

Appendix A1: Proposed Changes

	Comments arising at the 14th March 2011 LDF Working Group Meeting	Officers Response
1.	The document is repetitive in parts and is not easy to understand. Members suggested that an Executive Summary at the beginning of the document would be useful to assist members of the public.	To produce a Strategic Flood Risk Assessment (SFRA) User Guide primarily for use by the general public.
2.	Page 5 of the SFRA (2011) highlights the figure numbers. Figure 8 has been deleted so the subsequent figures will need to be re-numbered. The maps referred to as figure 11 a-g should be split up into North, South and City Centre (as provided to Members). These figure changes will need to be amended in the document accordingly.	<p>To amend the figure numbers throughout the report to read:</p> <p>Figure 1: Main River and Tributary Network in York</p> <p>Figure 2: River Ouse and Foss Catchment Boundaries</p> <p>Figure 3: River Derwent Catchment Boundary</p> <p>Figure 4: Internal Drainage Board Boundaries</p> <p>Figure 5: River Ouse Yearly Maximum Flood Levels</p> <p>Figure 6: River Zones in York</p> <p>Figure 7: Existing York Flood Defences</p> <p>Figure 8: Environment Agency Flood Zones</p> <p>Figure 9: Local Plan Map Extracts</p> <p>Figure 10: Flood Risk Areas within Zone 1, 2 & 3 (key plan)</p> <p>Figure 10a: Flood Risk Areas within Zone 1, 2 & 3 – North</p> <p>Figure 10b: Flood Risk Areas within Zone 1, 2 & 3 – South</p> <p>Figure 10c: Flood Risk Areas within Zone 1, 2 & 3 – City Centre</p> <p>Figure 11: Plan view of Danger to People from Breach Scenario</p> <p>Figure 12: Sectional view of Danger to People from Breach</p>

		<p>Scenario</p> <p>Figure 13: Flooded Domestic Properties in 2000 – Key Plan</p> <p>Figure 13a: Flooded Domestic Properties in 2000 – Rawcliffe</p> <p>Figure 13b: Flooded Domestic Properties in 2000 – City Centre and Clementhorpe</p> <p>Figure 13c: Flooded Domestic Properties in 2000 – Fulford</p> <p>Figure 13d: Flooded Domestic Properties in 2000 – Bishopthorpe</p> <p>Figure 13e: Flooded Domestic Properties in 2000 – Naburn and Acaster Malbis</p> <p>Figure 13f: Flooded Domestic Properties in 2000 – Elvington</p>
3.	<p>There is a discrepancy between the number of properties that were flooded in the 2000 floods. Paragraph 1.1.2 states 365 properties, paragraph 1.1.5 states 400 homes and businesses and on page 40 it indicates that 400 properties were affected by the flooding. This needs to be clarified.</p>	<p>To amend the text in all paragraphs to clarify that in the 2000 floods 353 properties were flooded, and a further 3,500 properties were threatened. These figures reflect the Flood Scrutiny Panel Report, 2004.</p>
4.	<p>Add into paragraph 1.1.2 that in November 2000 there were no deaths despite the severity of the floods.</p>	<p>To add the following text to Paragraph 1.1.2:</p> <p>The flood in 2000 was a result of rainfall alone, following a very wet autumn. It flooded 353 properties and threatened a further 3,500. Subsequent modelling calculated this flood to have a return period of 1 in 80-years (1.1%), and the maximum flood level was 300mm above the 1982 event. <u>There were no fatalities despite the severity of the flood.</u></p>
5.	<p>The following agencies have been missed of the list in paragraph 1.1.5 and need to be added: Parish Councils; British Civil Defence Force; Yorkshire</p>	<p>To add the following text to paragraph 1.1.5:</p> <p>The combined forces of the Army, the Environment Agency and</p>

	Ambulance Service; and Police.	City of York Council were required to prevent further devastation and to clear up once floodwaters had receded. <u>In addition to the three emergency services, assistance was also provided by Parish Councils and the British Civil Defence Force.</u>
6.	Update paragraph 2.1.2 to indicate that: Blue Beck also drains Skelton and Clifton Without; and Burdyke also drains Clifton Without.	To update paragraph 2.1.2 to read: <ul style="list-style-type: none"> • Blue Beck – drains relatively flat areas of residential and commercial development in Rawcliffe, <u>Skelton, Clifton Without</u> and Clifton Moor north west of the city. • Burdyke – drains relatively flat areas of residential and commercial development in Clifton <u>and Clifton Without</u> north of the city.
7.	Amend to reflect the role of the flood defences up to the Outer Ring Road at paragraph 2.4.1.	To amend paragraph 2.4.1 to read: York's flood defences were mainly constructed alongside vulnerable sections of the River Ouse, between <u>Rawcliffe Ings</u> Clifton Bridge and Rowntree Park, to protect property in areas where major flooding has occurred in the past.
8.	The Directives referred to in paragraph's 2.7.2 and 2.7.3 need to be altered to be in chronological order.	To change around paragraphs 2.7.2 and 2.7.3 so the Directives are in chronological order.
9.	The table in paragraph 3.1.4 needs to be updated. The length of the Burdyke open watercourse should not be nil.	To add a footnote to clarify that Burdyke is not an open water course in the City of York drainage area but note that Burdyke is an open watercourse in the Kyle and Upper Ouse Internal Drainage Board area which is within the City of York Council authority boundary.
10.	At the end of paragraph 3.1.7 Clifton Without needs to be added. Also add information on the hydrology of Rawcliffe Lake.	To add the following text to paragraph 3.1.7: '...However, Yorkshire Water Services own and manage Rawcliffe Lake, which provides attenuation storage for flows from Clifton Moor <u>and Clifton Without. Controlled flows from the lake discharge to Blue Beck which flows to the River Ouse</u> '.




11.	The Multi-agency emergency response plan is reviewed in consultation with the Environment Agency annually not every two years. (Paragraph 3.3.2, 1 st bullet point). All members of Silver Command also need to be included. For example the Police and the Army.	To amend the following text in paragraph 3.3.2: 'Ensures that its emergency response plans include appropriate arrangements for flooding emergencies and reviews the plan, in consultation with the Environment Agency, <u>Internal Drainage Board's, Yorkshire Water Services and the emergency services annually at least every two years'</u>
12.	The first bullet point of paragraph 3.4.5 relates to a breach of 100m wide. This should relate to pressure not size of breach.	To add the following wording to paragraph 3.4.5 bullet point 1: <ul style="list-style-type: none"> ▪ 'This table has been generated for a breach of 100m wide, breaching onto a flat floodplain. There maybe greater spatial variation for different sized breaches uncertainty is expected to be relatively large. <u>A breach smaller than 100m wide could also lead to serious problems'</u>.
13.	It should be clear if the flood depth mapping referred to in paragraph 3.5.1 is an assumption.	To add the following wording to paragraph 3.5.1: <p>Extensive historic flooding records exist for the River Ouse in York, dating back to 1263 A.D. The most recent and biggest flood in autumn 2000 was assessed by the EA using computer modelling as having a 1 in 80-year return period. This is approximately only 100mm lower than the predicted 1 in 100-year (1%) flood. The aerial photographic records taken within hours of this flood peak, supplemented by subsequent levelling surveys, allows Zone 3 (1 in 100-year (1%)) to be predicted with a high degree of confidence, <u>this is an assumption made from hydraulic modelling.</u></p>
14.	Section 3.8 page 39: <ul style="list-style-type: none"> ▪ The 1st bullet point of Section 3.8 'General' indicates that in 2000 the River Ouse rose to 5.4m above normal. The location of this measurement should be 	To update the 1 st bullet point of Section 3.8, under the 'General' section to read: <ul style="list-style-type: none"> • Heavy, persistent rainfall and/or rapid snowmelt on the high

	<p>clarified.</p> <ul style="list-style-type: none"> ▪ 2nd bullet point of Section 3.8 'General' is there a small beck at Poppleton before the Ring Road? This needs to be checked and added if appropriate; ▪ The 4th bullet point of 'Environmental Features' refers to important sites of environmental interest this section should also refer to Clifton Ings noted for it's special grassland area; and 	<p>ground results in rises in river level in York, and in 2000 it rose to 5.4m above the normal <u>summer level of 5.0 m above ordnance datum. River Ouse levels are recorded at the Viking Recorder, North Street and all Ouse flood warnings quote the level at this location.</u></p> <p>To add a new paragraph in the 2nd bullet point of Section 3.8 under the 'General' section to read: <u>In addition to these there are minor watercourses draining Poppleton, Acomb, Bishopthorpe and Acaster Malbis.</u></p> <p>To add the following new wording under the 'Environmental Features' of Section 3.8 to read: <u>'...Clifton Ings, while not a SSSI, is noted as a special grassland area'.</u></p>
15.	<p>The standard of protection reference given in paragraph 3.8.4 defines the term freeboard. This should be stipulated earlier in the document.</p>	<p>To include the following definition for freeboard to the glossary:</p> <p><u>Freeboard The difference between the flood defence level and the design flood level.</u></p>
16.	<p>Last sentence of Paragraph 3.8.7 indicates that a review of the November 2000 floods by Arup indicated that significant flooding would still have occurred in the Rawcliffe area due to backing up of flood water derived from within the Blue Beck catchment itself. It is suggested that this was also because the flood basin was too small.</p>	<p>To amend paragraph 3.8.7 to read: However, the review of the November 2000 flood by Arup concluded that significant flooding could still result from the backing-up of floodwater derived from within the Blue Beck catchment itself, <u>due to the limited capacity of local storage behind the flood defence.</u></p>
17.	<p>Paragraph 3.8.14 states that November 2000 saw 120</p>	<p>To amend paragraph 3.8.14 to read:</p>

	properties in Rawcliffe affected by flooding primarily as a result of outflanking of flood defences. The word 'primarily' needs to be deleted and replaced with flooding <u>was</u> a result of outflanking of flood defences.	'November 2000 saw 120 properties in Rawcliffe affected by flooding, primarily as a result of outflanking of the flood defences by the River Ouse. i.e. the floodwater inundated the area via a low point in the defences'...
18.	<p>The second bullet point of paragraph 3.8.15 refers to emergency track-ways. This was funded by the Internal Drainage Board and from money from the Rawcliffe Parish Council and not the Environment Agency. Include in the introduction to paragraph 3.8.15 the Environment Agency, Internal Drainage Board and Rawcliffe Parish Council.</p> <p>The final bullet point of paragraph 3.8.15 should be altered to read: The flood <u>response</u> procedure was amended.</p>	<p>To amend paragraph 3.8.15 to read: Following the investigation in 2001, the Rawcliffe defences were subsequently upgraded by the EA, <u>with additional funding from Rawcliffe Parish Council and the Kyle and Upper Ouse IDB</u> as follows: -</p> <ul style="list-style-type: none"> • A new section of flood bank was constructed to prevent outflanking of the defences. • An emergency track-way was laid to enable temporary pumping to be deployed. • Telemetry was installed to monitor water levels. • The flood <u>response</u> procedure was amended.
19.	Paragraph 3.8.17 (Burdyke) refers to past flooding events focusing on Clifton Green this should be expanded to include the roundabout and the area behind Canon Lee School (Lilbourne Drive).	To expand paragraph 3.8.17 to include the roundabout and area behind Canon Lee School (Lilbourne Drive) and indicate this area is affected by surface water flooding due to infrastructure failure.
20.	Question whether the November 2000 floods came within overtopping both sets of defences as referred to in paragraph 3.8.23 due to the presence of the sandbags. The Leeman Road Sorting Office should also be mentioned.	<p>To amend paragraph 3.8.23 to read:</p> <p>However, the November 2000 flood came within 50mm of overtopping both defences and a high risk of flooding remains, should the floodwalls fail. <u>A low point has been identified in the grounds of the sorting office on Leeman Road.</u> Neither defence provides 1 in 100-year (1%) protection and are classed as high-risk, rapid inundation zones, with significant flood depth exceeding 0.6m. Consequently, future development in these areas should be</p>

		constrained, as detailed in Section 4.
21.	Areas South of the York City Centre such as Clementhorpe, Bishopthorpe, Acaster Malbis, Fulford on A19 and Naburn also need a specific section in addition to the areas highlighted in paragraph 3.8.24.	To amend paragraph 3.8.24 to take account of areas South of York City Centre and update it to include the following areas: Skeldergate and Queens Staith, Kings Staith and South Esplanade and New Walk <u>and areas South of the City Centre, i.e. Clementhorpe, Bishopthorpe, Acaster Malbis, Fulford and Naburn.</u>
22.	Query the following paragraphs (4.1.9, 4.1.19, 4.1.33) which refer to sustainable drainage systems (SUDs). York has a high water table and some SUDs methods could exacerbate the problem. Suggest the wording in paragraph 4.1.49 is used which states the use of SUDs must be considered 'where practicable'.	To amend paragraphs 4.1.9, 4.1.19, 4.1.33 to read: The use of sustainable drainage systems must be considered, <u>where practicable</u> , to enable this target to be met.
23.	The paragraph in italics which refers to the BRE Digest 365 test is of critical importance and should be emphasised more.	To highlight the information on the BRE Digest 365 test in bold to emphasis its importance.
24.	It is queried whether Blue Beck and Burdyke have a 1 in 100-year protection as stated in paragraph 4.2.2.	To alter paragraph 4.2.2 to read: Blue Beck has 1 in 100-year (1%) <u>1 in 80-year (1.1%)</u> protection from the River Ouse, but has the potential to flood behind the defences due to insufficient flood storage, which persists within the catchment.
25.	Include the Flood Scrutiny Panel Final Report in Appendix 1.	To add ' <u>The Flood Scrutiny Panel Report, 2004</u> ' to Appendix 1.
26.	List Consultees referred to in Appendix 2 including Parish Councils.	To add <u>Parish Council's</u> to the list of Consultees in Appendix 2.
27.	Only the policy has been included in Appendix 5. The	To add the Local Plan Development and Flood Risk Policy GP15a

	Reason Justification also needs to be added. Appendix 5 should also include the new Core Strategy flood risk policy.	Reasoned Justification to the Appendix. To add a new Appendix to include the latest Core Strategy Flood Risk Policy.
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	Comments received after the 14th March 2011 LDF Working Group Meeting	Officers Response
1.	Table 3.1 relates to 'Head above Crest' a definition of what this means needs to be included with the document.	To include the term 'Head above Crest' within the glossary to read: <u>Head above Crest Level</u> <u>Depth of water above level of defence or breach.</u>
2.	Table 3.2 needs to include a key.	To add the following key: <u>Key</u>  Danger for some (Yellow)  Danger for most (Amber)  Danger for all (Red)
3.	Clementhorpe area should be added into Paragraph 3.8.24	To amend paragraph 3.8.24 to take account of areas South of York City Centre and update it to include the following areas: Skeldergate and Queens Staith, Kings Staith and South Esplanade and New Walk <u>and areas South of the City Centre, i.e. Clementhorpe, Bishopthorpe, Acaster Malbis, Fulford and</u>

4.	The first bullet point under Section 3.10 refers to the length of the River Derwent and it's tributaries being 275km is this correct?	<p><u>Naburn.</u></p> <p>275km is correct as it refers to the total length of the River from it's Source to Mouth. Add the following wording to make this clearer:</p> <ul style="list-style-type: none"> • Total length of main river of the Derwent and its tributaries is approximately 275km. <u>This includes the length of the River Derwent outside of the City of York Council authority boundary.</u>
5.	Table 5.1a and 5.1b include supplementary objectives. Why are these objectives separated in this way?	To update the Sustainability Objectives so they are inline with the current Sustainability Appraisal Objectives relating to York's LDF Core Strategy.