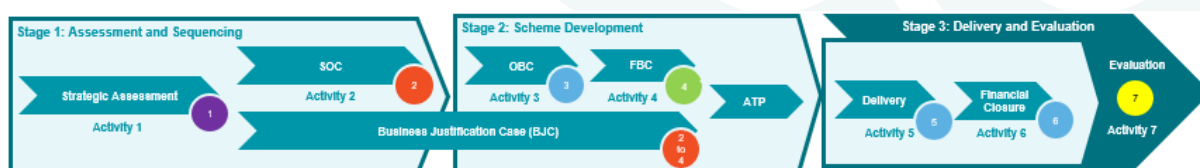


Report to:	Climate, Energy and Environment Committee
Date:	13 February 2024
Subject:	Flood Risk Management Project Approvals – Investment Priority 4 – Tackling the Climate Emergency and Environmental Sustainability
Director:	Liz Hunter, Director of Policing, Environment & Place
Author:	Craig Taylor, Head of Strategic Portfolio Office

1 Purpose of this report

- 1.1 To report on proposals for the progression of, and funding for projects under Investment Priority 4 – Tackling the Climate Emergency and Environmental Sustainability Investment within the West Yorkshire Investment Strategy (WYIS), that have been considered at stages 1, 2 and 3 of the Combined Authority’s assurance process.



- 1.2 The recommendations can be found in Section 12 of this report.

2 Report

- 2.1 This report presents proposals for the progression of schemes through the Combined Authority’s assurance process in line with the Combined Authority’s Assurance Framework. Further details on the schemes summarised below can be found as part of this report.

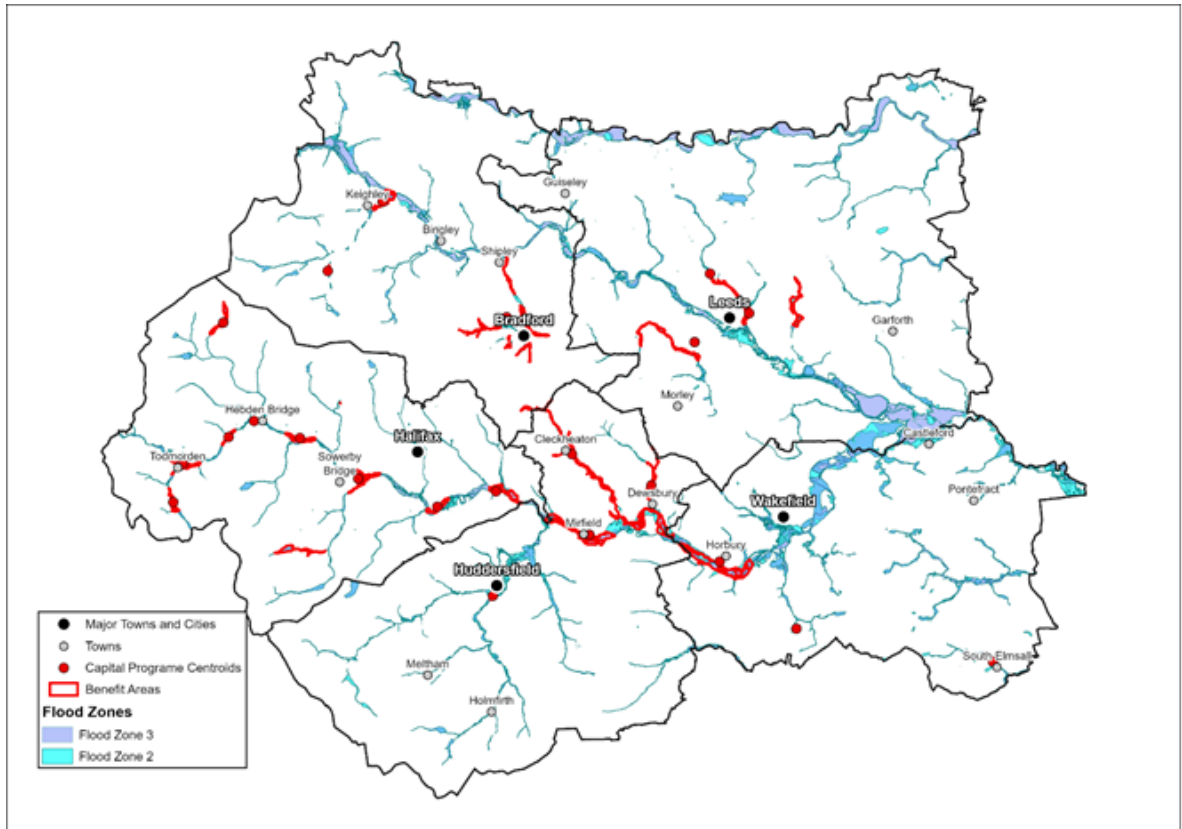
3 Improving Climate Resilience – Flood Risk Management

- 3.1 Around 5.2 million properties in England (or one in six properties) are at risk of flooding. In West Yorkshire approximately 37,000 residential properties and 15,000 commercial properties fall within a flood zone. Flooding is likely to become a more frequent occurrence as a result of climate change. More details are in the monitoring report at item 7.
- 3.2 There is now a consistent pattern of wet winter periods, with saturated land and consistently high river levels making our communities increasingly vulnerable to a higher number of intense storms. Many communities, particularly in small towns, are struggling to recover, and businesses are unable to plan for sustainable growth. These ongoing flood incidents have reinforced the need to secure capital investment to allow communities to be

more resilient to flooding and avoid both the human suffering and economic cost that comes with these events.

- 3.3 The West Yorkshire Plan sets out five 5 missions that will drive the Combined Authority's work to transform lives and communities across the region. Mission four 'A sustainable West Yorkshire – making lives greener' outlines our actions for change that will create a sustainable, nature rich and climate ready region.
- 3.4 The West Yorkshire Climate and Environment Plan (CEP) - approved by the Combined Authority in October 2021 - is the Mayor's and Combined Authority response to tackling the climate emergency, protecting the environment, and achieving a net zero West Yorkshire.
- 3.5 Within the CEP, the following critical action areas are identified in regard to Flood Risk Management:
 - CR01 Climate Ready Strategy
 - CR02 Embedding Climate Readiness
 - CR03 Flood Risk and Drainage
 - BI01 Business Sustainability Support
- 3.6 The CEP Wave 1 portfolio gained decision point 1 (strategic assessment) approval from the Combined Authority on 22 July 2022. The Flood Risk and Drainage critical action area (with a focus upon Natural Flood Management (NFM)) and Business Sustainability Support were prioritised.
- 3.7 The programme gained decision point 1 (strategic assessment) at Combined Authority on 2 February 2023. Development costs of £113,735 were also approved to secure staffing resources to expedite delivery.
- 3.8 The Capital Flood Risk Management programme then gained decision point 2 (strategic outline case) approval and approval for work to commence on the development of individual business cases, at the Climate, Energy and Environment Committee on 11 July 2023. An indicative approval for programme costs of £10,000,000 was given, £2,255,561 of which gained full approval, which, together with the £113,735 approved at decision point 1, took the total programme approval to £2,369,296.
- 3.9 The schemes recommended for approval in this paper are part of the Phase 1 of the Capital Flood Risk Management programme being delivered by the Combined Authority and therefore form part of a wider programme and strategic approach which seeks to adapt our environment and communities so that they become more resilient to future flood events.
- 3.10 The Capital Flood Risk Management Programme consists of up to 23 identified schemes that aim to enhance flood protection and climate resilience for homes and businesses across West Yorkshire. The programme will deliver new flood protection as well as the refurbishment and improvement of existing flood protection.

Plan 1: Indicative Plan Showing Capital Flood Risk Management Programme Schemes & Potential Scheme Benefit Areas



- 3.11 Work has commenced on the design and specification of schemes and business case development with three schemes coming forward for approval within this report and a further scheme likely to be submitted for appraisal through the Assurance Framework at the beginning of June. Subject to the Committee's approval, works for the three schemes submitted to appraisal so far are due to start on site shortly.
- 3.12 The programme is being delivered alongside the Natural Flood Management programme as part of a whole river catchment-based approach to managing flood risk. The Natural Flood Management programme comprises of up to nine schemes aiming to increase flood resilience to homes and businesses by implementing approximately 3,500 natural flood management measures.

Scheme summaries

<p>Albert Street Flood Alleviation Scheme Huddersfield</p>	<p><u>Scheme description</u></p> <p>The scheme will install two new pipes to redirect river floodwater back into the River Holme. This will reduce the flood risk to 28 businesses on Albert Street and Queens Mill Road in Huddersfield, which were impacted by fluvial (river) flooding in February 2022.</p> <p>The scheme is to be delivered through the Single Investment Fund (SIF), Investment Priority 3 gainshare allocation.</p> <p><u>Impact</u></p> <p>The scheme will reduce flood risk to 28 businesses on Albert Street and Queens Mill Road, which fall within the 30% most deprived neighbourhoods in England. Resilience to flooding and climate change will be improved and support the protection of investment and jobs in the area.</p> <p>The value for money assessment reflects a benefit cost ratio (BCR) of 2.3:1.</p> <p><u>Decision sought</u></p> <p>Approval to proceed through decision point 2 to 4 (business justification) and work commences on activity 5 (delivery).</p> <p>Total value of the scheme - £526,176</p> <p>Total value of Combined Authority funding - £526,176</p> <p>Funding recommendation sought - £526,176</p> <p>A decision by the Climate, Energy and Environment Committee using the delegated authority from the Combined Authority is sought as part of this report</p>
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<p>Sheepscar Beck Refurbishment Scheme</p> <p>Leeds</p>	<p><u>Scheme description</u></p> <p>The scheme will reduce flood risk to 51 residential and 255 commercial properties by refurbishing key assets along Sheepscar Beck forming the existing channel, currently in poor condition. Without the works, assets will continue to deteriorate, increasing the risks of flooding to the surrounding areas.</p> <p>The scheme is to be delivered through the Single Investment Fund (SIF), Investment Priority 3 Gainshare allocation.</p> <p><u>Impact</u></p> <p>The scheme will reduce flood risk to 51 residential and 255 commercial properties near Sheepscar Beck by extending the life of the infrastructure within the beck.</p> <p>The value for money assessment reflects a benefit cost ratio (BCR) of 7.9:1 and is expected to deliver very high value for money.</p> <p><u>Decision sought</u></p> <p>Approval to proceed through decision point 4 (full business case) and work commences on activity 5 (delivery).</p> <p>Total value of the scheme - £1,563,401</p> <p>Total value of Combined Authority funding – up to £620,104</p> <p>Funding recommendation sought – up to £620,104</p> <p>A decision by the Climate, Energy and Environment Committee using the delegated authority from the Combined Authority is sought as part of this report</p>
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Brighouse Flood Alleviation Scheme

Brighouse

Scheme description

The scheme aims to improve flood resilience in Brighouse and the surrounding areas. It involves repairing and replacing flood defences along the River Calder, and landscaping and environmental improvements at Wellhome Park and Whinney Hill Park to reduce the risk of flooding from Clifton Beck. This landscaping will provide improved attenuation of flood waters within the parks to make best use of the existing flood plains, slowing the flow of Hoyle House Beck from entering Clifton Beck.

The scheme will be delivered through the Single Investment Fund (SIF), Investment Priority 3 gainshare allocation.

Impact

The scheme aims to reduce the risk of flooding to 55 residential and 359 non-residential properties, reduce the risk of disruption to the transport network from flooding and provide improved flood attenuation, where land is allowed to flood, within existing flood plains. This will also provide improved wildlife habitat forming part of the Biodiversity Net Gains which this scheme will deliver.

The scheme has a benefit cost ratio (BCR) of 3.4:1 and is forecast to deliver a net reduction in carbon emissions of 10,777 tCO₂e over a 50-year period.

Decision sought

Approval to proceed through decision point 4 (full business case) and work commences on activity 5 (delivery).

Total value of the scheme - £30,809,000

Total value of Combined Authority funding - £4,499,000

Funding recommendation sought - £4,499,000

A decision by the Climate, Energy and Environment Committee using the delegated authority from the Combined Authority is sought as part of this report

Other decisions relevant to the Climate, Energy and Environment Committee – Flood Risk Management

Decisions made by the Combined Authority on 7 December 2024

3.13 The following schemes have recently been assessed in line with the Combined Authority’s assurance process and approved by the Combined Authority.

3.14 The full agenda and papers for the meeting can be found on the [Combined Authority website here](#).

Wortley Beck Re-naturalisation scheme Districts: Leeds & Bradford	Approval to proceed through decision point 2 (strategic outline case) and decision point 4 (full business case) and for work to commence on activity 5 (delivery). Funding approved - £966,000 Total value of the scheme - £1,000,000 Total value of Combined Authority funding - £1,000,000
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4 Information

4.1 The Combined Authority’s assurance framework requires that formal approval is given to the following elements of a scheme as part of its development:

- The progression of a scheme through a decision point to the next activity.
- Indicative or full approval to the total value of the scheme funding requested.
- The Combined Authority’s entry into a funding agreement with the scheme’s promoter.
- The assurance pathway and approval route for future decision points.
- The scheme’s approval tolerances.

4.2 This report provides information required to enable the Combined Authority to approve each of the above elements.

Projects in Stage 1: Assessment and Sequencing

4.3 There are no schemes to review at this stage.

Projects in Stage 2: Scheme development

Project Title	Albert Street Flood Alleviation Scheme
Stage	2 (scheme development)
Decision Point	2 to 4 (business justification)

Is this a key decision?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is the decision eligible for call-in by Scrutiny?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Does the report contain confidential or exempt information or appendices?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
If relevant, state paragraph number of Schedule 12A, Local Government Act 1972, Part 1:		
Are there implications for equality and diversity?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Background

- 4.4 This scheme is being delivered as part of Phase 1 of the Capital Flood Risk Management Programme delivered through the Single Investment Fund (SIF), Investment Priority 3 gainshare allocation.
- 4.5 The scheme's main objective is to reduce flood risk and increase flood resilience in the local area, by improving the local drainage network, benefitting 28 businesses, and protecting up to 422 jobs.
- 4.6 The scheme will install two new pipes, additional to the existing drainage gullies, which will redirect fluvial (river) floodwater back into the River Holme further downstream. The improvements will increase the rate at which floodwater can drain away, reducing the depths of flood water more quickly, and thereby reducing the impacts of flooding on local businesses and infrastructure.
- 4.7 The scheme has been developed by Kirklees Council, as a Lead Local Flood Authority (LLFA), under the Flood and Water Management Act 2010, in collaboration with the Environment Agency. The LLFA is responsible for managing local flood risk to improve the resilience of local communities and businesses to flooding.
- 4.8 A summary of the scheme's business case and location map is included in **Appendix 1**.

Outputs and Outcomes

- 4.9 The scheme outputs and outcomes, which are subject to further refinement and agreement, are expected to include:

- To reduce the risk of flooding to all 28 businesses on Albert Street and Queens Mill Road in Huddersfield, protecting up to 422 jobs.
- To increase the Standard of Protection from a 1:25 to 1:50 year event.
- To provide an economic benefit of £1,261,345, based on the Environment Agency's Flood Risk Management (FRM) Economic Appraisal Tool used to estimate the damages avoided and model the economic benefits of the scheme.
- To increase the rate at which floodwater drains away from the area during future flood events.
- To provide a cost-efficient solution that can be delivered within short timescales and maintained as part of Kirklees Council's usual maintenance regime.
- To improve the resilience of all 28 businesses and the speed at which they are able to recover from future flood events.
- Protecting properties and infrastructure, thus reducing barriers to sustainable and further future investment in the area.
- Reducing the risk of significant job losses in an area already considered a deprived area, due to businesses moving location.
- To build resilience against the impacts of climate change, which include a rising flood risk.
- Supporting communities in an area of high deprivation.

4.10 The scheme delivers a BCR of 2.3:1 and is expected to deliver high value for money.

Tackling the Climate Emergency Implications

4.11 The scheme will seek to respond to the climate emergency by increasing climate resilience of 28 businesses in an area of high deprivation to the risks of flooding. This will reduce the impact of climate change for local businesses and communities.

4.12 By reducing flood risk, the scheme will reduce the need for repairs or refurbishment works, and the replacement of commercial equipment, meaning a reduction in carbon emissions, waste, material production, and transport costs.

4.13 The potential impact of the scheme on carbon emissions has been assessed using the Environment Agency's Carbon Modelling Tool. This estimates a net carbon reduction arising from the delivery and operation of the scheme of 41 tCO₂e over a 50-year appraisal period.

Inclusive Growth Implications

4.14 The scheme inclusive growth implications include:

- Supporting as many people as possible across West Yorkshire to be able to contribute to, and benefit from, economic growth, by increasing the resilience of businesses to flood and climate change risks.
- Implementing mitigation measures that support carbon reduction, climate resilience, and the stability of infrastructures within West Yorkshire by reducing the risk and impacts of flooding on buildings, thus improving sustainable growth potential.
- Increasing the resilience of an area that is within the 30% most deprived neighbourhoods in England, and adjacent to areas within the 20% most deprived neighbourhoods (to the south of Queens Mill Road and east of Albert Street) and 10% most deprived neighbourhoods in the country (nearby areas such as Newsome and Lockwood).
- Supporting the delivery of the Leeds City Region 2038 net zero carbon target by reducing the potential future need for infrastructure repair and refurbishment works due to the impact of flooding, which will enable inclusive growth and the delivery of regional priorities.

Equality and Diversity Implications

- 4.15 An Equality Impact Assessment (EqIA) has been undertaken for the scheme and equality and diversity impacts taken account of as part of the development of the scheme and the business case development; there will be no perceived negative impacts from the scheme.
- 4.16 The scheme will support deprived communities within a neighbourhood that falls within the 30% most deprived in England, contributing to the delivery of Kirklees Council's Inclusion and Diversity Strategy and the Combined Authority's Inclusive Growth priorities.

Consultation and Engagement

- 4.17 The scheme has been developed by Kirklees Council in close collaboration with the Environment Agency who fully support the business case.
- 4.18 Early engagement has been undertaken regarding planning permission and road closures. The Planning Department is of the opinion that the scheme will be permitted, and the Road Closure Authority has so far indicated that road closures will be granted. Permits are yet to be confirmed/obtained, however.
- 4.19 Future consultation is planned which will include letter drops and social media posts to inform businesses, councillors, and the public of the progress and changes taking place. A Communications Plan will be developed by the preferred, chosen contractor and this will be written into the contract as an obligation.
- 4.20 The scheme will require approval under delegation from Kirklees Council's Service Director once funding has been secured and this is recommended as a condition of the Committee's approval today.

Risks

- 4.21 The scheme risks and mitigations are:

- Risk of encountering buried services during construction of the new pipes, leading to construction delays and potential increased costs. Existing service maps have been viewed as a desktop study to identify the potential route for the new pipes. This risk will be further mitigated by the undertaking of ground penetrating radar surveys to identify the locations of any unmapped buried services so that these can be avoided during construction.
- A flood event occurring during construction leading to construction delays, damage to equipment, and additional costs. This risk will be mitigated by the development of contingency plans whereby the contractor signs up to receive local flood warnings and plans to remove equipment from the site for safe offsite storage. Temporary defences and pumping mechanisms may also be considered.
- Suppliers' costs being higher than expected, leading to a lack of affordability. To mitigate, Kirklees Council has included a 25% contingency in the request for funding from the Combined Authority. Should costs increase beyond the contingency, additional funding options will be explored, or the option to reduce scope of the scheme considered.

Costs

- 4.22 The total scheme costs are £526,176.
- 4.23 The Combined Authority's contribution is £526,176 from the Single Investment Fund (SIF), Investment Priority 3 gainshare allocation.
- 4.24 The estimated cost of the scheme at decision point 2 was £250,000, this has since increased to £526,176, as following further development and investigation work, the initial proposal for the scheme was considered not to be technically feasible.
- 4.25 The Combined Authority will need to enter into a funding agreement with Kirklees Council for expenditure of up to £526,176 from the Single Investment Fund (SIF), Investment Priority 3 gainshare allocation.

Assurance Pathway and Approval Route

Assurance pathway	Approval route	Forecast approval date
2 -4 (business justification case)	Recommendation: Combined Authority's Director of Policing, Environment & Place Decision: Climate, Energy and Environment Committee	13/02/2024
5 (completion / service delivery)	Recommendation: Combined Authority's Portfolio Investment Panel Decision: Combined Authority's Director of Policing, Environment & Place	30/06/2025

Other Key Timescales

- Construction will commence - June 2024.
- Construction will be completed - July 2025.
- Evaluation of the scheme will take place - January 2026
- Delivery closure report submitted - January 2026

Assurance Tolerances

- 4.26 This approval is the first decision point for the scheme at committee. The assurance tolerances for the recommended approval in this report are:

Assurance tolerances
Combined Authority funding remain within +10% of those outlined in this report.
Completion/service delivery date remains within +6 months of those outlined in this report.
Outputs remain within -10% of those outlined in this report.

Appraisal Summary

- 4.27 The scheme supports commitments to achieving climate resilience and carbon net zero, and supports the inclusive growth agenda, by increasing climate resilience and decreasing the potential impact of flooding to 28 businesses in an area of high deprivation.
- 4.28 By increasing protection for the 28 businesses, future carbon emissions associated with the repair and reconstruction of infrastructure and replacement of commercial equipment will be reduced. The forecasted benefit of carbon avoidance equates to 180tCO₂e.
- 4.29 The scheme will be delivered by Kirklees Council and supported by the Environment Agency, using key experience and expertise amongst partners to deliver benefits. The value for money assessment indicates a positive return on investment.
- 4.30 Prior to commencement of delivery of the scheme, an Approval to Proceed step is a recommended requirement to be added into the assurance pathway. This is to ensure that surveys have been completed to confirm the full scope of the works required to deliver the scheme successfully, and the associated costs. Further to this, planning permissions and work permits are required to be secured. Internal approval to progress the scheme is also required from the Service Director at Kirklees Council, acting under delegated authority.

Recommendations

- 4.31 The Climate, Energy and Environment Committee, subject to the conditions set by the Portfolio Investment Panel, approves that:
- (i) The Albert Street Flood Alleviation Scheme proceeds through Decision Point 2 to 4 (Business Justification) and work commences on Activity 5 (Delivery).

- (ii) Approval to the Combined Authority’s contribution of £526,176. The total scheme value is £526,176.
- (iii) The Combined Authority enters into a Funding Agreement with Kirklees Council for expenditure of up to £526,176.
- (iv) Future approvals are made in accordance with the assurance pathway and approval route and tolerances outlined in this report.

Project Title	Sheepscar Beck Refurbishment Scheme
Stage	2 (scheme development)
Decision Point	4 (full business case)

Is this a key decision?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is the decision eligible for call-in by Scrutiny?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Does the report contain confidential or exempt information or appendices?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
If relevant, state paragraph number of Schedule 12A, Local Government Act 1972, Part 1:		
Are there implications for equality and diversity?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Background

- 4.32 This scheme is part of Phase 1 of the Capital Flood Risk Management Programme being delivered through the Single Investment Fund (SIF), Investment Priority 3 gainshare allocation.
- 4.33 The scheme’s main objective is to reduce flood risk and increase flood resilience in the local area, benefitting 51 residential and 255 commercial properties, by extending the life of the infrastructure within Sheepscar Beck.
- 4.34 In the area covered by this scheme, the beck flows through a channel which consists of a series of culverts, and canal like sections.
- 4.35 Investigative work has identified that the infrastructure assets, including retaining and channels walls, which form the existing channel, are in poor condition and will continue to deteriorate if refurbishment work is not carried out.
- 4.36 Failure of the 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 such a blockage. Assets along this beck have failed in

previous years requiring reactive maintenance to carry out repair work and clear blockages.

- 4.37 The scheme will involve refurbishing these key assets, to improve their condition and reduce the probability of flooding being caused by their failure. This would include full refurbishment of walls and clearing the channel of built-up debris, excessive vegetation, and blockages.
- 4.38 Without the works, assets will continue to deteriorate, increasing the risks of flooding and blight to the local area resulting in negative social impacts, infrastructure damage, loss of local jobs, and wider negative economic impacts. Public safety will also be impacted through failure of assets which provide a barrier to entry into the beck. Carrying out refurbishment work will also reduce the risk and the cost of future reactive work.
- 4.39 The scheme has been developed by Leeds City Council in collaboration with the Environment Agency. Although the channel and the assets surrounding the channel are mostly owned by independent landowners, there are over 100 landowners, meaning Leeds City Council as the Local Lead Flood Authority undertake non-statutory maintenance and support coordination.
- 4.40 A summary of the scheme's business case and location map is included in **Appendix 2**.

Outputs and Outcomes

- 4.41 The scheme outputs and outcomes, which are subject to further refinement and agreement, are expected to include:
- To reduce the risk of flooding to 51 residential and 255 commercial properties in the local area.
 - To produce £1,243,197 in savings in relation to potential damages on residential properties due to flooding.
 - To produce £27,123,721 in savings in relation to potential damages on non-residential properties due to flooding.
 - To deliver the equivalent economic benefit of £424,939 in terms of health-related benefits due to reduced damage to mental health of residents.
 - To reduce future maintenance costs for Leeds City Council and riparian landowners due to the ongoing deterioration of assets along the beck that are already in a poor condition.
 - To deliver economic benefits equivalent of £31,129 in savings due to a reduction in "risk to life".
 - To deliver £307,609 of savings due to a reduced need for temporary accommodation, and £2,357,353 savings in respect to emergency services.
 - To produce savings of £360,589 for recovery, repair, and clean-ups as a result of flooding.

- To produce savings of £816,956 due to reduced indirect damage to communities, and £130,886 due to reduced damage to vehicles.
- To reduce the risk of reputational damage to Leeds City Council associated with flooding caused by an asset failure.
- Enhancement of the local environment through refurbishment of existing assets through the removal of debris and silt-build up, vegetation and tree roots which improve water flows and delivery of environmental enhancements that improve habitat connectivity, so species can move between different areas more easily.
- Improving understanding among landowners about their responsibilities as riparian owners, who have responsibility the maintenance of watercourses on, next to or under their property.

4.42 The scheme delivers a BCR of 7.9:1 and is expected to achieve very high value for money.

Tackling the Climate Emergency Implications

- 4.43 The scheme will support the Combined Authority in its challenge to tackle the climate emergency by increasing the resilience of 51 residential and 255 commercial properties to the risks of flooding.
- 4.44 The potential impact of the scheme on carbon emissions has been assessed using the Environment Agency's Carbon Modelling Tool. This estimates a net carbon reduction arising from the delivery and operation of the scheme of 2,439 tCO₂e over a 50-year appraisal period.
- 4.45 A key objective of the scheme is to build greater climate resilience in the local area; by reducing flood risk the scheme will reduce future building and infrastructure repair or refurbishment works required, and the replacement of commercial equipment, meaning a reduction in carbon emissions, waste, material production, and transport costs.

Inclusive Growth Implications

- 4.46 The scheme inclusive growth implications include:
- The scheme will protect and improve the resilience of 51 residential and 255 commercial properties in terms of the risks and impacts of flooding at Sheepscar Beck.
 - The scheme will protect existing properties and infrastructure and reduce barriers to any further investment in the local area.
 - Investment Priority 3 of the West Yorkshire Investment Strategy is being supported by the scheme through accelerated investment that is focused on improving places and neighbourhoods, looking to create sustainable places that encourage climate resilience.

Equality and Diversity Implications

- 4.47 The scheme will reduce the vulnerability of local residents and businesses to the impacts of potential flooding.
- 4.48 Reducing the risks of flooding reduces the risk of businesses suffering and jobs being lost.
- 4.49 A Stage 2 Equality Impact Assessment (EqIA) has been requested as part of the conditions for the scheme set by the Portfolio Investment Panel (PIP).

Consultation and Engagement

- 4.50 Leeds City Council has developed the scheme in close collaboration with the Environment Agency. The business case has already been considered as part of the Environment Agency's own assurance process and was approved.
- 4.51 The Environment Agency has provided a range of functions throughout the development of the scheme, including specialist advice on evidence and risk (modelling), fisheries, biodiversity, geomorphology, hydrology, partnerships, and strategic overview.
- 4.52 Leeds City Council will engage with the local community affected by the proposed works via the project engagement forum, local newspaper adverts, and target newsletters. A stakeholder engagement plan is included in the business case submission to detail engagement activities with the community and other key groups of stakeholders. An interpretation strategy is being developed that will provide long term information about the history of the watercourse and the refurbishment scheme.
- 4.53 Utility providers have been and will continue to be consulted as part of this scheme to ensure any effects on services will be addressed.
- 4.54 The Leeds City Council planning department has confirmed that the majority of works are permitted, and an application has been made for a minor part of the scheme. Ongoing engagement with landowners / occupiers will take place, as the scheme develops, to support the initial vegetation removal. Responsibilities regarding engagement with landowners may be delegated to the chosen construction contractor, better placed to discuss the nature of the works.

Risks

- 4.55 The scheme risks and mitigations are:
- Risk of ground conditions and existing structures and obstructions causing additional work. The risk is being mitigated through additional site visits in the early stage of the project to understand all works required.
 - Risk of unknown failures to the existing walls, which require more extensive repair, than what is included in the scheme's scope. This will be mitigated by undertaking a survey to determine the work that needs to be carried out.

- Risk that the scope of the scheme and works required is uncertain at this stage, and further surveys and investigations are required to finalise scope and confirm costs of the proposed scheme. This is being set as a condition by the Portfolio Investment Panel (PIP) and is expected to be completed before the project enters Delivery.
- Risk of landowners not giving site access, mitigated by early engagement with all landowners through a land agent.
- Risk of illegal discharging into the river. This will be mitigated by the contractor identifying any risks of construction materials entering into the watercourse and putting measures in place to reduce any risks. This will be captured in Risk Assessments and Method Statements (RAMS) developed by the contractor and then agreed with Leeds City Council.
- Progress could be delayed by adverse weather conditions. This will be mitigated by monitoring of the weather and planning construction works appropriately.

Costs

- 4.56 The total scheme costs are £1,563,401.
- 4.57 The Combined Authority's contribution is up to £620,104 from the Single Investment Fund (SIF), Investment Priority 3 gainshare allocation.
- 4.58 The remaining funding is £943,297 from the Environment Agency.
- 4.59 At decision point 2 the estimated total cost of the scheme was £760,000; this has since increased to £1,563,401 as a result of more detailed feasibility works undertaken to determine the scope of works required.
- 4.60 The Combined Authority will need to enter into a funding agreement with Leeds City Council for expenditure of up to £620,104 from the Single Investment Fund (SIF), Investment Priority 3 Gainshare allocation.

Assurance Pathway and Approval Route

Assurance pathway	Approval route	Forecast approval date
4 (full business case)	Recommendation: Combined Authority's Portfolio Investment Panel Decision: Climate, Energy and Environment Committee	13/02/2024
5 (delivery)	Recommendation: Combined Authority's Portfolio Investment Panel Decision: Combined Authority's Director of Policing, Environment & Place	01/07/2025

Other Key Timescales

- The chosen contractor will be appointed - March 2024.
- Construction will start on site - April 2024.
- Construction is expected to be completed - April 2025.
- Delivery closure report submitted - October 2025.

Assurance Tolerances

- 4.61 This approval is the first decision point for the scheme at committee. The assurance tolerances for the recommended approval in this report are:

Assurance tolerances
Combined Authority funding remains within +10% of those outlined in this report.
Completion date remains within +6 months of those outlined in this report.
Outputs remain within -10% of those outlined in this report.

Appraisal Summary

- 4.62 The scheme is part of the wider Leeds Flood Alleviation Work Programme at Leeds City Council and the Local Flood Risk Management Strategy, aiming to improve flooding in Leeds through local projects.
- 4.63 It is also part of phase 1 of the Capital Flood Risk Management Programme at the Combined Authority, supporting the wider strategies and policies around environmental and economic sustainability.
- 4.64 Development of the Business Case has been supported by the Environment Agency and is included within their Coastal Erosion Risk Management Programme for reducing risk to residential properties, with investment forecast between 2021 and 2027. Match funding from the Environment Agency has been applied for and is going through the appraisal process and is awaiting approval. Final scope and costs of proposed works will be confirmed once a preferred contractor has been selected.
- 4.65 The main scheme objective to reduce flood risk to 51 homes and 255 commercial properties is clear and transparent, however further detail is under development by Leeds City Council in the format of Project Plans and supporting documents. These will be submitted through the Approval to Proceed to be assurance checked by the Portfolio Investment Panel (PIP).

Recommendations

- 4.66 The Climate, Energy and Environment Committee, subject to the conditions set by the Portfolio Investment Panel, approves that:

- (i) The Sheepscar Beck Refurbishment Scheme proceeds through Decision Point 4 (Full Business Case) and work commences on Activity 5 (Delivery).
- (ii) Approval to the Combined Authority's contribution of up to £620,104. The total scheme value is £1,563,401.
- (iii) The Combined Authority enters into a Funding Agreement with Leeds City Council for expenditure of up to £620,104.
- (iv) Future approvals are made in accordance with the assurance pathway and approval route and tolerances outlined in this report.

Project Title	Brighouse Flood Alleviation Scheme
Stage	2 (scheme development)
Decision Point	4 (full business case)

Is this a key decision?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Is the decision eligible for call-in by Scrutiny?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Does the report contain confidential or exempt information or appendices?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
If relevant, state paragraph number of Schedule 12A, Local Government Act 1972, Part 1:		
Are there implications for equality and diversity?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Background

- 4.67 The scheme is part of the West Yorkshire Capital Flood Risk Management (CFRM) programme. It will be funded through the Single Investment Fund (SIF), Investment Priority 3 gainshare allocation.
- 4.68 The scheme aims to improve flood resilience in Brighouse and the surrounding areas by repairing and replacing existing flood defences along the River Calder and installing new landscaping and environmental enhancements, including planting, at Wellhome Park and Whinney Hill Park to mitigate the risk of flooding from Clifton Beck.
- 4.69 The objectives of the scheme are to:
- Extend the operational life of flood defences along the River Calder in Brighouse for a further 50 years.
 - Replace temporary flood defences installed following flood events in December 2015 and February 2020.

- Install new landscaping features in Wellholme Park and Whinney Hill Park to support their function as part of the flood plain from Clifton Beck.
 - Install new environmental enhancements to Clifton Beck and its upper catchment area to reduce flows.
- 4.70 The Environment Agency are nearing completion of an early works package of the scheme to deliver asset replacement and repair along a section of the River Calder. This was funded by the Environment Agency following internal approval of their outline business case in early 2023 and focused on the refurbishment of embankments damaged by tree and vegetation establishment.
- 4.71 A summary of the scheme's business case and location map is included in **Appendix 3**.

Outputs and Outcomes

- 4.72 The scheme outputs and outcomes, which are subject to further refinement and agreement, are expected to include:
- Reduced flood risk to up to 55 residential and 359 non-residential properties as well as to the local highway network.
 - Increase the Standard of Protection at Clifton Beck to a 1:20 year event.
 - Create 1.56 hectares of wetland.
 - Potential wider environmental and sustainability benefits include the creation of improved wildlife habitat as well as improved community access to natural amenities.
 - The scheme has a potential cost benefit ratio of 3.4:1 based on the monetisation of a range of benefits, including the reduction in transport and utilities disruption to the local community and businesses and the creation of habitat and amenities in public parks.
 - Contribute to the delivery of wider socio-economic benefits through the regeneration and growth of the South Calderdale area centred on Brighouse.
 - Create a better place and that maximises environmental outcomes for people and wildlife.

Tackling the Climate Emergency Implications

- 4.73 The scheme contributes to the Mayoral Pledge of tackling the climate emergency through managing flood risk and resilience and complements the Natural Flood Management Programme that is being funded as part of Investment Priority 4 (Tackling the Climate Emergency, and Environmental Sustainability).
- 4.74 The scheme supports the delivery of the West Yorkshire Climate and Environment Plan (CEP) by reducing flooding risk to residential and business properties and key economic and social infrastructure and improving the resilience of the local community and the local economy to climate change.

4.75 The potential impact of the scheme on carbon emissions has been assessed by the EA using their own Carbon Modelling Tool. This estimates a net carbon reduction arising from the delivery and operation of the scheme of 10,777 tCO₂e over a 50-year appraisal period.

Inclusive Growth Implications

4.76 The scheme inclusive growth implications include:

- The scheme will provide flood protection to vulnerable and deprived areas. Research undertaken by the Joseph Rowntree Foundation (JRF) has found that many socially deprived neighbourhoods are also socially vulnerable to climate events. Low-income households are less able to make their property resilient, and to respond to and recover from the impacts of floods. The ability to relocate is affected by wealth, as is the ability to take out insurance against flood damage.
- The scheme will also contribute towards improving individual's knowledge of flood risk to homes and businesses, improving knowledge of climate change mitigation measures, and improving mental health outcomes by reducing frequency and scale of flooding in communities.

Equality and Diversity Implications

4.77 Research from Age UK has shown that people with disabilities, older age groups and pregnancy may affect the ability to evacuate quickly from an area at risk of flooding. The Flood Programme has the potential to positively impact protected characteristics through the reduction of flooding risk to properties.

4.78 The Environment Agency has completed an Equality Impact Assessment (EqIA) Screening which indicates that the potential negative impact of the scheme on protected groups is low.

Consultation and Engagement

4.79 Consultation and engagement on the design of the scheme was led by the Environment Agency in partnership with Calderdale Council. Further details can be found at <https://eyeoncalderdale.com/brighthouse-flood-alleviation-scheme/>. A further public consultation event is planned in early 2024.

Risks

4.80 The scheme risks and mitigations are:

- Further damage or degradation to existing flood defences from storms events and high flows – mitigated by ongoing asset inspections and updates to existing surveys and structural assessments.
- Highways and access constraints for works around Phoenix Bridge and Oakhill Road – mitigated by undertaking these works simultaneously with the proposed A641 improvements led by Calderdale Council
- Delays in securing planning approval and construction of Wilkin Royd Mill culvert works causing potential delay delivery of downstream Clifton Beck works – mitigated by ongoing engagement with the local planning

authority and the use of the Environment Agency’s powers under the Water Resources Act to remove culvert restrictions.

Costs

- 4.81 The total scheme costs are £30,809,000.
- 4.82 The Combined Authority’s contribution is £4,499,000 from the Single Investment Fund (SIF), Investment Priority 3 gainshare allocation which has remained the same as that expected in the decision point 2 (strategic outline case) programme approval.
- 4.83 The remaining funding is £26,310,000 from Environment Agency managed funds and funding allocated to the scheme through the Calderdale Flood Partnership Board and the Yorkshire Regional Flood & Coastal Committee.
- 4.84 Subject to approval, the Combined Authority will need to enter into a Funding Agreement with the Environment Agency for expenditure of up to £4,499,000.

Assurance Pathway and Approval Route

Assurance pathway	Approval route	Forecast approval date
4 (full business case)	Recommendation: Combined Authority’s Director of Policing, Environment & Place Decision: Climate, Energy and Environment Committee	13/02/2024
5 (completion / service delivery)	Recommendation: Combined Authority’s Portfolio Investment Panel Decision: Combined Authority’s Director of Policing, Environment & Place	31/03/2026

Other Key Timescales

- Main construction works commence - 1 March 2024
- Practical completion - 31 March 2026
- Delivery closure report submission - 31 March 2028

Assurance Tolerances

- 4.85 This approval is the first decision point for the scheme at committee. The assurance tolerances for the recommended approval in this report are:

Assurance tolerances
Combined Authority funding remain within +10% of those outlined in this report. Completion/service delivery date remains within +6 months of those outlined in this report. Outputs remain within -10% of those outlined in this report.

Appraisal Summary

- 4.86 The scheme has a strong strategic and economic case for improving the resilience of local communities in Brighouse to climate change and the significant risks of flooding from the River Calder and Clifton Beck.
- 4.87 It will deliver an increased standard of flood protection for both residential and non-residential properties and essential infrastructure in the area, new wildlife habitat and amenity space.
- 4.88 All match funding has been secured, delivery arrangements are broadly in-place (subject to planning), and advanced works are nearing completion.

Recommendations

- 4.89 The Climate Energy and Environment Committee subject to the conditions set by the Portfolio Investment Panel, approves that:
- (i) The Brighouse Flood Alleviation scheme proceeds through decision point 4 (full business case) and work commences on activity 5 (delivery).
 - (ii) Approval to the Combined Authority's contribution of £4,499,000 is given. The total scheme value is £30,809,000.
 - (iii) The Combined Authority enters into a Funding Agreement with the Environment Agency for expenditure of up to £4,499,000.
 - (iv) Future approvals are made in accordance with the assurance pathway and approval route outlined in this report. This will be subject to the scheme remaining within the tolerances outlined in this report.

Projects in Stage 3: Delivery and Evaluation

- 4.90 There are no schemes to review at this stage.

5 Tackling the Climate Emergency implications

- 5.1 The Climate Emergency implications have been considered on all projects included in this report as part of their business case development.

6 Inclusive Growth implications

- 6.1 The inclusive growth implications have been considered on all projects included in this report as part of their business case development.

7 Equality and Diversity implications

- 7.1 Equality Impact Assessments (EqIA) have been undertaken on all projects included in this report as part of their business case development.

8 Financial implications

8.1 The report seeks endorsement to expenditure from the available Combined Authority funding as set out in this report.

9 Legal implications

9.1 The payment of funding to any recipient will be subject to a funding agreement being in place between the Combined Authority and the organisation in question.

10 Staffing implications

10.1 A combination of Combined Authority and local partner council project, programme and portfolio management resources are, or are in the process of, being identified and costed for within the schemes in this report.

11 External consultees

11.1 Where applicable scheme promoters have been consulted on the content of this report.

12 Recommendations (Summary)

Albert Street Flood Alleviation Scheme

12.1 The Climate, Energy and Environment Committee, subject to the conditions set by the Portfolio Investment Panel, approves that:

- (i) The Albert Street Flood Alleviation Scheme proceeds through Decision Point 2 to 4 (Business Justification) and work commences on Activity 5 (Delivery).
- (ii) Approval to the Combined Authority's contribution of £526,176. The total scheme value is £526,176.
- (iii) The Combined Authority enters into a Funding Agreement with Kirklees Council for expenditure of up to £526,176.
- (iv) Future approvals are made in accordance with the assurance pathway and approval route and tolerances outlined in this report.

Sheepscar Beck Refurbishment Scheme

12.2 The Climate, Energy and Environment Committee, subject to the conditions set by the Portfolio Investment Panel, approves that:

- (i) The Sheepscar Beck Refurbishment Scheme proceeds through Decision Point 4 (Full Business Case) and work commences on Activity 5 (Delivery).
- (ii) Approval to the Combined Authority's contribution of up to £620,104. The total scheme value is £1,563,401.
- (iii) The Combined Authority enters into a Funding Agreement with Leeds City Council for expenditure of up to £620,104.

- (iv) Future approvals are made in accordance with the assurance pathway and approval route and tolerances outlined in this report.

Brighouse Flood Alleviation Scheme

12.3 The Climate Energy and Environment Committee subject to the conditions set by the Portfolio Investment Panel, approves that:

- (i) The Brighouse Flood Alleviation Scheme proceeds through decision point 4 (full business case) and work commences on activity 5 (delivery).
- (ii) Approval to the Combined Authority's contribution of £4,499,000 is given. The total scheme value is £30,809,000.
- (iii) The Combined Authority enters into a Funding Agreement with the Environment Agency for expenditure of up to £4,499,000.
- (iv) Future approvals are made in accordance with the assurance pathway and approval route outlined in this report. This will be subject to the scheme remaining within the tolerances outlined in this report.

13 Background Documents

13.1 None as part of this report.

14 Appendices

Appendix 1 – Albert Street Flood Alleviation Scheme – Business Case Summary

Appendix 2 - Sheepscar Beck Refurbishment Scheme – Business Case Summary

Appendix 3 - Brighouse Flood Alleviation Scheme – Business Case Summary