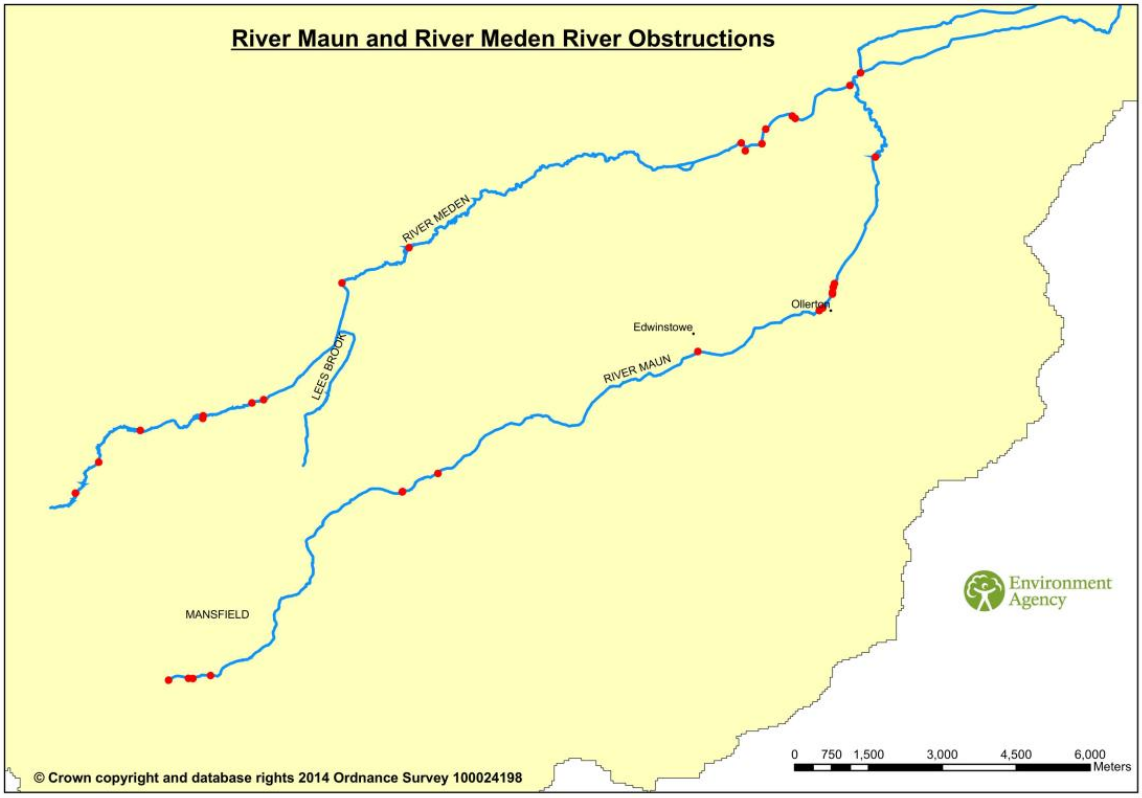
General Location & Adjoining Local Authority(ies)	Additional significant Surface Water Flood Risk and fluvial flood risk as identified through the EA 'Updated Flood Map for Surface Water' and the Mansfield District Central Area Flood Risk Review (Feb 2018).	Possible Development Constraints & Improvements
	Four Season's shopping centre has been known to historically flood and localised ponding of water has also be observed on West Gate and the Market Place.	Appropriate SuDS systems would need to be incorporated into any future development. This is an area that may require further investigation as an opportunity to retro-fitting SuDS may be appropriate.
Crown Farm industrial estate / Newlands Farm - area east of Vicar Water Country Park Newark and Sherwood DC (Clipstone)	The SFRA and the EA Flood Maps (Zones 2 & 3) identify flood risk from rivers from Newlands Farm towards Crown Farm industrial estate, notably an area between the industrial estate and housing area which are separated by a disused railway line. There has been historic flooding across Crown Farm Way near to Newlands Farm. The EA Flood Risk map from surface water also shows surface water flood risk within this generalised area. Fluvial flooding is also identified to the south of Vicar Water Country Park. This area is also identified as an area to prioritise discharge to low flow areas.	**SFRA conclusion (Possible Development Constraints)**: The SFRA did not specifically address this area. **Addendum Update:** It would be expected that development should be excluded from zones 2 and 3 and that appropriate SuDS systems would need to be incorporated into any future development. Address Biodiversity Enhancement Strategy opportunities through development and partnership working.
Ravensdale to Oak Tree (Area between Sherwood Hall Road to the north, Pump Hollow Road/Jubilee Way North to the east, Berry Hill Lane/Southwell Road West to the south, and Fisher Lane Park and Forest Road Recreation Ground to the west.	There are some recognisable areas within the EA Flood Map for surface water within these areas of the district, of which one was only identified in the SFRA. These areas include: -Pump Hollow Road southwest through to Racecourse Park to Southwell Road West - Pump Hollow Lane southwards to Big Barn Lane and Ling Forest Road -Area south of the Tesco at Oak Tree nr. To Sawley Dr. -Jubilee Way North southwest towards Oak Tree LNR.	**SFRA conclusion (Possible Development Constraints)**: The SFRA did not specifically address this area. **Addendum Update:** Appropriate SuDS systems would need to be incorporated into any future development. This may be an area in which retro-fitting SuDS may be appropriate. There are several existing areas of green space that intersect with predicted areas of flood risk from surface water run-off. These include: Racecourse Park, Forest

General Location & Adjoining Local Authority(ies)	Additional significant Surface Water Flood Risk and fluvial flood risk as identified through the EA 'Updated Flood Map for Surface Water' and the Mansfield District Central Area Flood Risk Review (Feb 2018).	Possible Development Constraints & Improvements
	-Former colliery site now built as residential around the Kings Walk area (this area was identified in the SFRA as an area of low permeability.) All of these areas are identified in the SFRA as being within a 'Low Flow Catchment'.	Road Recreation Ground; green space east of Kings Walk; part of Mansfield Way green corridor (former miner railway); and amenity land and play area north of Oak Tree Local Nature Reserve. These are all areas identified in the district's strategic green infrastructure network as areas for protection and enhancement. Address Biodiversity Enhancement Strategy opportunities through development and partnership working.
Berry Hill to Lindhurst (Area between Berry Hill Lane to the north, A617 (MARR) to the south, Rainworth Village to the east and Mansfield Cemetery to the west) Newark and Sherwood DC (Rainworth)	There are notable areas of surface water run-off as identified using the EA flood map for surface water. Two of these areas were also identified in the SFRA as 'areas of indicative surface water run-off'. These are noted below: - Small area south of Berry Hill Park and King George VI Park running southeast towards the MARR (A617). Includes residential areas and the cross roads at North Park/The Avenue. - Old Newark Road running east and west and also south towards the MARR/A617 (identified in the SFRA as an 'indicative area of concentrated run-off'). - Bellamy Road Estate residential area - Bellamy Road Oak Tree Business Park towards residential area near to Red Ruth Drive and then towards the MARR (identified in the SFRA 'indicative area of concentrated run-off'). - Areas within Rainworth Village including:area east of Helmsley Road and central Rainworth within Newark and Sherwood district near to Southwell Road East/Kirklington Road junction. All of these areas are identified in the SFRA as being within a 'Low Flow Catchment'.	**SFRA conclusion (Possible Development Constraints)**: The SFRA did not specifically address this area. **Addendum Update:** Appropriate SuDS systems would need to be incorporated into any future development. This may be an area in which retro-fitting SuDS may be appropriate. Address Biodiversity Enhancement Strategy opportunities through development and partnership working. These are recognised in the strategic green infrastructure network as areas in need of protection and enhancement.

General Location & Adjoining Local Authority(ies)	Additional significant Surface Water Flood Risk and fluvial flood risk as identified through the EA 'Updated Flood Map for Surface Water' and the Mansfield District Central Area Flood Risk Review (Feb 2018).	Possible Development Constraints & Improvements
Land south of West Notts College/Cauldwell Road Ashfield District Council	There are notable areas of surface water run-off as identified using the EA flood map for surface water, including: - Surface water run-off area extending from West Notts College along towards Rushley Farm (in Ashfield district) along the Nottingham Road (A60). - Small areas of surface water run-off within the West Notts College campus. Small area of surface water run-off extending from the car park at Mansfield Cemetery. - Surface water run-off area south of West Notts College extending (east-west) along Cauldwell Road.	**SFRA conclusion (Possible Development Constraints):** The SFRA did not address these area of surface water run-off.. Addendum Update: Appropriate SuDS systems would need to be incorporated into any future development. This may be an area in which retro-fitting SuDS may be appropriate.

Appendix 2 River obstructions on the Maun and Meden

Maun and Meden river obstructions identified by the Environment Agency (as of December 2014)

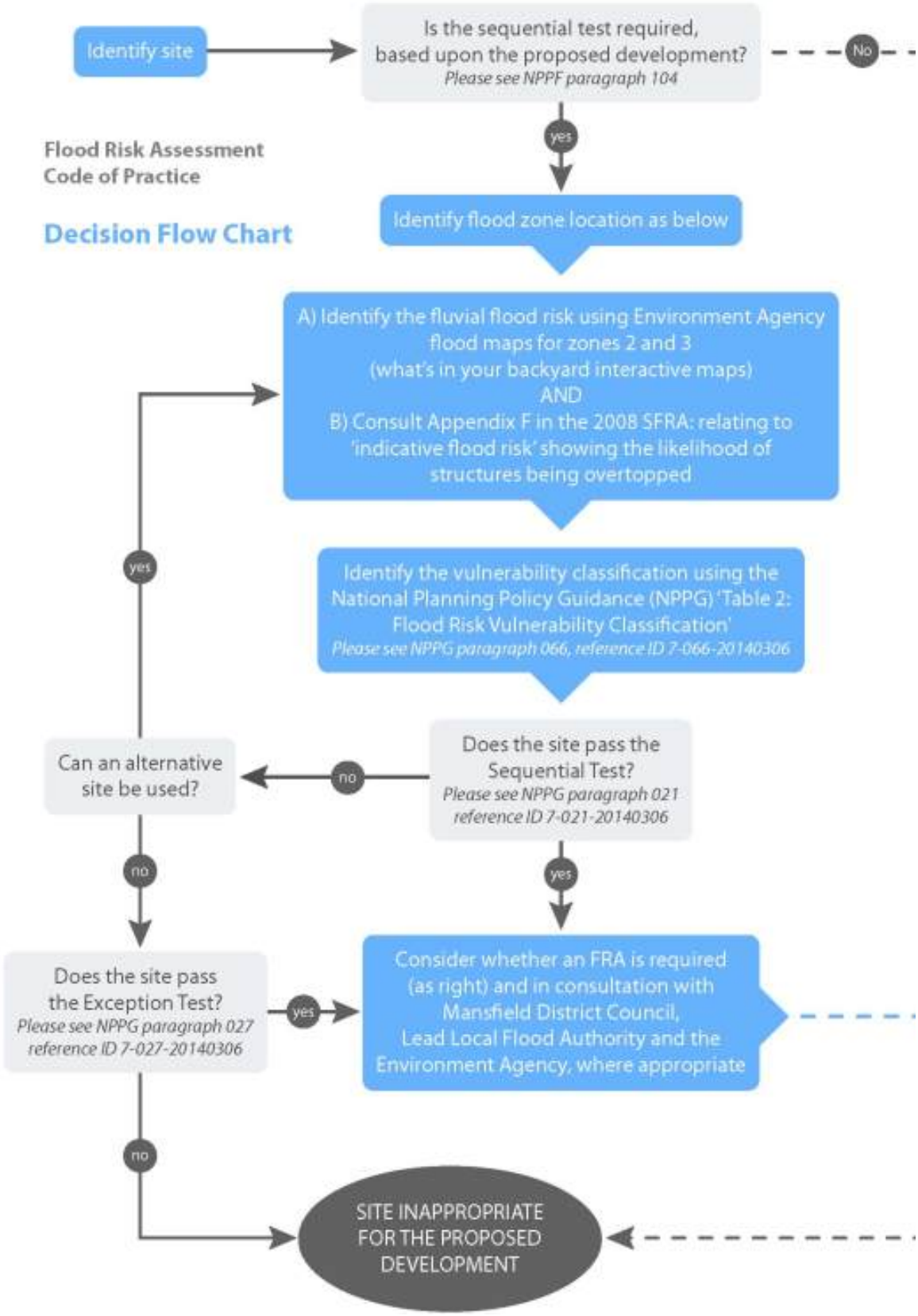


Location of river obstructions

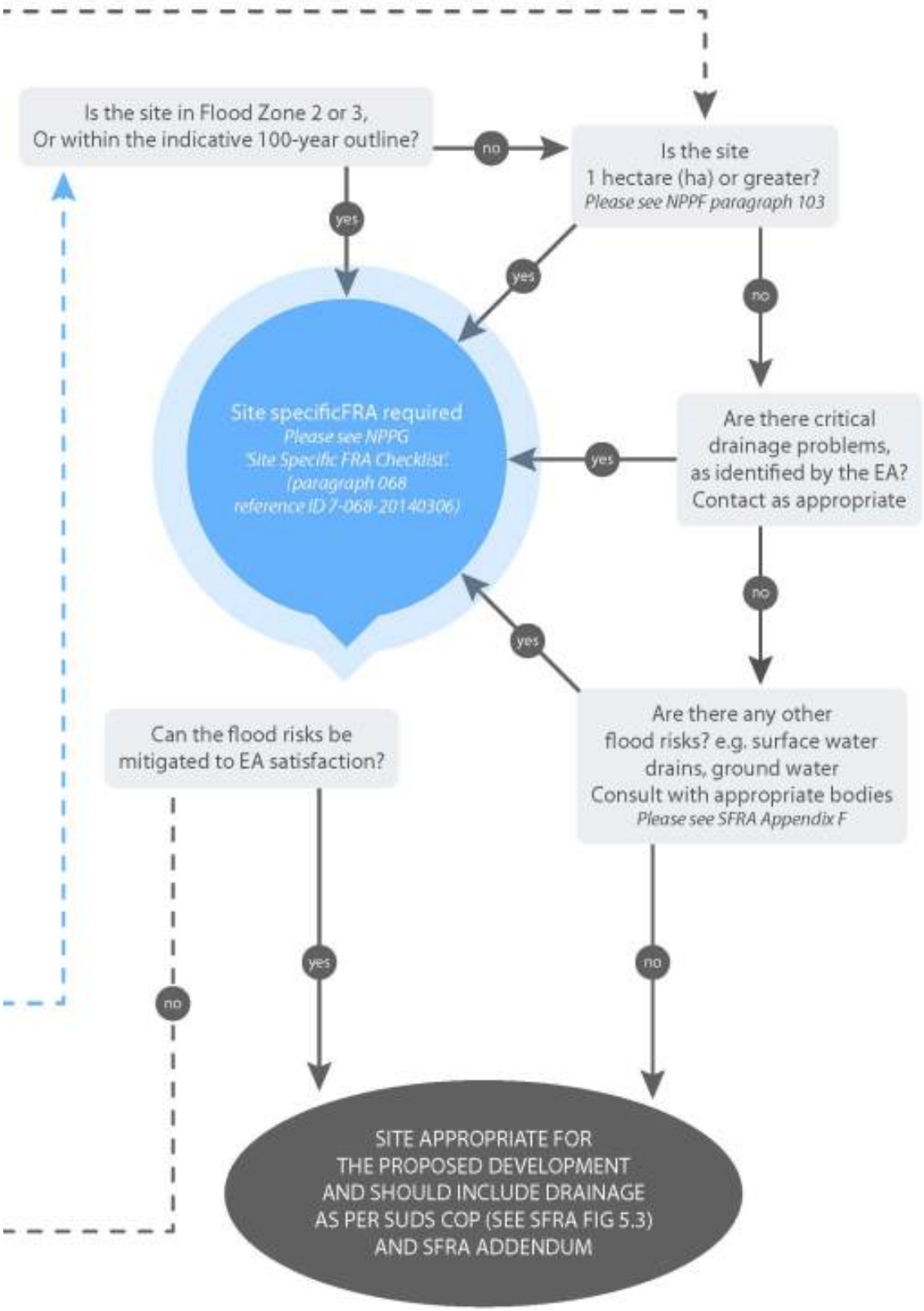
River	X mapping coordinate	Y mapping coordinate	River	X mapping coordinate	Y mapping coordinate
River Maun	465185.00000	367297.00000	River Meden	456849.00000	368572.31250
River Maun	465467.50000	367767.68750	River Meden	450073.90625	363587.18750
River Maun	465254.81250	367347.59375	River Meden	455487.40625	367855.81250
River Maun	465452.40625	367669.00000	River Meden	449377.90625	360732.31250
River Maun	465489.59375	367843.40625	River Meden	449335.59375	360565.50000
River Maun	465449.81250	367632.40625	River Meden	449384.09375	360665.09375
River Maun	462716.90625	366463.00000	River Meden	453894.09375	365482.81250
River Maun	470275.50000	375036.31250	River Meden	464634.59375	371246.81250
River Maun	469989.81250	373224.00000	River Meden	464017.90625	370681.18750
River Maun	466023.40625	372122.00000	River Meden	464097.18750	370982.50000

River	X mapping coordinate	Y mapping coordinate	River	X mapping coordinate	Y mapping coordinate
River Maun	465806.81250	371867.31250	River Meden	463680.09375	370539.18750
River Maun	452459.18750	359819.09375	River Meden	463597.40625	370698.18750
River Maun	452370.81250	359824.00000	River Meden	453659.68750	365419.18750
River Maun	451963.50000	359787.90625	River Meden	452665.59375	365157.59375
River Maun	457438.00000	363986.09375	River Meden	452658.18750	365106.31250
River Maun	452817.09375	359881.18750	River Meden	468096.68750	373282.50000
River Maun	456712.18750	363612.31250	River Meden	451391.40625	364858.50000
River Maun	456720.59375	363617.90625	River Meden	450544.59375	364215.50000

Appendix 3 Flood Risk Assessment code of practice decision flow chart



Three: Flood Risk Assessment code of practice decision flow chart



Appendix 4 Emergency planning considerations

4.1 This guidance was produced by Nottinghamshire County Council on behalf of the emergency planning units of the Local Authorities and the Emergency Services who sit within the Nottingham and Nottinghamshire LRF. It is a material planning consideration for new development.

Nottingham and Nottinghamshire Local Resilience Forum

Nottingham and Nottinghamshire LRF
National Planning Policy Framework (NPPF)
Emergency Planning Guidance

Version: 2, February 2013
Author: Nottinghamshire County Council Emergency Planning Team

1.0	**Emergency Planning NPPF Principles**
1.1	New developments in flood risk areas **must not** increase the burden on emergency services. The Emergency Services are in heavy demand during flood incidents. The Fire Safety Regulations state that "people should be able to evacuate by their own means" without support and aid from the emergency services. The emergency services and Local Authority emergency planners may object to proposals that increase the burden on the emergency services.
1.2	New developments **must have** access and egress routes that allow residents to safely exit their property during flood conditions. This includes vehicular access to allow the emergency services to safely reach the development during flood conditions. It should not be assumed that emergency services will have the resource to carry out air and water rescues during significant flooding incidents; therefore safe access and egress routes are essential. Emergency access and egress routes may be utilised which would not normally be used.
1.3	The emergency services are unlikely to regard developments that increase the scale of any rescue as being safe. The Fire Service can not guarantee that during a wide scale flood incident that they will have the resource to provide water rescue to new developments where self evacuation is not possible. Water rescue resources are limited and may be required at other significant areas of flooding.
1.4	Emergency service vehicles are not usually permitted to enter flood water; Local Authority vehicles cannot enter flood water. The following criteria applies: • Ambulance (conventional) – maximum depth of water vehicle permitted to drive through 400mm* of non flowing water • Fast response car (Ambulance Service) - maximum depth of water vehicle permitted to drive through 300mm* of non flowing water • Fire Appliance – not permitted to travel through any flood water due to unseen hazards and unknown depths and velocity. • Police vehicle - not permitted to travel through any flood water due to unseen hazards and unknown depths and velocity. *It should be noted that the above figures are approximations. Manufacturers do not detail a tolerance threshold for such vehicles travelling through water. Under some circumstances it may not be appropriate for any emergency service vehicles to travel through any flood water regardless of its depth.
1.5	It should be noted that even low levels of flood water can pose a risk to people in situ due to unseen hazards and possible contaminants. It is recommended that

	residents are encouraged not to enter flood water of any depths, unless in exceptional circumstances where an evacuation is made necessary.
1.6	Developers must ensure that appropriate safe evacuation and flood response procedures are in place for the development to manage the risk associated with flooding. All residents must be aware of such procedures.
1.7	It should be noted that proposals that would increase the number of people living or working in flood risk areas could increase the scale of any evacuation required. The Emergency Services may object to any such increases in order to preserve their ability to respond to existing flood prone sites.
1.8	The Nottingham and Nottinghamshire Local Resilience Forum (LRF) have multi-agency emergency plans in place to address their response to flooding incidents. The LRF Flood Response Plan lays down the roles and responsibilities of those organisations that would be involved in the response to flooding and details command and control procedures. This plan can be accessed via the following website: www.Nottsprepared.gov.uk.
1.9	For some flood risk areas within Nottingham and Nottinghamshire the LRF has written, or is in the process of writing, Local Flood Response Plans. These plans are not for public dissemination; they are for Local Authority and emergency service use only. Some Community Emergency Plans are in place held within communities across the county.
2.0	**Evacuation or Containment**
2.1	In exceptional circumstances, such as if the new development is not located within a flood zone but would be completely surrounded by water if a breach occurs, containment might be a suitable option (see section 1.2). • Identification of vulnerable residents is needed so they can be rescued or supported by the community as a priority • It is likely that power, water and sewage utilities will be lost during a flood scenario, therefore other residents may need to be evacuated if the flood water remains for a prolonged period. It should be noted that their rescue would be secondary to those whose lives are in danger. • Means of escape is likely to be by air or waterborne rescue (see LRF Flood Response Plan) • Flood water is likely to remain in the affected areas at a minimum for a number of days.
2.2	If the new development is located at the edge of the flood risk area then it should be possible to have a means of dry access and egress to an area that is not at risk and therefore self evacuation is made possible. • If evacuation is necessary residents must have safe access and egress to areas that are not considered to be at risk of flooding. • Identification of vulnerable residents will still be necessary in case they need to be rescued during an emergency.

2.3	Prior evacuation will not always be possible given the difficulties of delivering warnings at all hours. However, residents should be encouraged to sign up to the Environment Agency Flood Warning Service so that they are aware as soon as a flooding risk to their property has been identified.
2.4	If evacuation is possible the Local Authority may be able to provide temporary accommodation at local sports halls etc. Plans are in place to provide this emergency resource.
3.0	**Flood Emergency Plan for the proposed development**
3.1	Developers are advised to have flood emergency plans in place for developments in flood risk areas to ensure that evacuation and flood response procedures for the development are documented and agreed. These plans should include: • Aims and objectives of the plan • Maps showing development and flood risk areas, including depth and velocity of flooding • Evacuation or containment procedures, including evacuation routes • Flood warnings (EA Flood Warning Service) • Safe refuge information • Identification of vulnerable residents • Utility services • Procedures • Emergency contact information • Media information e.g. local radio stations
3.2	Consideration should be given to including a simple, discreet sign in each new property to inform residents of the flood risks, impacts and what to do, including the Environment Agency's national Flood Line phone number.
4.0	**Building Design**
4.1	Local Authority Emergency Planning Units will not provide guidance on housing design. This is covered under: • Environment Agency's 'Interim Position on Defining Safety against Flood Risk 17/08/2010' guidance • Communities and Local Government 2007 'Improving the Flood performance of New Buildings, Flood Resilient Construction' guidance.
4.2	Developers should give consideration to building in measures which will reduce the damage from flooding, including waterproof plaster, raised electrical installations, secure drains, pumps and room drainage.
4.3	Where flooding of a property might occur property flood protection measures should be provided as standard e.g. quick fitting door and patio door water guards.

This guidance was produced by Nottinghamshire County Council on behalf of the emergency planning units of the Local Authorities and the Emergency Services who sit within the Nottingham and Nottinghamshire LRF. This includes the following organisations:

Ashfield District Council	Bassetlaw District Council
Broxtowe Borough Council	East Midlands Ambulance Service
Gedling Borough Council	Mansfield District Council
Newark & Sherwood District Council	Nottingham City Council
Nottinghamshire County Council	Nottinghamshire Fire and Rescue Service
Nottinghamshire Police	Rushcliffe Borough Council

References

Department for Communities and Local Government, 2011, ***Technical Guidance to the National Planning Policy Framework****,* London

Jeremy Benn Associates Limited, 2011, '***Draft Emergency Planning Guidance for Housing Development in Areas of High Residual Flood Risk'***

Four: Emergency planning considerations

Appendix 5 Consultation summary

5.1 The consultation on the SFRA Addendum ran from 20th October 2014 to 1 December 2014. This was then extended for another week to allow more time for comments from consultees.

5.2 This was a targeted consultation with statutory organisations, such as the Environment Agency, Natural England, Severn Trent Water and Nottinghamshire County Council as lead local flood authority. It also included neighbouring local authorities and parish councils. Relevant nature conservation bodies. The Environment Agency and Nottinghamshire Wildlife Trust were part of the original steering group for the SFRA. A total of 18 organisations were consulted. Responses were received for those organisations highlighted in red.

Organisations consulted

Statutory organisations	• **Environment Agency** • **Natural England** • **Nottinghamshire County Council - lead local flood authority** • **Derbyshire County Council - lead local flood authority** • Severn Trent Water - Planning
Local authorities and parish councils	• **Nottinghamshire County Council - strategic planning** • **Ashfield District Council - planning and risk management** • **Bolsover District Council - planning and risk management** • Bassetlaw District Council - planning and risk management • **Newark and Sherwood District Council - planning and risk management** • Mansfield District Council - risk management • Warsop Parish Council • Rainworth Parish Council • **Clipstone Parish Council** • Edwinstowe Parish Council
Nature conservation bodies	• **Lowland Derbyshire and Nottinghamshire Local Nature Partnership (LNP)** • **Nottinghamshire Biodiversity Action Group (BAG)** • **Nottinghamshire Wildlife Trust**

5.3 A total of 24 individual comments were received sent by 11 separate organisations (highlighted in red above).

Duty to Cooperate

5.4 The two statutory organisations that did not return comments include Nottinghamshire County Council Flood Team and Severn Trent Water. MDC will continue to communicate with these two organisations through our Duty to Cooperate obligations and amend or add update responses to this Addendum where and when appropriate.

5.5 Below is a summary of Duty to Cooperate issues and how they were addressed through this SFRA Addendum.

DTC issues and actions taken

Organisation	Duty to cooperate issue	Amendments to the Addendum
Environment Agency (EA)	The EA was satisfied that this Addendum demonstrated a sufficient understanding of the issues and that flood risk was appropriately addressed. Recommendations were given to ensure that the Addendum fully demonstrated full regard for requirements in the Water Framework Directive (see detailed comments). Due to the allocation of regeneration sites (White Hart, Riverside and former Mansfield Brewery) as part of the 2016 local plan consultation, the EA requested that a holistic flood risk modelling and assessment study of the Mansfield Central Area inform the local plan. These sites have subsequently been removed from the list of preferred development site allocations but the study is still relevant to the Mansfield Town Centre and surrounding areas. Climate change allowances were updated February 2016.	• Clarification was made with regards to the role the EA plays in writing and monitoring Flood Risk Management Plans (FRMP) in **Section 3**. • Clarification was given to the role and findings in the Humber River Basin Management Plan in **Section 3**. • In order to address WFD requirements the following amendments were included in this Addendum: 1. **Section 4** was amended to include: references to weirs alongside culverts and other redundant flood-related structures. 2. **Section 4**: more in-depth inclusion of positive actions addressing barriers to fish and eel migration. 3. **Section 4**: greater emphasis placed on the importance of enhancing all watercourses regardless of what species currently exist, but rather what would be expected within the local area. 4. These changes have also been referenced in **Section 5(C)** regarding requirements as part of the Biodiversity Enhancement Strategy.

Organisation	Duty to cooperate issue	Amendments to the Addendum
		5. MDC commissioned (2016-2018) a holistic flood risk assessment, ncluding 1D and 2D modelling to inform updates to the flood zone 2 and 3 and to provide evidence for the local plan. This was prepared in consultation with the EA. Results of the hydraulic modelling of the flood zones and climate change allowances and recommendations with regards to flood risk and WFD river enhancements are provided in the Mansfield District Central Area Flood Risk Review (Feb 2018). 6. Addendum addresses climate change allowance updates.
Ashfield District Council (ADC)	ADC officers were supportive of this SFRA Addendum and were not aware of any significant outstanding flooding issues relating to Ashfield district that boarder Mansfield district. A few minor amendments were suggested and these were addressed post consultation.	• Surface water flooding issues identified in the Addendum near to West Notts College post consultation. These were noted in **Appendix 1: Flood Risk Updates**. • No further DTC issues to address.
Derbyshire County Council (DCC) - lead local flood authority for Derbyshire	Updates were requested from DCC to include a small number of historic river and sewer flooding events as part of the Appendix Flood Risk Updates - River Meden. A request was made to bring the SuDS code of practice in line with DCC's approach.	• The flood events were added to **Appendix 1: Flood Risk Updates - River Meden.** • **Section 5 (B)** - Sustainable Drainage Systems (SuDS) Code of Practice (COP) was amended to bring this up-to-date in relation to national guidance (of which the DCC approach follows) It also references relevant DCC planning guidance in relation to SuDS standing advice and design guidance. This is now part of the SuDS Code of Practice. • No further DTC issues to address.
Nottinghamshire County Council (Strategic Planning)	There were no issues raised.	No specific actions required.
Lowland Derbyshire and Nottinghamshire	There were no issues raised.	No specific actions required.

Organisation	Duty to cooperate issue	Amendments to the Addendum
Local Nature Partnership		
Clipstone Parish Council	There were no issues raised.	No specific actions required.
Nottinghamshire Local Biodiversity Action Group (BAG)	The Nottinghamshire BAG considered that the SFRA Addendum references to biodiversity positively contributes to the SFRA's strategic role. There were no specific issues raised that required attention.	No specific actions required.
Natural England (NE)	NE confirmed that the SFRA Addendum adequately and positively addresses regard for the Water Framework Directive, the Humber River Basin Management Plan and other key biodiversity and environmental considerations, including green infrastructure and standing advice on protected species. Updates to the SFRA, as published in the Addendum, were positively welcomed e.g. NE Standing Advice; the Nottinghamshire LBAP; design of green SuDS.	No specific actions required.
Newark and Sherwood District Council	The Risk Management team raised no specific issues or comments. Guidance was sent regarding key emergency planning considerations at the planning application stage. The Planning Policy team identified key areas for cross boundary working: 1) the Newark and Sherwood Green Infrastructure Strategy and 2) Newark and Sherwood SFRA Level 2 Phase 2.	• The emergency planning considerations were added in as **Appendix 4** to this Addendum and referenced within **Sections 3 (A) and 5 (A)**. This was considered a sufficient representative response from emergency planning in Nottinghamshire. • The the Newark and Sherwood Green Infrastructure Strategy and 2) Newark and Sherwood SFRA Level 2 Phase 2 were appropriately referenced in **Section 6 (Table 5) and Section 5 Table (4).** Table 4 states: *Areas for protection and enhancement as referenced in relevant Green Infrastructure and Biodiversity strategies from neighbouring local authorities should also inform relevant biodiversity and green infrastructure improvements as they relate to cross boundary issues.* • Also see comments re: Bolsover District Council below.

Organisation	Duty to cooperate issue	Amendments to the Addendum
Nottinghamshire Wildlife Trust (NWT)	No specific duty to cooperate issues were raised. On another note, NWT raised concerns regarding implementation of flood and related biodiversity enhancement catchment projects within the district. Namely, that there are no dedicated staff to address such issues. MDC is missing out on Water Framework Directive funding for projects facilitating improvements to water quality, low flow and other flooding and biodiversity issues. Concern was also raised about combined impacts on Vicar Water low flow area.	• NWT comments were noted and require a combined Council led approach in addition to the planning remit. The following text was included in **Section 5 (C)** of this SFRA Addendum: *In addition to funding from planning obligations (Section 106), it is recognised that a combination approach is needed to ensure biodiversity enhancements are realised. This would need to include funding from various sources, coordinated partnership working and dedicated MDC officer resources.* • Vicar Water is recognised as a key area in need of enhancement in the SFRA biodiversity enhancement strategy. No specific actions required as part of this SFRA.
Bolsover District Council (BDC)	BDC commented that they couldn't state with certainty that the SFRA Addendum adequately addresses strategic and cross boundary issues concerning surface water and fluvial flooding without undertaking a similar update in the North Eastern Derbyshire SFRA. It did agree with the 2008 SFRA and SFRA Addendum findings: • new development in Pleasley Square, Sookholme and Spion Kop areas should be avoided • SuDS will need to be incorporated along Chesterfield Road and that retrofitting of SuDS would bring positive benefits BDC commented that 'the key focus of Duty to Cooperate (i.e. cross boundary) flooding issues should be on imposing development constraints, where appropriate'.	• The following wording was added to **Table 5 (Section 6)** in order to future proof this SFRA Addendum with regards to cross boundary flood issues as identified in neighbouring local authority's Strategic Flood Risk Assessments (SFRAs): *For development near to other local authority areas (e.g. Rainworth, Clipstone, Pleasley, etc), neighbouring Local Authority's Strategic Flood Risk Assessment (SFRAs) findings and guidance must also be considered where there is a likelihood of cross boundary flood risk issues. This should help inform planning decisions.*
Nottinghamshire County Council (responded April 2016)	• The County Council as LLFA has prepared a draft LFRMS which public consultation has now been carried out on and it is envisaged that the final draft will be presented	• Section 3 regarding the Nottinghamshire LFRMS has been updated to reflect the publication of this document and

Organisation	Duty to cooperate issue	Amendments to the Addendum

	to Committee during the summer of 2016 for final approval.
	• information/updates regarding SuDS and clarification of NCC's role as lead local flood authority and statutory consultee were given. Emphasis was places on the Governments' non-staturoy guidance on SuDS published in April 2015. This is cited as the main guidance document. Clarification was given with respect to:
	  • 'The LLFA became a statutory consultee to the LPA on larger applications for surface water drainage matters but the final acceptance of drainage proposals is a matter for the LPA to determine as part of the overall consideration of a planning application.
	  • The decision as to whether the requirement for SUDs is 'inappropriate' is a matter that relates to a varying site and development circumstances as well as economic issues and therefore decisions need to be made on a site by site basis as to what is 'inappropriate'.
	  • The County Council has not developed local SUDs guidance but as is the case with Derbyshire there is national guidance that developers should use in the form of the Non-statutory Technical Standards for Sustainable Drainage Systems.
		its findings as they relate to the Mansfield district SFRA.
		• Section 5 was amended to reflect comments made with regards to SuDs.

Other issues addressed as a result of comments

5.6 In addition to the changes above, the following amendments to the SFRA Addendum were also made as a result of the 2014 consultation.

Key issues and updates incorporated into this SFRA Addendum

Section	Issues and updates
Section 3 (A)	• Updates in the National Planning Policy Guidance are now reflected in the Addendum with NPPG references. Key paragraph references in the NPPF were also added to this section in order to add further clarity regarding national planning policy and guidance. Updates are also reflected in Table 1 and Table 4.
Section 5	• Wording in Section 5 (A) and Table 4 regarding the site specific flood risk assessment (FRA) code of practice (COP) was added to clarify exactly what is included in these. • Updates, as per guidance in the NPPG and policy in the NPPF have informed an updated FRA COP decision flow chart (Appendix 3). • Wording in Section 5 (B), Table 3 and Table 4 regarding the was added to clarify exactly what is included in the SuDS codes of practice (COP). This also reflects changes in national guidance and policy and consultation comments received on SuDS. • Comments from the Environment Agency regarding key Water Framework Directive and the Humber River Basin Management Plan have been integrated into the requirements of the SFRA Biodiversity Enhancement Strategy as noted in Section 5 (C) and Table 4.
Section 7	• Guidance on ground water flood were further clarified as per comments received.

Five: Consultation summary

Appendix 6 Example consultation letter

6.1 The letter below is an example letter sent to consultees during the consultation period on this SFRA Addendum.

Example consultation letter

Mansfield District Council

Creating a District where People can Succeed

Mr X
Organisation
Address
Address
Address
Postcode

Your Ref: Mansfield SFRA Addendum
Our Ref: Mansfield SFRA Addendum-ADC
When calling or phoning please ask for:
Kira Besh
Tel: ***01623 4603195***
E-Mail: **lp@mansfield.gov.uk**

Date: 20th October 2014

Dear XX,

Local Plan Evidence Base - Addendum update to the Mansfield District Council Strategic Flood Risk Assessment (SFRA)

I am writing to you to explain our approach and ask for your support in relation to the following:

In preparation for writing the Preferred Options for Mansfield District Council's Local Plan, we are currently reviewing our evidence base documents including our Strategic Flood Risk Assessment (SFRA). The SFRA document was written in 2008 and we recognise that it requires some updating, but we are confident that the overall findings are still relevant and sound. In order to bring the Mansfield District Council SFRA up-to-date, we propose that an Addendum Report is appended to it.

We are mindful of the obligations placed on us by the Government's focus on local authorities and statutory undertakers to meet the Duty to Cooperate[1] and to ensure that policies and future development sites are better informed by joint working. Thus, through this letter and SFRA Addendum, we are seeking to ensure that we have a sufficiently informed evidence base that effectively takes account of strategic and cross boundary issues.

Background Information - Strategic Flood Risk Assessment (SFRA) 2008

The MDC SFRA includes a 'Guide for Developers' and a 'Technical Report'. The 'Methodology' section (2.1) of the Technical Report, explains in detail what informed the report. A brief summary of the SFRA can also be viewed in the SFRA Addendum.

Upon review of the SFRA, we believe overall that the main findings in the SFRA are still valid and relevant. It addresses strategic issues with regards to climate change and the Water Framework Directive, particularly with respect to biodiversity enhancement opportunities.

Overall, flooding in the district is not a major issue but there are localised areas that require consideration. The appendix to this draft SFRA Addendum highlights where flood risk has been identified and where we consider there are cross-boundary issues.

In summary, the main areas of the SFRA that require attention within the addendum report include:

A) Updating references to relevant policy, legislation and guidance references
B) Referencing the most up-to-date Environment Agency's flood risk mapping from rivers and surface water run-off.
C) Updating further guidance in relation to the Flood Risk and Sustainable Drainage Systems (SuDS) codes of practice.

[1] For more information on Duty to Cooperate, please follow this web link.
http://planningguidance.planningportal.gov.uk/blog/guidance/duty-to-cooperate/what-is-the-duty-to-cooperate-and-what-does-it-require/

Managing Director – Ruth Marlow
Civic Centre, Chesterfield Road South, Mansfield, Nottinghamshire, NG19 7BH.
Telephone 01623 463463 Fax 01623 463900 e-mail mdc@mansfield.gov.uk website: www.mansfield.gov.uk

D) Ensuring that the Water Framework Directive and Humber River Basin Management Plan are fully considered.
E) Identifying any outstanding flooding issues and development pressures within the district and adjoining local authorities as part of the Duty to Cooperate.
F) Identifying any further constraints and opportunities for addressing flood risk and biodiversity/green infrastructure enhancement.

The NPPF states that evidence base requirements should be proportionate to need and the Council considers that the original SFRA study together with the proposed Addendum is a proportionate response to the guidance.

What we require from you

This consultation is an opportunity to address cross-boundary and strategic flooding issues in a proactive manner. It is a start to Duty to Cooperate discussions and we welcome active dialogue to help identify any issues and opportunities that may need addressing. We will also be seeking comments from your emergency planning/risk management officer/team.

The appendix to this addendum summarises the finding in the SFRA and any significant up-dated findings post 2008. It also identifies constraints to development and strategic opportunities to help address such issues.

We look forward to your comments and working with you to ensure this SFRA evidence base remains fit for purpose. We encourage you to make specific comments on the SFRA Addendum on-line through our Objective Consultation Portal.

You can comment directly on the document whilst logged into Objective. In Section 8 of the Addendum (Summary and Required Comments to Address Duty to Cooperate), there is an opportunity to make additional comments.

If you don't have any comments to make, we would appreciate you stating this and why.

If you do have comments to make on the draft SFRA Addendum and have identified specific cross-boundary/strategic issues and/or opportunities that you feel need addressing further, please let us know so that we can follow this up.

Alternatively, you can send us a letter or email us with your comments if this is easier for you.

How to view the SFRA and the draft SFRA Addendum

The time period for commenting on this document is from **Monday 20th October until Monday 1st December 2014**.

The Mansfield District Council's SFRA can be viewed in full on the Mansfield District Council's website: www.mansfield.gov.uk/sfra.

The draft SFRA Addendum can be viewed through Objective - our on-line consultation forum. To view this document, please visit http://mansfield.objective.co.uk/portal/ and click on the link to the Draft Strategic Flood Risk Assessment Addendum. You will need to log-in to make comments.

As you don't already have a user name, you will need to create this by clicking on this link http://mansfield.objective.co.uk/common/register.jsp and register as a 'Consultee'.

Yours sincerely,

Kira Besh

Sustainable Planning Officer, Planning Policy Team

Mansfield District Council

Six: Example consultation letter

Appendix 7 Consultation comments

7.1 Please see below comments from the 2014 consultation on the SFRA Addendum.

Consultation responses

No.	Name and organisation	Section of the document	Comment	Summary	MDC's response
1	Mr Andrew Pitts - Environment Agency - Lower Trent Area	Duty to Cooperate	The addendum report demonstrates a sufficiently informed understanding of the need for a review of the existing evidence base with regard to flood risk. The proposed addendum report considers in detail the need to update the current Mansfield SFRA by utilising the most upto date and relevant new evidence that has arisen since the publication in 2008. From the EA's perspective we are satisfied that flood risk has been appropriately assessed in the addendum report, but we would make the following comments. Section 3 Paragraphs 3.17 & 3.18 are useful and highlight surface water strategies and plans, but there is no reference to fluvial flood risk. The Environment Agency (EA) and Lead Local Flood Authorities (LLFA) are required to prepare FRMPs for all of England. For the EA this will cover flooding from main rivers, the sea and reservoirs. The Draft Humber River Basin District FRMP is currently out for public consultation (delivery December 2015) and is an integrated plan for managing all sources of flooding in partnership with other Risk Management Authorities such as LLFAs The FRMP in its final form will help deliver the requirements of the National Flood and Coastal Erosion Risk Management Strategy in England by setting out the measures to manage flood risk now and in the future. The FRMP will: Help develop and promote a better understanding of flood and coastal erosion risk Provide information about the economic and environmental benefits to inform decision makers	There is an identified need to better understand and integrate measures into this SFRA Addendum to address the following: • The role of the Humber River Basin District FRMP (draft October 2014) • Fish conservation needs, including regard for barriers to movement (culverts and weirs) • Water Framework Directive	These comments were followed up with a phone conversation with the EA to further understand the issues raised (December 2014). The EA's comments have been fully addressed in the relevant sections and their summary tables. See Appendix: Consultation summary. DTC issues addressed. We will continue to monitor changes made to the Humber River Basin

No.	Name and organisation	Section of the document	Comment	Summary	MDC's response
			Identify communities with the highest risk of flooding so that investment can be targeted at those in most need The consultation is open until 31 January 2015 and can be accessed via the attached link: https://consult.environment-agency.gov.uk/portal/ho/flood/draft_frmp/consult?pointId=3063510 Chapter 4: Demonstrating regard for WFD We welcome the importance that has been given to integrating the additional opportunities/benefits of WFD in the addendum report , the following comments indicate why we feel that the SFRA Technical Report does not fully demonstrate regard to WFD in the way that is implied in the Addendum Report: The Biodiversity Enhancement Strategy To be fully in line with WFD, restoration proposals should not be limited to the removal of culverts but also to the removal of weirs and other redundant flood-related structures which have the potential to affect flows. Weirs pose a significant barrier to fish migration and WFD Cause of Failure reports for the River Maun have indicated that this is a major reason for failure. Paragraph 4.10 (Addendum Report) Refers to the comments made in Section 4.5 of the SFRA Technical Report, which although does include a paragraph on fish, is limited and without the detail that has been afforded to other protected species. There is a great deal of evidence to indicate that culverts act as a barrier to fish movement and hence culverts are likely to significantly affect the WFD status of a river. Associated with this, Table 4.3 (possible removal of culverts) in the SFRA should consider and note the benefits to fish that can be realised as part of any reinstatement. Prioritisation of watercourses - Paragraph 4.6.3 (SFRA Technical Report)	requirements regarding heavily modified rivers and priority species. • Changes are required in the SFRA Addendum to clarify the EA's role in FRMPs.	Management Plan (final draft soon to be released in 2016) and related documents. Updates to this Addendum will be made where significant issues arise.

No.	Name and organisation	Section of the document	Comment	Summary	MDC's response
			States that restoration of the watercourses in the main urban areas would be of low biodiversity benefit. This is not in line with WFD which seeks to address the issues regarding the heavily modifies nature of the river. By seeking to re-naturalise rivers, protected species may then enter the area. Prioritisation should not be based solely on what is currently there but should, under WFD, be based upon what is expected to be in the environment. Specifically in relation to WFD, trout and eels are both a priority species and it is likely that they arein this area. Paragraph 4.3: Should read Idle and Torne catchment, rather than Idle and T horne catchment.		
2	Mr Neil Oxby - Ashfield District Council	3 (A)	The National Planning Policy Guidance was issued on 6 th March 2014 not 2013.	Correction required.	Correction made.
3	Mr Neil Oxby - Ashfield District Council	3.3	I am not clear that there is a strategic change between PPS25 and the NPPF/NPPG. PPS 25 in para 3 & 4 identified that “all forms of flooding and their impact on the natural and built environment are material considerations and emphasis plans and applications taking account of flood risk. The appendix also identified the various sources of flooding. Requirements for a site specific flood risk assessment were identified in PPS25 and are also identified in NPPF footnotes.	Clarification required as per wording in Section 3 (A) regarding national policy guidance (NPPG) and NPPF wording. MDC needs to clarify the current NPPF and NPPG approach to flooding. Some of the wording in the Addendum needed updating, re-erferencing and re-paraphrasing to ensure	It is acknowledged that there is no significant change between PPS25 and NPPF/NPPG. Section 3 (A) and Table 1 have been further clarified as per NPPG and NPPF wording, making explicit references to specific paragraphs. This helps to clarify the SFRA requirements as per NPPG/NPPF; these are the definitive policy references to date.

No.	Name and organisation	Section of the document	Comment	Summary	MDC's response
				compatibility to the NPPF/NPPG wording.	Table 1 (point 2) - also clarifies the NPPF approach: *Unless exceptions in the NPPF are noted, development regardless of size needs to consider flooding from all sources and, where applicable, should address requirements through a site-specific flood risk assessment. See paragraphs 100 to 104 and applicable footnotes in the NPPF.*
4	Mr Neil Oxby - Ashfield District Council	Section 3 (Table 1)	Point 1: Should be identified as National Planning Policy Guidance 2014 not 2013.	Correction required.	Correction made.
5	Mr Neil Oxby - Ashfield District Council	4.9	We would agreed that the Planning Practice Guidance and Environment Agency's guidance on Strategic Flood Risk Assessments does not identify water quality as an output from the SFRA. Should specific reference be made to the draft Humber River Basin District Draft Flood Risk Management Plan which is currently out to consultation? The Idle and Torne Catchment Measures identify catchment wide measures but nothing specific to Mansfield or to district councils in terms of catchment wide measures. (Humber Basin Draft Flood Risk Management Plan Page 222)	There is a need to recognise and reference the Humber River	Section 3 (F) relating to Flood Risk Management Plans was amended to clarify the roles of Nottinghamshire County Council as lead local flood authority and the EA

No.	Name and organisation	Section of the document	Comment	Summary	MDC's response
				FRMP as published by the EA. This reflects similar comments made by the EA.	regarding FRMPs. Information on the Humber River Basin District Draft Flood Risk Management Plan - the Idle and Torne catchment measures has also been added. We will continue to monitor changes made to the Humber River Basin Flood Risk Management Plan and related documents. Updates to this Addendum will be made where significant issues arise.
6	Mr Neil Oxby - Ashfield District Council	Section 4 (Autainable Drainage Systems Code of Practice)	I am not clear what the SuDS Code of Practice refers to. Is it the Interim Code of Practice for Sustainable Drainage produced by the National SuDS Working Group 2004 or something else? It would be helpful if the final document clarifies this.	Clarification is sought over what the 'SuDS Code of Practice' refers to.	Section 4 where it references the SuDS code of practice are clarified. Further detailed guidelines are also included in Section 5 (B) and corresponding summary table.

No.	Name and organisation	Section of the document	Comment	Summary	MDC's response
7	Mr Neil Oxby - Ashfield District Council	5.1	Similar to the comment on 4.17. I am unclear what the reference to Codes of Practices means? A Code of Practice is typically a set of written regulations providing details on how to achieve the standards or in relation to how people should work, issued by a official body or profession. Does the Code of Practice relate specifically to and is issued under Mansfield SFRA or does it relate to wider guidance? It would be helpful if the final document clarifies this aspect.	Clarification is sought over what the 'Flood Risk Code of Practice' and the 'SuDS Code of Practice' refer to.	Section 5 (A) and 5(B) and corresponding tables have been amended to clarify what these COPs refer to and what they include. Appendix: Flood risk assessment code of practice decision flow chart was also added to show updates as a result of NPPF/NPPG requirements.
8	Mr Neil Oxby - Ashfield District Council	5.14	The wording in the Summary Table is incorrect as identifies that in Flood Zone 1 a site specific flood risk assessment will only be required on sites of less than 1 ha. It should be require on site of 1 ha or greater in accordance with the NPPF. Therefore, it should this read: "For development outside Flood Zones 2 or 3 but is of1 hectare or greater a site specific flood risk assessment will be required in line with paragraph 103 (footnote 20) of the National Planning Policy Framework (NPPF)" Should the summary also set the context that repeats the requirement of the NPPF that "All development regardless of size needs to consider flooding from all sources and where applicable, should address requirements through a site-specific flood risk assessment. Also see paragraph 103 (footnote 20) in the NPPF." (SFRA Summary Updates - Table 1).	Correction and further emphasis required for Section 5 summary table as per NPPF/NPPG requirements.	Corrected wording to read: *For development outside Flood Zones 2 or 3 and is of 1 ha or greater, a site specific flood risk assessment will be required in line with paragraph 103 (footnote 20) of the National Planning Policy Framework (NPPF). The National Planning Policy Guidance*

No.	Name and organisation	Section of the document	Comment	Summary	MDC's response
					(NPPG) provides a site specific flood risk assessment check-list. Also included the following wording in relation to the NPPF: Unless exceptions in the NP*PF are noted, development regardless of size needs to consider flooding from all sources and, where applicable, should address requirements through a site-specific flood risk assessment. See paragraphs 100 to 104 and applicable footnotes in the NPPF.*
9	Mr Neil Oxby - Ashfield District Council	7.12	Table 5 Flood Risk from Ground Water - I am not clear why contacting Sever Trent is identified under Groundwater issues?	Clarification is sought as to why Table 5 (Flood Risk from Ground Water) suggests that Severn Trent Water should be consulted under	Correction made and further wording added to Table 6 to give clearer guidance on groundwater flooding issues.

No.	Name and organisation	Section of the document	Comment	Summary	MDC's response
				groundwater issues.	
10	Mr Neil Oxby - Ashfield District Council	Duty to Cooperate	A number of minor comments have been raised regarding the Mansfield SFRA Addendum 2014. However, officers at Ashfield District Council are supportive of the update to Mansfield SFRA and are not aware of any significant flood issues relating to Ashfield that have not identified in the original 2008 SFRA or the SFRA Addendum 2014. In relation to the Flood Risk Updates as Reported in Section 4.5 and Table 4.5 of the SFRA-Guide for Planners and Developers: Ashfield is in agreement with the comments made in relation to Kings Mill Reservoir, Bleak Hills, and West Mansfield. Surface water flooding is identified in relation to land to the south of West Notts College/Cauldwell Road. Should this area be included in the Flood Risk Updates?	Add surface water flooding area identified for West Notts College/Cauldwell Road to the Appendix on Flooding Updates for the River Maun Catchment.	Specific areas were included in Appendix 1 on Updates to Flood Risk (River Maun). DTC issues addressed.
11	Mr Ashley Dunn - Derbyshire County Council	Duty to Cooperate	Based on your letter dated 25 th November, I feel the main feedback into the addendum update to the SFRA that we can provide would be to item (E) (identifying any outstanding flooding issues and development pressures within the district and adjoining local authorities as part of the Duty to Cooperate). For this purpose I have consulted our historic flooding records for areas on or near the boundary of DCC and MDC. Our historic flooding records have been collated from a range of sources and are anecdotal. The provision of this data is suggested to act as a guide only. We are aware of the following flooding records that may be of relevance and which may or may not already be included within the existing SFRA: Fluvial Flooding: River Meden at or near OS Grid Reference 453136, 365308 – Unknown date, magnitude and consequence. Blocked culvert/drain at OS Grid Reference 451559, 364933 – Mills at Pleasley Vale Business Park, Unknown date, magnitude and consequence.	We acknowledge these historic flooding events and will include them within the addendum.	Specific areas were included in Appendix 1 on Updates to Flood Risk (River Meden). DTC issues addressed.

No.	Name and organisation	Section of the document	Comment	Summary	MDC's response
			River Meden at or near OS Grid reference 450500, 364500 – River overtopping its banks in 2004 and 2007. Unknown consequence of flooding. River Meden at or near OS Grid reference 450541, 364240 - Pleasley Bridge, Chesterfield Road, Pleasley in 2003, causing flooding to basement and yard of non-residential property. Sewer Flooding: Church Lane, Pleasley – Sewer flooding to external garden areas. Unknown date. There are also a number of flooding records in and around Shirebrook which are thought to be of a very local nature and therefore may not be of great interest to MDC.		
12	Mr Ashley Dunn - Derbyshire County Council	5 (B) SuDS COP	More generally, I note that the addendum will make reference to SuDS being designed according to CIRIA C697 SuDS Manual Derbyshire promotes SuDS for all sites including any sites on or near to the borders of DCC and MDC. DCC encourages, for all developments that site surface water drainage is designed in line with the current draft National SuDS Standards, including restricting developed discharge of surface water to greenfield runoff rates making suitable allowances for climate change and urban creep, managing surface water as close to the surface as possible and prioritising infiltration as a means of surface water disposal where possible. Regardless of a site's status as greenfield or brownfield land, DCC encourages that surface water discharge from any development should be as close to the greenfield runoff rate as is reasonably practicable. Prior to designing a drainage scheme for a development, a full ground investigation should be implemented for each site to fully explore the option of ground infiltration to manage the surface water in preference to discharging to a surface water body or public sewer system.	These comments give additional background for the Derbyshire County Council's approach to SuDS as the lead local flood authority for Derbyshire. These mostly reflect national guidance on SuDS. The SuDS Manual for Derbyshire promotes SuDS for all sites on and near the DCC and Mansfield district border.	

No.	Name and organisation	Section of the document	Comment	Summary	MDC's response
13	Mr Ashley Dunn - Derbyshire County Council	5 (B) SuDS COP	Defra have recently consulted on an alternative means of implementing SuDS to the SAB approach detailed in Schedule 3 of the Flood and Water Management Act. This would see the responsibility for ensuring suitable SuDS are implemented resting with the Local Planning Authority. I note that the addendum makes reference to this, however DCC would recommend that the outcome of the consultation is monitored and where possible/necessary any new duties on MDC encompassed within the SFRA.		
14	Nina Wilson - Nottinghamshire County Council (Strategic Planning)	Duty to Cooperate	Thank you for consulting Nottinghamshire County Council on the above, we have no comments to make from a Minerals and Waste Planning Policy perspective.	No DTC issues identified.	No actions required.
15	Rosy Carter - Lowland Derbyshire and Nottinghamshire Local Nature Partnership	Duty to Cooperate	Thank you for requesting Lowland Derbyshire and Nottinghamshire Local Nature Partnership's input as part of Mansfield District Council's Local Plan Strategic Flood Risk Assessment consultation process. We aim to positively contribute to your strategic planning process and core strategy approval in relation to sustainable development and your Duty to Co-operate with the LNP. We are in the process of establishing the natural environment baseline for the area before setting our strategy and objectives which aim to create a resilient and ecologically rich Lowland Derbyshire and Nottinghamshire supporting people, communities and economic growth. This will be completed in early 2015 and at this point we can contribute to your local plans with specific objectives, targets and spatial maps to support you towards achieving your sustainable development goals. We have recently discussed with senior management at both Derbyshire and Nottinghamshire County Council planning departments how to discharge the duty to co-operate and incorporate our objectives and targets into local planning. Their advice was for the LNP to set very clear objectives and targets first and then the two County Councils can help to ensure they are incorporated into local plans. Depending on which stage of the planning process you are at our objectives and targets may need to be added as an addendum to your plans if it is not possible for them to be incorporated into the plan during 2015. In early 2015 we will hold an event for planning authorities and planners where we will share our aims, strategy and objectives and begin a continuing, constructive and cooperative dialogue.	No DTC issues identified.	No actions required. We will continue to monitor the LNP strategic needs/requirements as they relate to flooding issues as part of our obligations under the Duty to Cooperate.

No.	Name and organisation	Section of the document	Comment	Summary	MDC's response
			If you have any questions or have issues with having an addendum to your plans do not hesitate to contact either of us or the LNP Co-ordinator, Rosy Carter.		
16	Jennifer Howe - Clipstone Parish Council	Duty to Cooperate	After a parish council meeting, it was concluded that there were no issues or concerns to raise regarding the addendum.	No DTC issues identified.	No actions required.
17	Chris Jackson - Biodiversity Action Group	Duty to Cooperate	The suggested minor updates listed in the SFRA Summery updates, table 3 will assist the SFRA's role as a guidance document for both the strategic and site-specific scales.	This is a positive response on the document affirming support for table 3 (Summary of updates) in its role as a guidance document on strategic and site-specific levels.	No actions required.
18	Roslyn Deeming - Natural England	Duty to Cooperate	Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development. As regards to the question posed in section 8 regarding Duty to Cooperate I can confirm that Natural England considers that the Flood Risk Strategy adequately addresses strategic and cross boundary issues. This is demonstrated by the reference to relevant strategic documents. In particular the Addendum satisfactorily demonstrates regard for the Water Framework Directive and Humber River Basin Management Plan. It has also taken account of the Nottinghamshire BAP which covers cross boundary issues. In addition we note that reference is made to the strategic green infrastructure network in the updated list of surface water flooding for the Mansfield Urban Area.	No DTC issues identified.	No actions required.

No.	Name and organisation	Section of the document	Comment	Summary	MDC's response
19	Roslyn Deeming - Natural England	5.12	Natural England generally welcomes the Addendum to the Strategic Flood Risk Assessment which we acknowledge updates the original document (2008) in terms of significant changes in legislation and relevant advice and guidance. We particularly welcome the incorporation of minor changes in section C: Biodiversity Enhancement Strategy, which includes reference to our own Standing Advice and the Nottinghamshire Biodiversity Action Plan (BAP) in relation to guidance on the design of Green Sustainable Drainage Systems.	This is a positive response and no specific outstanding DTC issues to address.	No actions required.
20	Miss Celia Lunn - Newark and Sherwood District Council (Risk Management)	Duty to Cooperate	No specific issues or comments raised. Attached key emergency planning aspects that should be incorporated into any planning application.	We will endeavour to incorporate this guidance into the SFRA Addendum.	Guidance sent has been referred to in the Addendum (Section 3 (A) and Section 5 (A)) and included Appendix 4.
21	Mr Matthew Tubb - Newark and Sherwood District Council (Planning Policy)	Duty to Cooperate	It is recognised that there may be the potential for future cross-boundary working between the two Authorities in seeking to address Biodiversity Enhancement Strategy opportunities. Indeed these kind of interventions could also contribute towards delivering aims and objectives within the Newark & Sherwood Green Infrastructure Strategy. Support is therefore provided for the exploring of such opportunities. Clearly the location of future development within Newark & Sherwood District will need to be an important consideration in taking account of potential cross-boundary flood risk issues. In this respect it should be noted that the two settlements adjoining Mansfield (Clipstone and Rainworth) are locations where planned growth is identified to take place over the plan period (2006 – 2026). In order to deliver this planned growth a range of sites have been allocated through the Allocations & Development Management DPD (adopted July 2013). This process has been informed by the District Councils SFRA with the Level 2 Phase 2 document having provided the means to sequentially assess these allocations and, where necessary set out the known factors that will be required to satisfy the Exception Test. The table on page 3 provides further detail on the approach followed for those sites located within Rainworth and Clipstone which are subject to flood risk.	Duty to Cooperate issues highlighted as per N&SDC's Strategic Flood Risk Assessment, specifically Level 2 Phase 2 and Green Infrastructure Strategy.	Reference to cross boundary considerations within adjoining local authorities is referenced in Section 5 and Section 6 summary tables. Table 4 (Section 5) states: *Areas for protection and enhancement as referenced in relevant Green Infrastructure and*

No.	Name and organisation	Section of the document	Comment	Summary	MDC's response
			In conclusion having reviewed the existing Mansfield District Strategic Flood Risk Assessment and its addendum I consider that taken together the two documents provide an appropriate basis for addressing strategic and cross-boundary flood risk issues within Newark & Sherwood District, including as part of the emerging Mansfield Local Plan.		*Biodiversity strategies from neighbouring local authorities should also inform relevant biodiversity and green infrastructure improvements as they relate to cross boundary issues.* AND Table 5 (Section 6)states: *For development near to other local authority areas (e.g. Rainworth, Clipstone, Pleasley, etc), neighbouring Local Authority's Strategic Flood Risk Assessment (SFRAs) findings and guidance must also be considered where there is a likelihood of cross boundary flood risk issues. This should help inform planning decisions.*

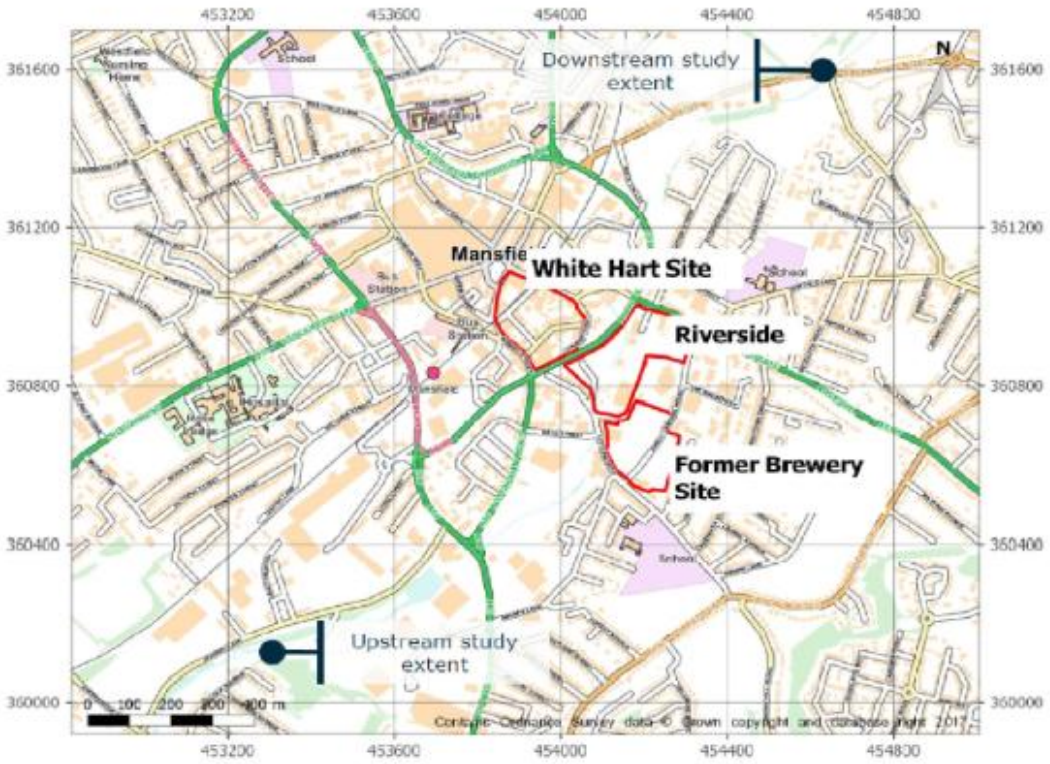
No.	Name and organisation	Section of the document	Comment	Summary	MDC's response
22	Mr Andrew Lowe - Nottinghamshire Wildlife Trust	Duty to Cooperate	Thank you for consulting Nottinghamshire Wildlife Trust concerning the review of the Strategic Flood Risk assessment, I am sorry that it has taken me so long to reply but I have had a problem logging on to the councils system so have sent you my comments via this letter. As you know NWT helped draft the original document with officers from MDC and the Environment Agency so we have few comments on this strategy, however we do feel that there is an issue with implementation with difficulty in contacting a single council officer to discuss issues in depth. When asking questions the caller is passed on to planning, parks etc with no one officer able to take responsibility, this is unfortunate as NWT feel that MDC are missing out on outside funding as well as the opportunity to take advantage of organisations expertise which could significantly help the council find solutions to some of the issues outlined in this document such as water quality and low flow rates within the main rivers flowing through the town, these impact directly upon the residents of Mansfield. Nottinghamshire Wildlife Trusts additional comments are; Surface Water: NWT would ask that MDC allocate an officer to coordinate 'water issues' within the district, for example water quality and investigating 'low flow' issues in the rivers Meden and Maun. Many of these issues are caused developments for example at Crown Farm Mansfield, Vicar Water is diverted away from it natural course by the pit tip and associated culvert. The low flow within the water course is causing damage to amenity such as the fishing ponds at Newlands Farm, decreasing wildlife diversity throughout the catchment which is exasperated by N&SDC which is forced to 'top-up' Vicar Water through the use of a borehole so extracting water under EA licence that would otherwise have entered the river Maun. In this case the Environment Agency has passed the resolution of this serious issue to MDC to date with no response, a 'named' council officer could coordinate the various interested parties and come up with a solution to this and other such issues. WFD: WFD and Catchment Hosting, there is an opportunity for MDC to get involved in these projects, to look for funding to solve issues and to improve the waterways and areas within the district. MDC need to again allocate a single officer to coordinate the council's response, if this is done	NWT notes that MDC is missing out on Water Framework Directive funding and outside expertise opportunities which could significantly help the council find solutions to some of the issues outlined in the SFRA and its Addendum NWT highlights the need for Mansfield District Council to appoint an officer within the Council coordinate 'water issues' within the district and gives examples of outstanding issues in relation to Crown Farm Way and Vicar Water.	The following text was included in Section 5 (C) of this SFRA Addendum: *In addition to funding from planning obligations (Section 106), it is recognised that a combination approach is needed to ensure biodiversity enhancements are realised. This would need to include funding from various sources, coordinated partnership working and dedicated MDC officer resources.* This recognises the need for cross partnership working and actions required as part of a wider Council approach. MDC will endeavour to address this in due course.

No.	Name and organisation	Section of the document	Comment	Summary	MDC's response
			positively there is an opportunity to engage with partners, local communities and businesses to provide solutions to many of the water issues facing the council now and in the future. Improving water quality, amenity and wildlife opportunities must be a council priority to meet its aims of making the town a better place to live and work. The first step is that MDC officers should meet to discuss potential WFD / Catchment projects and areas of the district to undertake them. There is potential for works to improve parks, LWS and LNR's within this remit as the water course does not have to be joined to any of the main rivers running through the district it could be improvement to ponds or pond creation, ditches, surface water run-off from roofs (SUDS)etc.		
23	Mr Jon Hendy - Bolsover District Council (Planning Policy)	Duty to Cooperate	BDC's response is aimed at its elected members and the following excerpt are included where they relate to DTC actions. 5.2 Having considered the information provided in the addendum it is considered that Bolsover District Council cannot state with any certainty that the addendum adequately addresses strategic and cross boundary issues concerning surface water and fluvial flooding in relation Mansfield District Council's area, without undertaking a similar update of the North Eastern Derbyshire SFRA. 5.3 The Addendum update (2014) identifies that there are additional locations at risk from surface water run-off outside flood zones 2 & 3 within the Pleasley area. Also there are significant changes for flood zones 2 and 3 extending over Nettleworth Farm and onto Sookholme Road, in Mansfield District Council's area. These areas are a significant distance away from the border with Bolsover District. 5.4 Therefore, with regard to Surface Water Flooding, Bolsover District Council agrees with the 2008 SFRA conclusion that new development in the Pleasley Square (Mansfield) area should be avoided, and also agrees with the Addendum update that any development along Chesterfield Road will need to incorporate SuDS and that the retro fitting of SuDS would bring positive benefits. This will be noted during the development of new Bolsover District Local Plan policies.	Overall, there are no specific DTC / cross boundary concerns.	Any significant cross boundary issues have also been addressed (as per comments above) by Derbyshire County Council (of which is Bolsover DC's lead local flood risk authority). The following wording was added to Table 5 (Section 6) in order to future proof this SFRA Addendum with regards to cross boundary flood issues as identified in neighbouring local authority's Strategic

No.	Name and organisation	Section of the document	Comment	Summary	MDC's response
			5.5 With regard to the Sookholme and Spion Kop area, Bolsover District Council agrees with the 2008 SFRA conclusion that new development should avoid areas defined as flood zone 2 and 3. The addendum update has no further comments to add to this. 5.6 Changes in both types of flood risk in both districts are readily available on the Environment Agency's website anyway, and both Council's can regularly check which areas are at risk from Fluvial and Surface water flooding in its district, and therefore the identification of these areas are not matters that need to be addressed through consultation on neighbouring SFRAs. However, ways to tackle the flooding problems through imposing development constraints are issues that both Councils can act upon and that, it is considered, should be the focus of the duty.		Flood Risk Assessments (SFRAs): *For development near to other local authority areas (e.g. Rainworth, Clipstone, Pleasley, etc), neighbouring Local Authority's Strategic Flood Risk Assessment (SFRAs) findings and guidance must also be considered where there is a likelihood of cross boundary flood risk issues. This should help inform planning decisions.*

Appendix 8 Mansfield District Central Area Flood Risk Review Study Area

8.1 This image shows the extents of the Mansfield Central Area Flood Risk Review (February 2018).



Eight: Mansfield District Central Area Flood Risk Review Study Area