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## Report of City Development

### Executive Board

Date: 26<sup>th</sup> August 2009

Subject: Leeds (River Aire) Flood Alleviation Scheme

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#### Electoral Wards Affected:

Ward Members consulted  
(referred to in report)

#### Specific Implications For:

Equality and Diversity

Community Cohesion

Narrowing the Gap

Eligible for Call In

Not Eligible for Call In  
(Details contained in the re

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## EXECUTIVE SUMMARY

1. The following report updates the Executive Board on the progress of the scheme, provides feedback from the public consultations, seeks approval for the latest version of the Design Vision and Guide (DV&G) and approval for the Managed Adaptive approach to be adopted by the Environment Agency in designing a scheme for the River Aire.

### 1.0 Purpose of this Report

- 1.1 The purpose of the report is to agree a course of action to enable a letter to be sent to the Environment Agency (EA) confirming the Council's position on the scheme proposals. This will be taken into account by the EA at its National Review Group meeting set for early October 2009.

### 2.0 Background Information

- 2.1 In June 2007 and January 2008, the City came very close to experiencing major flooding. It has been estimated by the EA that over 4,500 residential and commercial properties are at risk and approximately £400 million of direct damage would be caused by a major flood from the River Aire in Leeds. Currently there are no formal flood defences along the River Aire.

- 2.2 The EA's latest proposals consider the River Aire over a 19km length from Newlay Bridge to Woodlesford. Previous proposals in 2007 were shelved because they did not meet strict criteria for funding.
- 2.3 The current proposals are based on a design that provides flood protection for a 1 in 200 year flood event, plus climate change plus freeboard, which is added to account for uncertainties.
- 2.4 At the 13<sup>th</sup> February meeting, Members agreed the following:-
- i. Approved the continuing development and refinement of the DV&G document and gave approval to participate in comprehensive public consultations, in conjunction with the Environment Agency, later in the year.
  - ii. Requested the Environment Agency to continue exploring the feasibility of a hybrid flood defence scheme for Leeds in order to lower the height of the raised flood defences in the City Centre.

### **3.0 Main Issues**

- 3.1 Since February, the joint working with the EA has continued, culminating in the recent public consultations and the production of the latest version of the DV&G, being used to shape and influence the design of the flood defence scheme for the River Aire; sections of the latter are available at [www.leeds.gov.uk/Housing/Planning/Planning\\_policy.aspx](http://www.leeds.gov.uk/Housing/Planning/Planning_policy.aspx) and a full, coloured hard copy is available from the clerk of the meeting.
- 3.2 The document has now been formally adopted by the EA, emphasising the excellent joint working that has taken place on this project. It is expected that the level of joint working, cooperation, financial support and consensus between the two authorities and other partner organisations will be material considerations in the EA's formal decision making process that will be initiated from October onwards.
- 3.3 The main changes to the document relate to the inclusion of case studies at pages 79-82, which provide examples of how flood defences could be incorporated into the existing landscape of the City.
- 3.4 The public consultations on the scheme proposals and the DV&G commenced on 8<sup>th</sup> May. A press launch and photo-call preceded the launch on 7<sup>th</sup> May and was attended by representatives from the EA and Leeds City Council, including Councillor Andrew Carter.
- 3.5 A briefing for LCC Councillors was held on 14<sup>th</sup> May in the East Room, Civic Hall.
- 3.6 Public exhibitions were held at the following venues:
- i) Leeds Town Hall: 27<sup>th</sup> – 30<sup>th</sup> May
  - ii) Swillington Social Club, Swillington: 4<sup>th</sup> – 6<sup>th</sup> June
  - iii) Milford Sports Centre, Kirkstall: 7<sup>th</sup> – 9<sup>th</sup> June
- 3.7 A telephone survey of 400 out of 8000 residents within the River Aire flood zone has also been conducted.

- 3.8 The formal public consultations concluded on 3<sup>rd</sup> July although a static display of the proposals will continue in the Central Library from 15<sup>th</sup> June until 11<sup>th</sup> September.
- 3.9 Over 300 people attended the exhibitions; the latter were staffed by representatives of the EA who explained the proposals and LCC staff who were there to outline LCC's current view of the scheme proposals and the principles behind the DV&G. According to the EA, this was a very good turnout bearing in mind the current status of the project (at preliminary design stage, not approved and unfunded).
- 3.10 The feedback gathered by the EA via the questionnaires and telephone survey is attached as Appendix A.
- 3.11 The scheme proposals were also debated at the Joint Plans Panel meeting on 1st July and at the subsequent 3 Area Plans Panel meetings. The main comments emerging from these meetings were as follows:
- The estimated scheme costs are significant but fully justifiable in light of the overall benefits to the people and businesses of Leeds.
  - Full consideration be given to the variety of options being considered especially those that reduce the heights of the defences.
  - The design and mitigation measures identified in the DV&G were welcomed.
  - Very careful design considerations needed at certain critical locations.
  - The cost of the River Aire scheme should not impact on other schemes, which are considered very important locally e.g. Wykebeck
  - Downstream impact of the scheme needs to be clearly understood and addressed.
  - The concern was expressed that this important scheme remains uncommitted and unfunded.
  - Significant concerns were expressed that the completion of such a scheme would increase the likelihood of development behind the defences.
- 3.12 In February, the Executive Board recommended to the EA that various alternative proposals including upstream storage facilities, different land management techniques and/or alleviation channels be investigated; the intention being that such measures should bring about a lowering of the height of the flood defences in the city centre.
- 3.13 The latest position is that the EA has examined these alternatives in line with the recommendations and identified 5 options in their Project Appraisal Report (PAR); the executive summary of this document is attached as Appendix B. The 5 options are listed below. The external funding referred to in each case relates to funding that would be required from third parties to support the core investment from the EA if the scheme gains approval. Third parties would therefore include the Council (para. 5.2 refers in Legal and Resources Section), other organisations and partners.

- A. 1 in 200 years plus precautionary climate change: Raised flood defences. Total scheme cost £145m. £0m external funding required.
- B. 1 in 200 years plus precautionary climate change: Upstream Storage. Total scheme cost £180m. £30-35m external funding required.
- C. 1 in 200 years Managed Adaptive approach dealing with climate change in the future. Total scheme cost £145m. Raised defences - £5-10m external funding required.
- D. 1 in 200 years Managed Adaptive approach dealing with climate change in the future. Total scheme cost £150m. Upstream Storage - £15-20m external funding required.
- E. 1 in 200 years Managed Adaptive approach dealing with climate change in the future. Total scheme cost £200m. Bypass Channel - £65m – 70m external funding required.

- 3.14 The main difference between the Precautionary and Managed Adaptive approaches is that under the Precautionary approach, the defences are constructed at the relevant (higher) height at the outset to take account of future climate change predictions. In some locations, accounting for the climate change element in the defence heights will be as much as 1metre. This will make a significant difference to the impact of the defences on the waterfront particularly in the city centre and the upstream reaches. The advantage of this precautionary approach is that, all things remaining the same, there should be no need to undertake further works, other than general maintenance in the foreseeable future.
- 3.15 Under the Managed Adaptive approach, an initial standard of protection at 1 in 200 year event level, without the element for climate change, is provided. Climate change is then managed by future interventions such as upstream storage, land management or by periodic “topping up” of defences say in 30, 40, 50, 60 or 70 years time.
- 3.16 It is important to note at this juncture that the external funding contribution needs to be made available to the EA at the outset of the scheme.
- 3.17 The EA has identified option A as their preferred option; this option complies with DEFRA guidance and the strict criteria for funding.
- 3.18 All the options were presented to the Steering Group on 13th July 2009. The Steering Group, comprising senior offices from the Council, British Waterways, Yorkshire Forward and Yorkshire Water, were requested to indicate their preferred way forward.
- 3.19 The Members of the Steering Group considered options B and E not to be financially viable in the current economic climate, there being very little scope for raising the level of external funding required at this time or in the near future (within 2-3 years).
- 3.20 Option A was noted as being the EA’s preferred option but there remained significant concerns about the impact this option would have on the Waterfront. Visibility of and accessibility to the Waterfront were seen as key issues. The full wall heights under the precautionary approach may significantly affect visibility, aesthetic qualities and access to the Waterfront, key issues which affect the regeneration and amenity value of the river corridor.

- 3.21 Options C and D emerged as the most likely options to be worthy of further detailed work, providing a high level of flood protection at the outset (1 in 200) yet providing a wholly flexible approach to dealing with climate change in the future.
- 3.22 Adopting the Managed Adaptive approach as highlighted in options C and D is in line with DEFRA's policy statement 'Appraisal of flood risk management and coastal erosion' recently published in June 2009. This new updated appraisal guidance sets out principles for sustainable management of flood and coastal erosion risk in England and brings with it a new emphasis on adaptive approaches to flood risk management.
- 3.23 Such an approach is also consistent with the EA's emerging Upper Aire Flood Risk Management Strategy which has recently been consulted upon and which recommends upstream storage facilities be used at Holden Park, Keighley.
- 3.24 Papers are being presented to the August meeting to ensure LCC can make definitive recommendations to the EA to enable them to report to their National Review Group (NRG) meeting on 6<sup>th</sup> and 7<sup>th</sup> October. At this stage, there is a desire to maintain the current momentum to ensure work progresses in accordance with the EA's programme.
- 3.25 The NRG will make recommendations for the Chief Executive of the EA to consider. Depending on the outcome, DEFRA / Treasury approval would be sought in 2010 with construction commencing on site in 2010/11. DEFRA / Treasury approval is required because the overall cost of the scheme is in excess of £100M.
- 3.26 Approval in principle by the Chief Executive does not guarantee funding or scheme implementation. A scheme for Leeds will have to compete with other areas for funding in the overall National Programme.
- 3.27 Subject to consideration of the above and approval to move forward after the NRG meeting in October, a lobbying campaign to highlight the importance and need for this scheme and to secure funding seems appropriate. Members are requested to comment on this proposal and to make suggestions how to progress such a campaign.

#### **4.0 Implications for Council Policy and Governance**

- 4.1 The construction of a Leeds FAS, after due process, would be in line with a number of Strategic Outcomes and Improvement Priorities contained within the Leeds Strategic Plan e.g. it supports the Environment theme through 'undertaking actions to improve our resilience to current and future climate change' as well as 'improving the quality and sustainability of the built and natural environment'; it supports the Enterprise and the Economy theme through 'investment in high quality infrastructure and physical assets, particularly in the City Centre'.

#### **5.0 Legal and Resource Implications**

- 5.1 The Design Vision and Guide document has been prepared by the Landscape Architecture Team from the Strategic Design Alliance and has cost approximately £130,000 to date, which is being funded from central contingencies. It is anticipated that the Landscape Team will need to be further engaged in the refinement of the document as it progresses through public consultations later in the year. Once finalised the DV&G will be a material consideration in the determination of planning applications. Consideration to developing a formal Supplementary Planning Document will be given at a later date.

- 5.2 The Council has provisionally indicated its willingness to make a contribution of £10m towards this scheme from its Capital Programme.
- 5.3 An external funding working group, again comprising representatives from the aforementioned Steering Group and the Business Community has been established to explore possible funding opportunities.
- 5.4 Significant building and engineering operations would be involved in constructing the proposed formal flood defences. The works will require the benefit of full planning permission and Listed Building Consent.

## **6.0 Conclusions**

- 6.1 This is an important scheme for the City because of the long-term physical and reputational damage a major flood of the City Centre would have on the City; throughout the engagement process to date, there seems to be a general consensus that improved flood defences are required.
- 6.2 It is equally important however that the scheme not only delivers the level of flood protection required but also that the scheme delivers on the various strategies the Council has developed for the River Aire waterfront in recent years. The scheme provides an opportunity to secure significant enhancements to the River Aire Waterfront which must not be lost or prevented in the future. Nevertheless, balancing the need to achieve flood protection for the city whilst preserving access, visibility, and the architectural and landscape qualities of the Waterfront remains extremely challenging.

## **7.0 Recommendations**

- 7.1 The Executive Board is requested to:
- 7.2 **NOTE** the progress on the Leeds (River Aire) Flood Alleviation Scheme and the comments received during the public consultations;
- 7.3 **APPROVE** the latest version of the Design Vision and Guide document and
- 7.4 **AGREE** that a Managed Adaptive approach to protecting Leeds from major flooding from the River Aire be adopted by the Environment Agency.

### **Background Papers**

13<sup>TH</sup> February 2009 Executive Board report - Leeds City Council

August 2009 Project Appraisal Report – Environment Agency