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## Approval of Sheepscar FAS

Date: 31/07/23

Report of: Executive Manager – Flood Risk & Climate Resilience

Report to: Chief Officer – Highways & Transportation

Will the decision be open for call in?  Yes  No

Does the report contain confidential or exempt information?  Yes  No

## Brief Summary

Meanwood Beck (also known as Lady Beck) runs through the north of Leeds from Golden Acre Park through the city centre meeting the River Aire at Crown Point Weir. Within the city centre this watercourse is known as Sheepscar Beck and is carried by a system of large culverts and canalised open channels.

The channel walls in numerous locations are in poor condition and have been identified to be at risk of collapse, there is historical evidence of this occurring. Collapse of these walls could cause a blockage in the watercourse significantly increasing flood risk either directly or indirectly to residential properties, infrastructure, and businesses. Approximately 255 non-residential properties and 100 residential properties in the area would be at risk as well as critical infrastructure including the A61 Regent Street, A58 Clay Pit Lane and Leeds Bus Station.

The project has identified numerous areas along the ordinary watercourse where the walls are at risk of failing due to missing stonework, lack of pointing and poorly constructed outfalls. Other walls have also been highlighted at risk due to vegetation damage or poor construction and design.

As part of the works opportunities have been sought to improve visual access to the channel by removing walls and replacing them with suitable fencing, areas have further been identified which would benefit from litter bins and benches.

The working area within the channel is between SE 30768 34565 and SE 30865 33903, the closest roads running alongside or in proximity of the channel are Benson Street, Sheepscar Street South, Bristol Street, Skinner Lane and Mabgate. Downstream of Skinner Lane is classified as a conservation area, it is also an area of current regeneration and investment with several planned developments in the area. Please see Appendix D for an overview of the working sections.

The overall project cost for the scheme including design, construction and support services is estimated to be **£1.563m**. It is proposed that the funding will come from FDGiA to a value of **£943k**, WYCA gap funding of **£350k** with Strategic Outline case previously approved by WYCA Climate and Environment Committee (CEEC) & with Leeds City Council underwriting the shortfall of **£270k**. The proposed £270k shortfall will come from the pre-approved FRM Capital Budget where funding for Sheepscar was agreed on 29<sup>th</sup> October 2021. The project team will actively seek to reduce this commitment and where possible recover current committed FRM Capital Programme Budget through value engineering or alternative funding contribution.

The scheme attains a present value benefit of over £13m and achieves a Benefit Cost Ratio of 7.9.

## Recommendations

The Chief Officer Highways and Transportation is requested to:

- A. To give approval to submit the Outline Business Case to the Environment Agency and WYCA, and subsequently agree:
  - a. To give approval to inject the remaining £883,000 of FDGIA government Grant funding into the scheme (In addition to £60,000 previously injected), Subject to EA approval of the business case.
  - b. To give approval to inject £350,000 WYCA funding into the scheme. Subject to WYCA approval of the business case.
  - c. To give approval to transfer £210,000 from the Flood Risk Management Capital Programme Budget scheme 32234/000/000 giving a total value available of £1,563,000.
- B. To give approval to submit the Planning Application.
- C. To give approval to enter onto private land to carry out these works using the powers under the Land Drainage Act 1991
- D. To give approval subject to the acceptance of the OBC to procure Sheepscar Stage 2 through the Leeds CC Bridges Framework.
- E. To note the previously approved authority to spend (ATS) of £120,000.
- F. Give authority to spend (ATS) approval for the remaining funds of £1,443,000 required to deliver the full scheme subject to approval of the OBC.

## What is this report about?

1. Sheepscar is identified on the flood risk programme and was reported through to Infrastructure Investment and Inclusive growth scrutiny board on the 5 April of 2023, where we presented the local flood risk management strategy which included Sheepscar within that strategy under the List of Measures as S18.
2. The previous Highways Board report was issued to the Chief Officer on the 11 February 2020. The initial report sort and attained approval to spend £120,000 on the OBC development..
3. Recommendations as per below extract from Section 6.1 of the previous Highways Board Report.

### 6.1 The Chief Officer (Highways and Transportation) is requested to:

- Give authority to incur expenditure of £120,000 for a capital maintenance scheme to develop an Outline Business Case for a flood management scheme at Sheepscar Beck including obtaining the necessary permits and approvals for the scheme.
- Note that a further report will be submitted for Executive Board review in 2021 to gain approval to submit the Outline Business Case to the Environment Agency and to give authority to incur expenditure associated with design and construction of the works.

4. To note the flooding issues and benefits associated with a failure of assets within the Sheepscar and Meanwood areas to be addressed by the proposed work.
5. Attain acceptance of the recommendations highlighted in the Recommendations section.
6. Highlight the estimated costs and associated risks to LCC with regards to the project funding.

7. To attain approval to formally submit the Outline Business Case to the Environment Agency and the West Yorkshire Combined Authority and progress the scheme to Stage 2 (Detail Design and Construction)

### **What impact will this proposal have?**

8. The proposed works will reduce flood risk associated with an asset failure improving the resilience of the affected community and neighbourhood.
9. The Council is meeting its responsibility as Lead Local Flood Authority in reducing flood risk.

### **How does this proposal impact the three pillars of the Best City Ambition?**

Health and Wellbeing       Inclusive Growth       Zero Carbon

10. Ongoing work to reduce the risk of flooding is a key activity within sustainable infrastructure and reflects the councils 2019 declaration of a climate emergency and its intention to work towards being a carbon net zero city by 2030.
11. Delivery of the Sheepscar FAS will help to reduce the impacts of flooding and therefore deliver managed adaptation to the future impacts of climate change. In delivering the capital programme for flood alleviation the carbon impact of these schemes is considered and we promote lower carbon solutions.
12. Prevention of flooding also positively impacts carbon emissions by avoiding the need to rebuild, repair and refurbish properties impacted by flooding, it is estimated that over the duration of the assets life 2439 Tons of carbon will be saved from the avoidance of flooding.
13. Mabgate and Sheepscar is an area displaying significant development and investment. Inclusive Growth is promoted by the prevention and amelioration of flooding to properties and businesses and the resilience of the city to flooding is enhanced. Businesses are confident that property will remain protected to the current standard of protection, therefore encouraged to remain, and invest. The increased resilience of infrastructure networks and structures also supports inclusive growth.
14. The threat of and experience of flooding can impact on people's mental health and general health and wellbeing, schemes to prevent flooding can have a very positive impact on improving people's mental health by enhancing people's ability to feel safe in their home and not under threat of flooding.

## What consultation and engagement has taken place?

Wards affected: Little London, Woodhouse and Burmantofts & Richmond Hill

Have ward members been consulted?  Yes  No

15. There are several proposed engagement activities planned in the following

months these include.

- Executive Members and Ward Members were provided with a scheme update via email in August 2023.
- Residents and businesses in the area of the scheme have been contacted via a letter drop directing in August 2023 directing them towards our Common Place portal providing further information on the proposed works & seeking feedback on our proposals.
- Common Place portal can be accessed via the following QR code or link.



➤ <https://leedscitycouncilfloodresilience.commonplace.is/>

- A simplified plan of the working areas can be seen in Appendix D, this will be issued as part of the engagement as well as an interactive map with a brief description of the proposed works.
- Engagement with LCC regeneration to help ensure activities undertaken align with those of the regeneration objectives.
- LCC conservation officer has been consulted who has advised on planning requirements which sit outside of permitted development.

16. The Environment Agency PSO advisor has been kept informed through the duration of the projects development and attends progress meetings regularly.

17. Both West Yorkshire Combined Authority and the Environment Agency have been provided a draft version of the OBC for comment. The Environment Agency provided comments back and West Yorkshire Combined Authority have acknowledged the acceptance of the OBC as an acceptable business case format.



18. £60k Leeds City Council Flood Risk Management Capital Programme Budget has already been contributed for Stage 1

19. Stage 1 is approximately £55k over committed due to various CE's including.

- Landscaping
- Planning consultation
- Response to EA queries
- Programme extension
- WSP time

20. Stage 2 has a funding gap approximately £155k

21. A total funding gap including the current £60k contribution amounts to £270K.

22. The LCC proposed gap funding of £270k will be transferred from the FRM Programme Capital budget. Based upon the current OBC estimates Leeds will need to fund the £270k to deliver the scheme. However, in the circumstance the scheme costs are reduced then the current committed LCC FRM Capital Funding allocation will be recovered from either or both FDGiA and WYCA contributions.

23. Current FRM Programme Capital budget balance is approximately £2.3m at the time of writing this report.

24. To reduce this risk commitment the project team by actively seeking to reduce costs and attain additional funding by;

- Utilising the Bridges and Highways Framework to reduce construction costs.
  - Indicative tender price received from the Highways Framework demonstrating a reduction in construction costs,
- Requesting additional funding from WYCA.
- Look at alternative contribution from internal and external stakeholders.
- Reduce the scope of the works and remove the landscaping.
- Risk to the project will be managed through proactive monitoring and appropriate mitigation. A risk management workshop will be held in the initial phases of the project, with the use of NEC contract tools to manage.
- The project team will actively seek to reduce the overall cost of the project by value engineering and introducing commercial competition.

**What are the key risks and how are they being managed?**



25. Stage 1 has identified the preferred option which carries the most cost benefit. As part of this process a Risk Register has been developed on best known information at the time.
26. Two risk budgets have been allowed 95% risk budget for potential unknowns at the current design stage and Optimum Bias at 30% for the optimism typically shown unconsciously in scheme development. The combined Risk budget is approximately 45% of the OBC estimated construction costs, at this stage in the project this is relatively conservative.
27. The project will be governed under the NEC4 Contract which helps mitigate risk by working in clause 10.2 requires them to 'act in a spirit of mutual trust and co-operation'.
28. The top 5 risks identified in the risk workshops will be managed by the development of RAMS, Early Engagement, NEC contract Management and additional site assessment as part of the proposed ECI. The top 5 risks assigned are:
- Flooding
  - Unknown asset condition
  - Change to asset condition since the inspection
  - Bats and other ecological interest
  - Objection from Land Owners

### **What are the legal implications?**

29. The proposed flood alleviation study aims to mitigate flood risk to properties in the Sheepscar and Mabgate area by identifying remediation options for damaged areas of the Sheepscar Beck walls. This is consistent with the Council's statutory duty as the Lead Local Flood Risk Authority on ordinary water courses and the Council's policy as set out and approved in the Leeds CC Local Flood Risk Management Strategy.

### **Options, timescales and measuring success.**

### **What other options were considered?**

30. Alternative options were explored as part of Stage 1 and economically assessed against benefits as well as against project objectives these alternative options are listed below however, they didn't meet the objectives of the scheme or offer the most economic outcome.

- Do Nothing
- Do Minimum
- Repair to sustain current standard of service (Short term)
- Repair to sustain current standard of service (Medium term)
- Raise defences
- SuDS retrofit using targeted NFM measures
- Upstream engineered flood storage
- Property Flood Resilience

#### **How will success be measured?**

31. The aim of the scheme is to reduce flood risk to businesses and properties in the proximity of Sheepscar and the working area. The asset life will be extended to 50 years and so prevent flooding of these properties. This will also reduce future maintenance cost liability to LCC.

#### **What is the timetable and who will be responsible for implementation?**

Leeds City Council Flood Risk Management Team will be responsible for implementation of the works.

The timetable includes.

- Public engagement Autumn 2023
- Submit OBC to EA and WYCA for approval Autumn 2023
- Appoint contractor for Stage 2 Winter 2023
- Commence Construction Spring 2024
- Construction Complete Summer 2025

## **Appendices**

Appendix A – Equality Impact Assessment

Appendix B – SHEEPSCAR FAS – Draft Outline Business Case - Project Summary

Appendix C – Overall Plan of Working Area

## Appendix A

### Equality, Diversity, Cohesion and Integration Screening



As a public authority we need to ensure that all our strategies, policies, service and functions, both current and proposed have given proper consideration to equality, diversity, cohesion and integration.

A **screening** process can help judge relevance and provides a record of both the **process** and **decision**. Screening should be a short, sharp exercise that determines relevance for all new and revised strategies, policies, services and functions. Completed at the earliest opportunity it will help to determine:

- the relevance of proposals and decisions to equality, diversity, cohesion and integration.
- whether or not equality, diversity, cohesion and integration is being or has already been considered, and
- whether or not it is necessary to carry out an impact assessment.

<b>Directorate: City Development</b>	<b>Service area: FRM</b>
<b>Lead person: Oliver Saunders</b>	<b>Contact number: 0113 378 8012</b>

**1. Title:**

Is this a:

Strategy / Policy

Service / Function

Other

If other, please specify

## 2. Please provide a brief description of what you are screening

This screening assessment is for the proposed flood management works at Sheepscar Beck in the Mabgate and Sheepscar areas.

Works include:

- Pointing in channel Stone work
- Removal of walls and replacement with fencing
- Repair and replacement of walls

*Possible Landscaping Improvements*

- *Wall removal and erecting fencing to replace*
- *Planters*
- *Bins*

## 3. Relevance to equality, diversity, cohesion and integration

All the council's strategies and policies, service and functions affect service users, employees or the wider community – city wide or more local. These will also have a greater or lesser relevance to equality, diversity, cohesion and integration.

The following questions will help you to identify how relevant your proposals are.

When considering these questions think about age, carers, disability, gender reassignment, race, religion or belief, sex, sexual orientation. Also those areas that impact on or relate to equality: tackling poverty and improving health and well-being.

Questions	Yes	No
Is there an existing or likely differential impact for the different equality characteristics?		X
Have there been or likely to be any public concerns about the policy or proposal?		X
Could the proposal affect how our services, commissioning or procurement activities are organised, provided, located and by whom?		X
Could the proposal affect our workforce or employment practices?		X
Does the proposal involve or will it have an impact on <ul style="list-style-type: none"> <li>• Eliminating unlawful discrimination, victimisation and harassment</li> <li>• Advancing equality of opportunity</li> <li>• Fostering good relations</li> </ul>		X

If you have answered **no** to the questions above please complete **sections 6 and 7**

If you have answered **yes** to any of the above and;

- Believe you have already considered the impact on equality, diversity, cohesion and integration within your proposal please go to **section 4**.
- Are not already considering the impact on equality, diversity, cohesion and integration within your proposal please go to **section 5**.

**4. Considering the impact on equality, diversity, cohesion and integration**

<p>If you can demonstrate you have considered how your proposals impact on equality, diversity, cohesion and integration you have carried out an impact assessment.</p> <p>Please provide specific details for all three areas below (use the prompts for guidance).</p>	
<ul style="list-style-type: none"> <li>• <b>How have you considered equality, diversity, cohesion and integration?</b> (<b>think about</b> the scope of the proposal, who is likely to be affected, equality related information, gaps in information and plans to address, consultation and engagement activities (taken place or planned) with those likely to be affected)</li> </ul>	
<ul style="list-style-type: none"> <li>• <b>Key findings</b> (<b>think about</b> any potential positive and negative impact on different equality characteristics, potential to promote strong and positive relationships between groups, potential to bring groups/communities into increased contact with each other, perception that the proposal could benefit one group at the expense of another)</li> </ul>	
<ul style="list-style-type: none"> <li>• <b>Actions</b> (<b>think about</b> how you will promote positive impact and remove/ reduce negative impact)</li> </ul>	

<p><b>5. If you are <b>not</b> already considering the impact on equality, diversity, cohesion and integration you <b>will need to carry out an impact assessment.</b></b></p>	
<p>Date to scope and plan your impact assessment:</p>	
<p>Date to complete your impact assessment</p>	

Lead person for your impact assessment (Include name and job title)	

## 6. Governance, ownership and approval

Please state here who has approved the actions and outcomes of the screening

Name	Job title	Date
Oliver Saunders	Project Manager	17/03/23
<b>Date screening completed</b>		17/03/23

## 7. Publishing

Though **all** key decisions are required to give due regard to equality the council **only** publishes those related to **Executive Board, Full Council, Key Delegated Decisions** or a **Significant Operational Decision**.

A copy of this equality screening should be attached as an appendix to the decision making report:

- Governance Services will publish those relating to Executive Board and Full Council.
- The appropriate directorate will publish those relating to Delegated Decisions and Significant Operational Decisions.
- A copy of all other equality screenings that are not to be published should be sent to [equalityteam@leeds.gov.uk](mailto:equalityteam@leeds.gov.uk) for record.



Complete the appropriate section below with the date the report and attached screening was sent:	
For Executive Board or Full Council – sent to <b>Governance Services</b>	Date sent:
For Delegated Decisions or Significant Operational Decisions – sent to appropriate <b>Directorate</b>	Date sent:
All other decisions – sent to <a href="mailto:equalityteam@leeds.gov.uk">equalityteam@leeds.gov.uk</a>	Date sent: 17/03/23

## Appendix B OBC Project Summary

# 1.0 Project Summary

Total Value of Project £1,563k

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### Flood risk type: Fluvial

#### Numbers of households at flood and/or erosion risk (raw counts, not OM2 being claimed)

- Households at very significant risk now - 2
- Households at significant risk now - 40
- Households at intermediate risk now - 26
- Households at moderate risk now - 31
- Households at very significant risk in 2052 (without investment) - 41
- Households at significant risk in 2052 (without investment) - 28
- Households at intermediate risk in 2052 (without investment) - 31
- Households at moderate risk in 2052 (without investment) - 31

(Note that Household OM2 have not been claimed due to the ongoing Meanwood scheme which will likely claim OM2 for this area)

#### Critical Infrastructure at risk now and in 2052

The following infrastructure would be impacted by flooding:

- A61 Regent Street
- A58 Clay Pit Lane
- Leeds Bus Station

## **Type, condition, and residual life of existing defences**

Sheepscar Beck is a watercourse that travels from north to south through the suburbs of Adel and Meanwood in northern Leeds where it is allowed to take a moderately open form before becoming more canalised and culverted as it reaches Sheepscar; the focus area of this study, before entering a long culvert and discharging into the River Aire near Crown Point bridge. There are a number of wall sections along Sheepscar Beck whose condition puts them at risk of failure within the next 30 years. The condition of the walls has been classified as either in Poor, Fair or Good condition and indicates a remaining design life of 5 years, 10 years, and 30 years respectively.

There are 9 discrete walled sections, and each wall section is terminated by a downstream structure, such as a culvert or bridge. The Council's highways structures team undertakes periodic inspections and maintenance of all highways related structures in line with industry best practice.

## **Environmental designations?**

There is one statutory designated Sites of Special Scientific Interest (SSSI) of national importance and seven Local Nature Reserves (LNRs) of regional importance within 5km of the Site boundary. There is one Local Wildlife Site within 2km of the Site and three Habitats of Principal Importance within 1km of the Site. None of these sites or habitats are to be impacted by the works.

The areas of tall ruderal on the banks of Sheepscar Beck were dominated by invasive non-native invasive (INNS) Indian balsam *Impatiens glandulifera* and an area of Giant hogweed was identified within the Site.

Further surveys in the form of bat activity surveys and further otter surveys of the channel and up to 150m either side of the works are recommended to assess the levels of potential impact to these protected species.

The Skinner Lane, College Building, Hope Foundry, Hope Road and Mabgate channel section are within a conservation area.

## **How is flood and erosion risk managed?**

Sheepscar Beck is classified as an ordinary watercourse. The channel and assets here were developed following the Leeds Improvement of Becks Act 1866. This act allowed for the construction of the current modified channel and gives Leeds City Council (Leeds Corporation) responsibility for maintenance of the channel.

Assets along this beck have failed in previous years requiring reactive maintenance to carry out repair work and clear blockages. Any reactive or planned maintenance and inspections are undertaken by Leeds City Council as a Risk Management Authority.

## **Summarise the case for change**

Investigative work has identified that the assets forming the existing channel of Sheepscar Beck are in poor condition. If no refurbishment work is carried out the condition of these assets will continue to deteriorate.

Failure of the beck channel walls would lead to blockage within the channel and culverts and an increase in flood risk to the surrounding area. As the channel runs through Leeds City Centre a large number of properties would be at risk of flooding caused by a blockage to the channel.

There is a high risk and cost associated with reactive maintenance work to remove blockages and carry out repairs associated with failure of assets. Carrying out refurbishment work will reduce the risk and hence cost of future reactive work.

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## **Selected option**

The walls classified as in Poor, Fair and Good condition and have a remaining design life of 5, 10 and 30 years respectively, are to be repaired. These walls and channels along Sheepscar Beck are maintained to the current status quo with any build-up of debris, excessive vegetation and blockages cleared from the channel.

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## **Economic cost and benefit of selected option**

- Present Value Benefit - £13,134k
  - Present Value Cost - £1,704k
  - Net Present Value - £11,430k
  - Benefit to Cost Ratio 7.9
  - Incremental Benefit to Cost Ratio 34.4
  - Whole Life Cash Cost - £1,851k
- 

## **Affordability of selected option**

- Raw Partnership Funding score is 60%
  - Adjusted Partnership Funding score is 100%
  - Funding from Environment Agency (grant) is £943k
  - Funding from the Regional Flood and Coastal Committee is £0
  - Funding from West Yorkshire Combined Authority is £350k
- 

## **Risk**

- The total contingency amount is £528k, comprising
  - £167k 95<sup>th</sup> percentile contingency
  - £361k optimism bias
- A further 30% optimism bias (£32k, PV) is set-aside for future maintenance

## **Top three residual risks are:**

- Ground conditions, obstructions, contaminates, existing structures that may induce additional work or remediation may be required when uncovered.
- Unknown wall features or conditions of the existing walls could require more expensive repairs or wall design re-work, leading to potential further works on site.
  - Preferred option scope is not clear enough or sufficient to inform an accurate estimate to capture all project costs

## **Permissions and consents**

This section of the watercourse is an ordinary river. Planning permission for the refurbishment of the channel works is not required as the proposals fall under The Town and Country Planning (General Permitted Development) (England) Order 2015. However, works to remove and replace some

brick walls with fencing which are adjacent to the river channel at Roscoe and Skinner Lane does require planning permission. An ordinary watercourse consent will be required for the works.

## Outcomes

<u>Guidance Ref</u>	Outcome Measures	Value
4.1	OM 1 – Ratio of whole-life benefits to whole life costs over the duration of benefits period.	7.9
4.2	OM 1A – Qualifying benefits over the appraisal period (PVb taken from table 4)  OM1A included net carbon = £13,530k	£13,134k
4.4	OM 1B – benefits to people that are not associated with avoiding household damages, eg, less stress/risk to life.	£1,545k
4.5	Duration of benefit period (not the appraisal period)	50
5.2	OM 2A – Households at risk of flooding before the investment and which are going to benefit from a reduction in flood risk at the end of the duration of benefits period (households at risk today) (Note that Household have not been claimed due to the ongoing Meanwood scheme which will likely claim OM2 for this area)	0 – Not claimed due to Meanwood scheme

<u>Guidance</u> <u>Ref</u>	Outcome Measures	Value
5.3	OM2B – Additional households that are at risk from the impacts of climate change before 2040. (Note that Household have not been claimed due to the ongoing Meanwood scheme which will likely claim OM2 for this area)	0 – Not claimed due to Meanwood scheme
6.1.1	OM 3 – Households at risk of loss in the medium term	0
6.1.1	OM 3 – Households at risk of loss in the longer term	0
7.2	OM 4A – Habitat created or improved (ha)	0
7.3	OM 4B – Rivers enhanced – river habitats and natural processes restored and enhanced (km)	0

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**Schedule of critical milestone dates.**

- Submit Outline Business case – August 2023
- Target date for Outline Business Case Approval – November 2023
- Contract award – December 2023
- Detailed design – December 2023




· Construction works completion – June 2025



Appendix C Overview of Working Areas

# Sheepscar Beck Flood Resilience

## Legend

-  Sheepscar Beck
-  Road
-  Repair and enhancement work in this area

