

Connected by Water Catchment Plan (Name TBC)

FRONT PAGE – Connected by Water Logo, plus strapline, plus all organisations logos (EA, SYMCA, 4 Councils, YW).

Insert a range of photos from around South Yorkshire

ADD CONTENTS PAGE

DRAFT

Why is a plan needed?

The flooding in November 2019 provided the catalyst for the creation of the Connected by Water Catchment Plan. One of the wettest Autumns on record led to unprecedented river levels, and widespread flooding across South Yorkshire. Communities were evacuated from their homes, precious belongings destroyed or ruined, businesses devastated, infrastructure severely disrupted and people unable to return to their homes for many months. As the flood water subsided, communities, businesses and senior leaders resolutely agreed that we need to work together to reduce the risk and impact of flooding in our region.

However, the stark reality is that climate change is leading to wetter winters with more intense rainfall. It will also lead to sea level rise. Both factors will increase the risk of flooding from the rivers, surface water and the public sewer network across South Yorkshire. **If we are to meet this challenge, and reduce both the risk and impact of flooding in the future, we cannot stand still.** Unless we do more, our communities will struggle to cope with the increasingly catastrophic impacts of more frequent and severe floods.

The region was devastated by flooding back in 2007, and much work has been done since then to better protect communities across South Yorkshire. However, the shock of the events of 2019, together with the stark reality of climate change, have galvanised a South Yorkshire wide alliance of partners, Connected by Water, who are determined to explore all measures to both adapt to and mitigate climate change in our region. Since November 2019, we have been working together, not only to deliver flood risk management schemes on the ground, but also to plan catchment wide measures for the future to help us meet the challenges that climate change will present us.

This plan is one of the products of this collaboration.

The Connected by Water Catchment Plan outlines the actions we will take in South Yorkshire to reduce the risk of flooding and develop more resilient communities who can adapt to the future impacts of climate change.

The landscapes and rivers which make South Yorkshire vulnerable to flooding, are also one of its most precious assets. South Yorkshire covers largely the same geography as the catchment for the River Don. The uplands of the River Porter, Rivelin, Loxley in Sheffield, and in the River Dearne in Barnsley, give us beautiful moorland landscapes. These uplands lead into wetland nature reserves along the Dearne and Rother in Barnsley and Rotherham and on to nationally significant lowland peat around the Lower Don in Doncaster.

Add map / image / artwork of area plan covers – could also be on inside of front cover potentially?

There is exciting potential to restore and develop these natural landscapes to slow and store water, help nature recover, and provide wildlife-rich environments for people to thrive in.

Nature-based solutions form a key element of this catchment plan. These measures will not only reduce flood risk, but will mitigate climate change and restore nature by storing carbon and protecting the environment that we all love and depend on.

This plan is a 'living plan'. We do not know all the answers. This plan is just the start. We will continue to incorporate emerging data, knowledge and opportunities so that we build and shape the plan in the coming months and years. It will evolve and change as we find out more and develop actions as a partnership.

This plan is a 'shop window' for showing the actions partners are currently taking to reduce flood risk and build climate resilience across South Yorkshire. This will provide visibility of the projects we are doing to support better collaboration, provide a compelling programme to attract potential investors and give communities confidence that work is happening in their area.

Why invest in reducing flood risk?

The impact of flooding is far reaching. Flooding can cause serious injury and loss of life. It leads to long term misery for those whose homes have flooded, severely affecting mental health and wellbeing. Flooding also disrupts businesses, transport infrastructure, utilities, workplaces and public services (including health care, emergency services, social care and schools). The risk of flooding can also prevent economic regeneration, stop new housing being built, cause businesses to close and result in people losing their jobs. For every one person whose home is flooded, sixteen further people are impacted.

Investing in flood risk management therefore provides numerous benefits. If you are an investor looking to support economic growth, business resilience, transport infrastructure, housing development, mental health and wellbeing, protecting and creating jobs...then investing in flood risk management supports all these and more.

Moreover, by using nature-based solutions as part of our approach to reduce flood risk, investment can also unlock further benefits in terms of carbon reduction, environmental improvements and re-connecting with nature.

For **every £1 spent** on protecting communities, we **avoid around £5** in property damages.

An overview of the South Yorkshire Flood Risk Management Investment Programme is provided in Appendix 1.

Successful project delivery case studies:

The partners leading South Yorkshire's response to flood risk are experienced and successful in delivering flood risk management schemes. Below are some examples of the projects which have recently been completed in South Yorkshire. In addition to these, in response to the 2019 floods, we collectively delivered over £20 million of flood repair works, from clearing drains to repairing flood walls, across South Yorkshire.

Case Study 1: Post 2019 South Yorkshire Flooding: Recovery and Investment

A. Fishlake, Doncaster: Investment to better protect 300 homes

Following the devastating impact of the 2019 flood, the flood defences in Fishlake were subject to a £3 million programme of recovery works. These works were completed in June 2021 and included including strengthening embankments and improving the condition of existing defences. With much of the work being carried out during the COVID 19 pandemic, a key part of the successful delivery of the works was the proactive use of different methods of communication between the contractors, the Environment Agency and the local community. Examples include regular attendance at the online Fishlake Parish Council and Flood Action Group meetings and the sending out of regular newsletters, which enabled key information and any questions/queries to be shared and dealt with on a timely basis. Overall, this investment will help to improve and sustain the future performance and condition of critical flood defences for the area.

Insert Fishlake Chinook photo.

B. Bentley Ings Pumping Station, Doncaster: Investment to better protect 1,669 homes

Bentley Ings Pumping Station was built in the early 1940s to manage surface water as a result of mining subsidence. It is a key flood defence which protects 1,669 local properties from surface water flooding. Following the completion of an £12 million refurbishment scheme in 2021, the Bentley Ings Pumping station has been totally transformed. The capacity of the pumping station has been increased by 20%, achieving a carbon saving of 24%. The site has now become significantly more flood resilient, allowing access to the site and the pumps to continue operating during flood events.

Insert BIPS Photo

Case Study 2: Rotherham Renaissance Flood Alleviation Scheme

When complete, the Rotherham Renaissance Flood Alleviation Scheme will extend along 5km of the River Don through Templeborough, Rotherham Town Centre and Parkgate. The Templeborough phase of the scheme was completed in 2008, at a cost of £15.7million. Between 2009 and 2011, £1.3 million was spent on the Rotherham Town Centre phase. Work continues on the Rotherham Town Centre phase, with construction ongoing currently at several sites. The initial phases of the scheme have provided the catalyst for this ongoing work and the future Parkgate phase.

To date, the scheme has reduced the risk of flooding to over 100 businesses, it has improved key employment areas in Rotherham through securing existing jobs and creating new ones and it has reduced the flood risk to key roads and the rail network in Rotherham.

Insert Forge Island Photo to show what the next phase will protect against or photo of completed works

Case Study 3: Sheffield Lower Don Valley Flood Alleviation Scheme

Completed in 2017, this £20 million scheme on the River Don in Sheffield better protects over 300 business, securing approximately 5,000 jobs. The scheme has been designed to allow for the provision of climate adaptation in the future.

The scheme was innovative both in its use of a Business Improvement District (BID) and in the use of a social enterprise, the River Stewardship Company, to provide channel maintenance and engage with volunteers to support river maintenance and riverside enhancement. Environmental enhancements delivered by the scheme include the installation of a fish pass at Sanderson's Weir on the River Don.

Insert Jessops photo

New project case studies

The partners at the forefront of the Connected by Water alliance have developed new, innovative actions as part of the plan. These are a couple of examples of the joint proposals which have emerged from this collaborate approach:

Case Study 5: Source to Sea – Nature Based Solutions Programme

We are collaboratively developing a multimillion-pound Source to Sea nature based solutions programme. This programme is split into three projects, the Upper Don (Peak District National Park and Sheffield), Middle Don (North East Derbyshire, Rotherham and Barnsley) and the Lower Don (Doncaster). Each of these projects will build upon existing

projects, partnerships, local strategies and initiatives to implement a variety of nature based solutions to slow the flow and create more space for water.

The Upper Don project is the first of these three projects being developed, primarily focusing on slowing the flow and storing water in Sheffield's hills. We are currently developing a series of demonstrator sites in the Limb Valley, Upper Don Valley and the Peak District, considering measures such as restoring upland peatlands, creating ponds and wetlands, and soil management. These demonstrator sites will test, trial and monitor different ways of delivering nature-based solutions, which will in turn inform the development of the wider Source to Sea programme.

Insert Source to Sea Photo

Case Study 6: South Yorkshire Flood Risk Investment Tool

We are working collaboratively to develop the concept of the South Yorkshire Flood Risk Investment Tool. This tool will bring together flood risk data and evidence from across the region, to inform future investment in flood risk management and ensure future investment is targeted to maximise flood risk benefits in South Yorkshire. This will also bring together information on wider investment and funding opportunities, to enable us to proactively identify additional sources of funding to enable flood risk management schemes.

Insert graphic / image of South Yorkshire Investment Tool

How is the plan going to be delivered?

The Plan is being led by the Environment Agency, Barnsley Metropolitan Borough Council, Doncaster Metropolitan Borough Council, Rotherham Metropolitan Borough Council, Sheffield City Council, the South Yorkshire Mayoral Combined Authority and Yorkshire Water. The plan is also supported by a wide range of other partners and organisations, which will increase further as the plan develops.

Potential to do something with lead partners logos again here?

Each action in the plan has a lead organisation or organisations, who are responsible for completing that action. The action has an indicative timescale for when it will be completed. The lead organisation will report on progress on an annual basis to the South Yorkshire Flood Risk Partnership. The Connected by Water steering group will continue to meet on a monthly basis to review progress, address blockers and ensure support for delivery partners.

Some actions will lead on to other actions – for instance when some investigative or planning work is needed to determine the best course of action. When the plan is reviewed each year, these actions will be updated so there is always a current summary of the activity across the plan at any one time. This will also enable new information, technology or funding sources to be explored and integrated to ensure the partnership takes up new opportunities and innovation.

Plan Themes

The remainder of this plan is split into four themes, which we have collectively identified as our key priorities in order to reduce flood risk, mitigate climate change and support climate adaptation and resilience across South Yorkshire. These four themes are as follows:

1. Responding to the Climate Emergency
2. Smart Investment
3. Technology and Operational Management
4. Communication, Engagement and Building Resilience

An introduction to each theme is provided in the following four sections of the plan. Each section of the plan also contains an action table. The action tables are split into new, innovative actions that have been developed as part of the plan and actions we are already undertaking and developing as a partnership.

Current Key:

Grey - new, innovative actions that have been developed as part of the plan

Green – Approved ongoing projects/actions (e.g. Environment Agency's Medium Term Plan)

DRAFT

Theme 1: Responding to the Climate Emergency

We are facing the unprecedented and interdependent crises of climate change and biodiversity loss. These two challenges together are the most pressing issues of our time and an existential threat to human welfare, prosperity and life on earth.

Globally, nationally and regionally, biodiversity is declining faster than at any time in human history, and the world is still heading for a temperature rise in excess of 3°C this century – far beyond the Paris Agreement goals of limiting this increase to 1.5°C.

Around 1 million species already face extinction unless urgent action is taken to address the key drivers of biodiversity loss. More than three quarters of the Earth's land surface has been significantly impacted by human activity and just 16% of our natural ecosystems remain relatively intact. Climate change is both a direct driver of biodiversity loss and is itself exacerbated by it.

Urgent action is needed to mitigate further climate change, and halt and reverse biodiversity loss and environmental destruction.

A changing climate in South Yorkshire

The UK Climate Projections (UKCP18) national climate projections were developed by the national government, the Environment Agency and the Met Office. Headline findings from the 2018 edition which we can expect to see in our region are:

- By the end of the 21st century, all areas of the UK are expected to be warmer, more so in summer than in winter
- Hotter summers and hot spells (defined as daytime temperatures exceeding 30°C for two or more consecutive days) are expected to become more common
- The UK is expected to experience drier summers and wetter winters but there are also expected increases in the intensity of summer and autumn rainfall events
- Sea levels around the UK will continue to rise. In Yorkshire we can expect 0.83 - 1.1m in a 4⁰ rise in temperature by 2100. Given current trajectories it is likely we will see 0.3m rise by around 2050. With 0.35m of sea level rise we will see a decline in the level of protection offered by sea defences. The scale of flooding we currently consider infrequent and extreme, such as that seen on the Humber in December 2013, will occur more regularly and with growing consequences.

To become a region more resilient to a changing climate we need to take action to adapt now. This means we need to embrace the uncertainties around the likely impacts and adopt flexible approaches to building resilience. The alarm call of extinction is sounding loudly across our region with many species being pushed to the brink. It is not just something happening overseas but on our doorstep.

This theme seeks to reduce flood risk whilst delivering multiple benefits in terms of our response to the climate emergency in South Yorkshire. We will integrate policy, best practice and the latest research into our approach to this theme (E.g. the UK's third Climate Change Risk Assessment 2021 (CCRA3), Ciria Guidance on natural flood management practice (RP1094), Institute for Climate and Atmospheric Science at the University of Leeds, National Planning Policy and the Yorkshire and Humber Climate Commission). We will also align and complement existing and emerging national, regional and local level plans and strategies (e.g. Humber Flood Risk Management Plan, Humber Strategy, South Yorkshire Local Nature Recovery Strategy, individual organisations carbon strategies and each Council's Local Flood Risk Management Strategy and Local Plans).

The actions in the following table reflect our ambitions for this theme and how, by working collaboratively across our organisations, these will be achieved. Actions we are already undertaking and developing as a partnership to support this theme are also listed.

Action references to be finalised once action ordering is finalised.

RESPONDING TO THE CLIMATE EMERGENCY ACTION TABLE				
Action Ref	Action – What we are going to do	When will we do it by	Who's leading	Who's supporting
1.1	Undertake high level, regional, analysis of the UK's third Climate Change Risk Assessment 2021 (CCRA3). This analysis will consider how flood risk interacts and links with the other risks identified in this assessment. To identify threats and opportunities that need to be considered as part of this plan going forward.	2022	Environment Agency	Yorkshire Water Sheffield City Council
1.2	Step 1: To identify all regional climate plans and groups and map out the relationships between these groups. This will in turn establish how we can interact with these groups, by providing a regional structure and enable collaborative and streamlined ways of working.	Step 1: 2022	Environment Agency	Yorkshire Water Sheffield City Council
	Following completion of the South Yorkshire Natural Capital Mapping exercise, review this data in relation to flood risk benefits and future flood risk management activities. This review will identify any additional economic assessment work required.	2022	Environment Agency Sheffield City Council	South Yorkshire Mayoral Combined Authority Yorkshire Water
	Following completion of the South Yorkshire Natural Capital Mapping exercise, consider what future land use changes mean for flood risk interventions in relation to Local Plans, the Local Nature Recovery Strategy, the Environmental Land Management Scheme and Biodiversity Net Gain. The overall aim of this action is to represent how we are going to deliver nature based solutions across South Yorkshire spatially on a map. Step 1: Initially consider two areas within Sheffield (one in the upper catchment and one in the lower catchment) to	Step 1: 2024	Environment Agency Sheffield City Council	South Yorkshire Mayoral Combined Authority Yorkshire Water

	inform how to approach this on a regional scale.			
	<p>Develop a roadmap to set out how we want to decarbonise our multi-agency flood risk activities in South Yorkshire, aligning with our respective carbon targets.</p> <p>Step 1: To initially consider in Sheffield, to inform this roadmap / approach on a regional scale.</p>	Step 1: 2023	Environment Agency	Sheffield City Council Yorkshire Water South Yorkshire Mayoral Combined Authority
	<p>Create a South Yorkshire wide strategy to inform to how flood risk investment can enable Biodiversity Net Gain, aligning with our collective targets, considering individual projects and the impact of management and maintenance on biodiversity.</p> <p>Step 1: Initially consider two areas within Sheffield (one in the upper catchment and one in the lower catchment) to inform the development of a strategic approach on a regional scale.</p>	Step 1: 2024	Environment Agency Sheffield City Council	Yorkshire Water
	<p>To develop a South Yorkshire Monitoring Plan, to monitor progress and impact in terms of actions in relation to the climate emergency across the region.</p> <p>Step 1: To determine what we want to know, how we start to bring this together and propose potential methods of monitoring this.</p>	Step 1: 2024	Environment Agency Sheffield City Council	Yorkshire Water Rotherham Metropolitan Borough Council Doncaster Metropolitan Borough Council Barnsley Metropolitan Borough Council Sheffield City Council South Yorkshire Mayoral Combined Authority
	<p>To create a collection of case studies to share with external audiences to showcase best practice and support the delivery of actions to respond to the climate emergency.</p> <p>Step 1: To scope the topics we want these case studies to cover and identify what already exists. E.g, case studies of partnership approaches, multiple objectives, sustainable drainage and initiative ways of assessing benefits.</p>	Step 1: 2022	Environment Agency Sheffield City Council	Yorkshire Water Rotherham Metropolitan Borough Council Doncaster Metropolitan Borough Council Barnsley Metropolitan Borough Council Sheffield City Council

				South Yorkshire Mayoral Combined Authority Yorkshire and Humber Climate Commission
	<p>As part of the Yorkshire Adaptive Pathways project undertake flood modelling to assess how climate change scenarios will affect the South Yorkshire region. This will in turn inform how we respond and manage the affects.</p> <p>Step 1: Scope the modelling work required, by undertaking gap analysis and identifying stakeholders to co-design the delivery of this work.</p>	Step 1: 2022	Environment Agency	
1.	<p>To develop and deliver flood risk benefits through the planning system.</p> <p>Step 1: To establish whether undertaking a water cycle study for South Yorkshire would be valuable in terms of flood risk opportunities and constraints in relation to new housing proposals.</p>	2022	Environment Agency	
1.	Develop and deliver the Houghton River Restoration and Fish/Eel Pass scheme to improve migratory fish populations in the River Dearne.	2027	Environment Agency	Royal Society for the Protection of Birds
1.	<p>Develop and deliver project works with the Dearne Valley Green Heart Partnership to improve river habitats and deliver nature-based solutions to reduce flood risk.</p> <p>Step 1 - Deliver work on the Dearne at Smithies, Barnsley to reconnect the flood plain, create wetland habitat and improve in-channel habitat.</p> <p>Step 2 - Deliver work on the Dearne at the Fleets, Barnsley to reconnect the flood plain, create wetland habitat and improve in-channel habitat.</p>	<p>Step 1 2022</p> <p>Step 2 2023</p>	Environment Agency	<p>Yorkshire Wildlife Trust</p> <p>Royal Society for the Protection of Birds</p> <p>Don Catchment Rivers Trust</p> <p>Natural England</p> <p>Rotherham Metropolitan Borough Council</p> <p>Doncaster Metropolitan Borough Council</p>

				Barnsley Metropolitan Borough Council Derbyshire County Council
1.	Align and support the catchment-based approach through the Don, Dearne and Rother catchment network. This catchment based approach, focusing on the Water Framework Directive and biodiversity, is outlined in The Catchment Plan for the Don and Rother Catchment (2021 – 2026).	2026	Environment Agency Don Dearne Rother Catchment Network (co-hosts)	Yorkshire Water
1.	Continue to develop and deliver the Source to Sea nature-based solutions programme on the Upper River Don (Sheffield) in collaboration with partners, landowners and communities.	2026	Environment Agency	Sheffield City Council Sheffield Wildlife Trust
1.	Develop and deliver the Source to Sea nature-based solutions programme on the Middle River Don (Barnsley, Derbyshire and Chesterfield) in collaboration with partners, landowners and communities.	2027	Environment Agency	Barnsley Metropolitan Borough Council Rotherham Metropolitan Borough Council Derbyshire County Council Chesterfield Borough Council
1.	Develop and deliver the Source to Sea nature-based solutions programme on the Lower River Don (Doncaster) in collaboration with partners, landowners and communities.	2031	Environment Agency	Doncaster Metropolitan Borough Council
1.	Develop and deliver the Hidden Rivers Secret Streams project, to improve river habitat and reconnect local communities with the river Rother in Chesterfield.	2022	Don Catchment Rivers Trust	Environment Agency Chesterfield Borough Council Derbyshire County Council
1.	Develop and deliver the Putting the Sheaf Back into Sheffield project, to improve river habitat and reconnect local communities with the River Sheaf in Sheffield City Centre. –	2023	Sheffield City Council	Environment Agency Sheaf and Porter Rivers Trust
	Continue to develop and deliver Sheffield city retrofit green blue infrastructure	Ongoing	Sheffield City Council	Yorkshire Water

1.	Develop and deliver the Sheaf and Porter River Restoration Project, to improve biodiversity and connectivity along the Porter and Sheaf in Sheffield. <i>(Link to Sheaf Flood Alleviation Action in Smart Investment)</i>	2028	Environment Agency	Sheaf and Porter Rivers Trust Wild Trout Trust Sheffield City Council
	Develop and deliver the Blackburn Brook Restoration and Natural Flood Management project to improve biodiversity, connectivity and nature based solutions that will complement the Blackburn Brook FAS. <i>(Link Blackburn Brook Flood Alleviation Scheme Action in Smart Investment)</i>	2027	Environment Agency	Sheffield City Council SRWT
1.	Develop and deliver the Sheffield Lakeland Landscape Partnership Project work, to improve biodiversity, create habitats, reduce flood risk and diffuse pollution in the valleys to the west of Sheffield.	2023	Sheffield and Rotherham Wildlife Trust	Sheffield City Council Environment Agency Natural England Yorkshire Water Bradfield Parish Council, Sheffield United Football Club Community Foundation, Hallam University Stocksbridge Town Council South Yorkshire Archaeology Service Steel Valley Project
1.	Develop and deliver the Wilder Waterways partnership project, a series of nature-based solutions in the Doncaster area (initial focus is the Bentley and Conisbrough) which includes wetland creation, tree planting and flood plain reconnection.	2023	Don Catchment Rivers Trust	Environment Agency Doncaster Metropolitan Borough Council Yorkshire Wildlife Trust
1.	Develop and deliver the Sprotbrough Ings project to create and restore habitats, raise flood awareness and reconnect people in the Hexthorpe area with the River Don.	2025	Don Catchment Rivers Trust	Environment Agency Doncaster Metropolitan Borough Council Yorkshire Wildlife Trust

1.	Develop and deliver a Natural Flood Management scheme in Conisbrough, Doncaster.	2025	Doncaster Metropolitan Borough Council	Environment Agency
1.	Develop and deliver a Natural Flood Management Scheme in Tickhill, Doncaster.	2025	Doncaster Metropolitan Borough Council	Environment Agency
1.	Develop and deliver the Rotherham River 3 Programme of environmental enhancement works to improve flood plain connectivity, create wetland habitat and address fish passage on the Lower River Rother.	2025	Environment Agency	Sheffield and Rotherham Wildlife Trust Highways England
	Investigate the Dale Dike catchment on the River Loxley, Sheffield, to identify the scope of peatland restoration works required for Yorkshire Water's seventh Asset Management Plan (AMP7) to meet the obligations of the Water Industry National Environment Programme (WINEP).	2022	Yorkshire Water	Moors for the Future
	Peatland Restoration in the catchments of Langsett, Ewden and Loxley Water Treatment Works	2024	Yorkshire Water	Moors for the Future
	Underbank reservoir tree planting to slow the flow, enhance water quality and increase biodiversity in Stockbridge, Sheffield.	2023	Yorkshire Water	Sheffield City Council Sheffield Lakeland Landscape Partnership
	Develop and deliver the Doncaster, Immingham and Grimsby Surface Water Resilience Project.	2027	Yorkshire Water	Anglian Water, Doncaster Metropolitan Borough Council, North East Lincolnshire Council

Theme 2: SMART Investment

This theme is the foundation of this plan, ensuring investment is prioritised, SMART (Specific, Measurable, Attainable, Relevant, Time-based) and based on evidence.

We will be working collaboratively to bring together flood risk data and evidence on all sources of flooding (river, sea, surface water, groundwater and sewers) that impact communities and businesses across the region. This data and evidence will be used to inform future investment in flood risk management to ensure it is targeted to maximise flood risk benefits in South Yorkshire. This collective resource, will enable us to prove to potential investors how the funding of flood risk reduction contributes towards the successful delivery of regional and national priorities. Examples of these priorities include the South Yorkshire Mayoral Combined Authority's Strategic Economic Plan which seeks to 'pave the way to a stronger, greener and fairer economy' and the Government's 2020 National Infrastructure Strategy with its aim of 'transforming the UK infrastructure in order to level up the country and achieve net zero emissions by 2050'.

Our approach to SMART investment will consider and apply best practice from across the UK for example the Humber 2100+ Strategy, River Severn Partnership and Citizen Science. In turn, we will be sharing our collaborative learning with other organisations to ensure we are able to be respond and develop our own ideas by sharing our experiences.

The actions in the following table reflect our ambitions for this theme and how, by working collaboratively across our organisations, these will be achieved. Actions we are already undertaking and developing as a partnership to support this theme are also listed. The latter includes flood risk management schemes we are currently developing or delivering.

Action references to be finalised once action ordering is finalised.

SMART INVESTMENT ACTION TABLE				
Action Ref	Action – What we are going to do	When will we do it by	Who's leading	Who's supporting
2.1	Develop a business case to secure resources and funding to deliver the actions in this plan in future years.	2022	Environment Agency	Rotherham Metropolitan Borough Council Doncaster Metropolitan Borough Council Barnsley Metropolitan Borough Council Sheffield City Council Yorkshire Water
2.2	Develop a web based South Yorkshire Flood Risk Investment	Step 1: 2022	Environment Agency	Yorkshire Water

	<p>Tool to bring together flood risk data and evidence with wider information on investment opportunities across the region.</p> <p>Step 1: To consider what mapping systems and data already exist across South Yorkshire, so we can utilise and adapt existing best practice.</p> <p><i>Add to link operational data sharing in Ops theme.</i></p>		Barnsley Metropolitan Borough Council	
	Produce a paper on new and emerging green sources of funding, including biodiversity net gain, carbon reduction and Green Finance initiative.	2022	Environment Agency South Yorkshire Mayoral Combined Authority	Yorkshire Water
	Create a portfolio of flood risk management scheme case studies to support conversations with potential investors.	2022	Environment Agency	Rotherham Metropolitan Council, Barnsley Metropolitan Borough Council, Doncaster Metropolitan Borough Council, Sheffield City Council, Yorkshire Water, Regional Flood and Coastal Committee
2.	Develop a proposal to address our collective funding pressures. This will include considering a shared resource to co-ordinate flood risk funding bids and securing sufficient resources to deliver our flood risk management schemes.	2022	Environment Agency, Barnsley Metropolitan Borough Council	Yorkshire Water, South Yorkshire Mayoral Combined Authority Doncaster Metropolitan Borough Council, Sheffield City Council. Rotherham

				Metropolitan Council,
2.	To develop a prioritised list of partnership projects for Yorkshire Water's proposed Business Plan 2025 – 2030 (Price Review 2024). Step 1: Bring together the South Yorkshire programme and Yorkshire Water Drainage and Wastewater Management Plans to identify partnership investment opportunities.	2022	Yorkshire Water	Environment Agency Rotherham Metropolitan Council, Barnsley Metropolitan Borough Council, Doncaster Metropolitan Borough Council, Sheffield City Council.
2.	Develop the South Yorkshire shovel ready programme (as listed in Appendix 1) to enable the South Yorkshire Local Authorities to capitalise on future funding opportunities.	2024	Rotherham Metropolitan Borough Council, Barnsley Metropolitan Borough Council Sheffield City Council, Doncaster Metropolitan Borough Council	Environment Agency Yorkshire Water, South Yorkshire Mayoral Combined Authority

<i>Table contd.</i>				
Action Ref	Action – What we are going to do	When will we do it by?	Lead	Support
2.	Develop and deliver a Flood Alleviation Scheme for Pastures Road in Denaby, Doncaster.	2027	Doncaster Metropolitan Borough Council	Environment Agency
	Develop and deliver a scheme to reduce flood risk to Frank Road in Bentley, Doncaster.	2024	Doncaster Metropolitan Borough Council	Environment Agency
	Undertake an initial feasibility study for Duftons Close, Conisbrough to assess flood risk alleviation options and inform any future works.	2023	Doncaster Metropolitan Borough Council	Environment Agency
	Develop and deliver a surface water Flood Alleviation Scheme for Scawthorpe, Doncaster.	2027	Doncaster Metropolitan Borough Council	Environment Agency
	Develop and deliver a Doncaster Borough Wide Surface Water Alleviation Scheme.	2025	Doncaster Metropolitan Borough Council	Environment Agency

	Develop and deliver a Bentley Risk Management Scheme, Doncaster.	2027	Doncaster Metropolitan Borough Council	Environment Agency
	Develop and deliver a Fishlake Risk Management Scheme, Doncaster.	2025	Doncaster Metropolitan Borough Council	Environment Agency
	Barnsley			
	Develop and deliver a Flood Alleviation Scheme for Lang Avenue in Lundwood, Barnsley.	2023	Barnsley Metropolitan Borough Council	Environment Agency Yorkshire Water
	Develop and deliver a Flood Alleviation Scheme for Low Valley, Barnsley	2027	Barnsley Metropolitan Borough Council	Environment Agency
	Develop and deliver the Barnsley sewer flood alleviation scheme in Great Houghton.	2022	Yorkshire Water	
	Develop and deliver the Ingbirchworth sewer flood alleviation scheme.	2022	Yorkshire Water	
	Sheffield			
	Develop and deliver the Three Brooks Scheme to reduce flood risk to Car Brook and Kirk Bridge Dike in Darnall, Sheffield.	2022	Sheffield City Council	Environment Agency
	Develop and deliver a Flood Alleviation Scheme on Blackburn Brook, Sheffield. <i>Link to Blackburn Brook Restoration action in Climate Section</i>	2027	Sheffield City Council	Environment Agency
	Develop and deliver the Sheaf Catchment Flood Alleviation Scheme, Sheffield. <i>Link to Sheaf Restoration action in Climate Section</i>	2028	Sheffield City Council	Environment Agency
	Develop and deliver the Sheffield Upper Don Flood Alleviation Scheme, Phase 1, Loxley.	2022	Sheffield City Council	Environment Agency
	Develop and deliver the Sheffield Upper Don Flood Alleviation Scheme, Phase 2, Neepsend.	2027	Sheffield City Council	Environment Agency
	Develop and deliver the Sheffield Upper Don Flood Alleviation Scheme, Phase 3, Hillsborough to Stocksbridge.	2028	Sheffield City Council	Environment Agency
	Sheffield Upper Don Reservoir Storage	Step 1: 2023	Environment Agency	Sheffield City Council

	Step 1: Initial feasibility study to investigate potential to use of reservoirs for flood risk purposes.			Yorkshire Water
	Develop and deliver Philadelphia sewer flood alleviation scheme, Sheffield	2023	Yorkshire Water	
	Develop and deliver the Stocksbridge sewer flood alleviation scheme.	2022	Yorkshire Water	
	Develop and deliver the Crookesmoor sewer flood alleviation scheme.	2022	Yorkshire Water	
	Develop and deliver the Chapeltown sewer flood alleviation scheme, Sheffield	2022	Yorkshire Water	
	Rotherham			
	Deliver a project to reduce flood risk to the railway in Rotherham. The project is centred on the Greasborough Dyke, close to where it joins the River Don.	2022	Network Rail	Rotherham Metropolitan Borough Council
	Develop and deliver the Parkgate and Rawmarsh Flood Alleviation Scheme, on Greasborough Dike and Old Sough/Boundary Dike, Rotherham.	2027	Rotherham Metropolitan Borough Council	Environment Agency
	Develop and deliver the Rotherham to Kilnhurst Flood Alleviation Scheme – Phase 2.	2027	Rotherham Metropolitan Borough Council	Environment Agency
	Develop and deliver the Broom and Clifton Flood Alleviation Scheme, Rotherham.	2027	Rotherham Metropolitan Borough Council	Environment Agency
	Develop and deliver the Swinton Flood Alleviation Scheme, Rotherham.	2027	Rotherham Metropolitan Borough Council	Environment Agency
	Develop and deliver the Todwick Flood Alleviation Scheme, Rotherham.	2027	Rotherham Metropolitan Borough Council	Environment Agency
	Develop and deliver a Whiston Flood Alleviation Scheme, Rotherham.	2026	Rotherham Metropolitan Borough Council	Environment Agency
	Develop and deliver an Eel Mires Dike Flood Alleviation Scheme (including Laughton Common), Rotherham.	2024	Rotherham Metropolitan Borough Council	Environment Agency
	NE Derbyshire and Chesterfield			
	Develop and deliver the Inkersall Green sewer flood alleviation scheme, Chesterfield.	2022	Yorkshire Water	

Theme 3: Technology and Operational Management

Aligning operational resources and technology is key in providing an agile and robust response to flood risk across South Yorkshire. This theme will bring together our collective, catchment wide information to shape and inform the future use of technology and operational resources. It will also build on all our ongoing flood risk maintenance and management activities.

We will work collaboratively to better understand each partner’s existing operational procedures (including incident management), individual priorities, existing data sets, roles and responsibilities, communication processes and available resource. In turn, this will allow us to work more efficiently and collaboratively on a daily basis and during flood incidents.

Establishing data sharing opportunities will allow us to explore innovative ideas, new technology and networks for operational use on daily basis and during flood incidents. This includes telemetry systems, to create simple and readily accessible ways of displaying how the Don catchment responds to rainfall. This also includes operational procedures in terms of our maintenance programmes, to identify opportunities to streamline these activities across all our organisations.

The actions in the following table reflect our ambitions for this theme and how, by working collaboratively across our organisations, these will be achieved. Actions we are already undertaking and developing as a partnership to support this theme are also listed. The latter includes flood risk maintenance and management activities, such as flood defence refurbishment works, that we are currently delivering or have planned for the future.

Action references to be finalised once action ordering is finalised.

TECHNOLOGY AND OPERATIONAL MANAGEMENT ACTION TABLE				
Action Ref	Action – What we are going to do	When will we do it by	Who’s leading	Who’s supporting
3.1	To streamline maintenance activities across South Yorkshire. Step 1: Capture our collective maintenance activities and requirements across Doncaster initially (e.g. gully maintenance, culvert inspection and grass cutting).	Step 1: 2022	Doncaster Metropolitan Borough Council Environment Agency	Yorkshire and Humber Drainage Boards Doncaster East Internal Drainage Board
3.2	To collectively agree key flood risk infrastructure across South Yorkshire, to inform emergency response procedures and develop a shared understanding of how this infrastructure work.	2022	Environment Agency	Doncaster Metropolitan Borough Council Rotherham Metropolitan Borough Council Barnsley Metropolitan

				n Borough Council Sheffield City Council Yorkshire and Humber Drainage Boards Doncaster East Internal Drainage Board
3.	To develop a plan that sets out how we will consider whether historical water infrastructure (e.g. old mill ponds, water tanks, dams and land drains) could be used to store water and reduce flood risk. Step 1: Initially consider in Doncaster. <i>Link to Lower Don Source to Sea project action in Climate section</i>	2023	Doncaster Metropolitan Borough	Yorkshire and Humber Drainage Boards Doncaster East Internal Drainage Board
3.	To create a simple and readily accessible way of displaying how the Don catchment responds to rainfall. Step 1: To pilot in Doncaster initially and then consider data sharing protocols across South Yorkshire.	Step 1: 2022	Doncaster Metropolitan Borough Council	Environment Agency
3.	Develop an approach to better understand surface water flood risk and the links between surface water and the sewer network. With an aspiration for surface water separation and managing at surface water source. Step 1: To trial in Doncaster initially with Yorkshire Water, to develop best practice recommendations for the region.	Step 1: 2023	Doncaster Metropolitan Borough Council Yorkshire Water	
3.	To create a multi- agency data sharing protocol for operational data can be shared and displayed across South Yorkshire.	2022	Doncaster Metropolitan Borough Council	Yorkshire and Humber Drainage Boards Doncaster East

	Step 1: To trial in Doncaster initially to inform the development of sharing protocols across South Yorkshire. <i>Link to smart investment tool action in the Smart Investment theme.</i>		Environment Agency,	Internal Drainage Board
3.	To understand the potential for reservoirs to support flood risk management across South Yorkshire. Step 1: Spatially map all reservoirs in relation to flood risk across South Yorkshire.	Step 1: 2022	Environment Agency	Yorkshire Water
3.	Map flood flow routes in the Humber Head Levels and install real time monitoring systems (linked to telemetry) to inform pumping station operations and community warning.	2025	Yorkshire and Humber Drainage Boards	Environment Agency
2	Develop and deliver the Humber Head Level Capital Maintenance Strategy, which involves river and economic modelling of the Humber Head Levels to identify operational rationalisation opportunities (e.g. pumping stations).	2022	Yorkshire and Humber Drainage Boards	Environment Agency, Coal Authority
2	Refurbish the engineered river and watercourse channels in the Humber Head Levels.	TBC	Yorkshire and Humber Drainage Boards	Environment Agency
	Yorkshire sewer inspection chamber repair programme to proactively identify and repair defects, to reduce the risk of external flooding and pollution.	2025	Yorkshire Water	
	Sewer Repair Programme, to proactively inspect 355km of the public sewer network in high-risk flooding areas to carry out surveying, clear any blockages and identifying defects to be repaired to reduce Internal and External Flooding.	2025	Yorkshire Water	
	Combined sewer overflow refurbishment programme to reduce pollution and sewer flooding risk in 7 locations across Barnsley and Sheffield.	2023	Yorkshire Water	
	Sewer Maintenance Programme - proactively visiting 71,330 properties in high-risk flooding areas to carry	2025	Yorkshire Water	

	out surveying, clear any blockages and identifying defects to be repaired to reduce Internal and External Flooding.			
--	---	--	--	--

Action Table contd.				
Action Ref	Action – What we are going to do	When will we do it by?	Lead	Support
	Refurbish Dikes Marsh pumping station (inlet pumping station), Moorends, Doncaster.	2022	Yorkshire and Humber Drainage Boards	Environment Agency
	Refurbish St Mary's Bridge Wall, North Bridge Road, Doncaster.	2024	Environment Agency	
	Pumping Station Telemetry System Installation across the Don catchment.	2022	Yorkshire and Humber Drainage Boards	Environment Agency
	Refurbish Went Outfall (doors, penstock, and telemetry) on the River Went, Lower Don, Doncaster.	2025	Environment Agency	
	Refurbish Cheswold Culvert in Doncaster town centre.	2026	Doncaster Metropolitan Borough Council	Environment Agency

Refurbish Kirk Sandall Pumping, Kirk Sandall, Doncaster.	2025	Environment Agency	
Doncaster Culvert Replacement Programme	2028	Doncaster Metropolitan Borough Council	Environment Agency
Future refurbishment of flood defences on the Lower Don as identified and required.	2027 onwards	Environment Agency	
Barnsley			
Culvert replacement works on the A637 at Birthwaite Hill in Darton, Barnsley.	2022	Barnsley Metropolitan Borough Council	Environment Agency
River clearance on the River Dearne between Church Street and Darton Business Park Bridge, Darton, Barnsley.	2024	Barnsley Metropolitan Borough Council	Environment Agency
Bank strengthening and desilting at Netherwood Road in Wombwell, Barnsley.	2023	Barnsley Metropolitan Borough Council	Environment Agency
Spillway Repairs on Worsborough Reservoir, near Worsborough Country Park, Barnsley.	2027	Barnsley Metropolitan Borough Council	Environment Agency
Dearne Washlands Optimisation Study Any future works will be informed by the initial study, based on an improved understanding of how these washlands operate. This will inform whether they can be altered to provide any flood risk and / or environmental benefits.	Study: 2023	Environment Agency	Barnsley Metropolitan Borough Council
Barnsley Wide Culvert Condition Investigation and Improvement Programme	2024	Barnsley Metropolitan Borough Council	Environment Agency
Culvert Replacement and Channel Regrading Works on Bulling Dyke at Low Valley, Barnsley.	2023	Barnsley Metropolitan Borough Council	Environment Agency
Sheffield			
Culvert removal at Staindrop View, Chapeltown, Sheffield.	2022	Environment Agency	Sheffield City Council
Refurbish culvert on Clough Dike at Deepcar, Sheffield	2027	Environment Agency	Sheffield City Council

Culvert removal on Ochre Dike, Beighton, Sheffield	2027	Environment Agency	Sheffield City Council
Broad Oaks Culvert refurbishment scheme, Sheffield.	2022	Yorkshire Water	Network Rail
Rotherham			
Refurbish the three Don Catchment Regulators. Woodhouse Regulator in Sheffield and Canklow and Meadowgate Mill Regulators in Rotherham.	2025	Environment Agency	
Rother Washlands Optimisation Study and Works. Any future works will be informed by the initial study, based on an improved understanding of how these washlands operate. To inform whether they can be altered to provide any flood risk and / or environmental benefits.	2025	Environment Agency	N/A
Upgrade the Catcliffe Pumping Station, from mobile pumps to permanent pumping station, in Catcliffe, Rotherham.	2026	Rotherham Metropolitan Borough Council	Environment Agency
Rotherham Culvert Renewal Programme.	2026	Rotherham Metropolitan Borough Council	Environment Agency
To work with partners to better understand the flood risk in the Mexborough and Denaby areas of the Lower Don Valley, specifically in relation to Network Rail infrastructure to inform the future management of this risk.	2022	Network Rail	Environment Agency Rotherham Metropolitan Borough Council
NE Derbyshire and Chesterfield			
Poolsbrook Reservoir decommissioning, Staveley, North Derbyshire. Including weir removal to improve fish passage and habitat improvements.	2022	Environment Agency	Derbyshire County Council

Theme 4: Communication, Engagement and Building Resilience

The aim of this theme is to build resilience across South Yorkshire, by working with all of our stakeholders to ensure they are at the heart of our decision making.

Together, with partner organisations, we will develop a communication and engagement strategy that all partners are responsible for delivering. We will work collaboratively, ensuring we have ‘one joined up voice’ for providing key messages. This will allow us to be more streamlined in the way we work, ensuring there is a consistent approach to the delivery of our communication, engagement and resilience measures.

We will continue to work with existing stakeholder groups, including but not limited to, flood action groups, landowners, farmers, flood wardens, parish councils and businesses whilst also developing new relationships with other key stakeholders. We will work with all these stakeholders to help and support them understand their own flood risk and how the Don catchment works.

Whilst we can work collectively to reduce the risk of flooding and the impacts of flooding, we can never prevent all flooding. This is why preparing and responding to flood incidents is an essential component of achieving greater resilience to flooding. We will work collaboratively to better prepare for and respond to flood incidents through timely and effective forecasting, warning and implementing property level resilience measures. This includes working with the South Yorkshire Local Resilience Forum and the Yorkshire and Humber Climate Commission to build resilience through improved emergency and recovery planning.

The actions in the following table reflect our ambitions for this theme and how, by working collaboratively across our organisations, these will be achieved. Actions we are already undertaking and developing as a partnership to support this theme are also listed.

Action references to be finalised once action ordering is finalised.

COMMUNICATION, ENGAGEMENT and BUILDING RESILIENCE ACTION TABLE				
Action Ref	Action – What we are going to do	When will we do it by	Who’s leading	Who’s supporting
4.	<p>Working in partnership with key stakeholders we will increase community resilience and preparedness by engaging with communities to raise flood awareness</p> <p>We will prioritise communities recently affected by river flooding and other identified high-risk communities.</p>	2030	Environment Agency	<p>Rotherham Metropolitan Borough Council</p> <p>Doncaster Metropolitan Borough Council</p> <p>Doncaster Metropolitan Borough Council</p> <p>Sheffield City Council</p> <p>Yorkshire and Humber Drainage Boards</p>

				Doncaster East Internal Drainage Board
4.	<p>Working in partnership with key stakeholders we will increase community resilience and preparedness by increasing flood groups, where wanted</p> <p>We will prioritise communities recently affected by river flooding and other identified high-risk communities.</p>	2030	Environment Agency	Rotherham Metropolitan Borough Council Doncaster Metropolitan Borough Council Doncaster Metropolitan Borough Council Sheffield City Council Yorkshire and Humber Drainage Boards Doncaster East Internal Drainage Board
4.	<p>Increase community resilience and preparedness by increasing full registration to the Flood Warning Service.</p> <p>We will prioritise communities recently affected by river flooding and other identified high-risk communities.</p>	2030	Environment Agency	Rotherham Metropolitan Borough Council Doncaster Metropolitan Borough Council Doncaster Metropolitan Borough Council Sheffield City Council Yorkshire and Humber Drainage Boards
4.	<p>Working in partnership with key stakeholders we will increase community resilience and preparedness by registering Flood Wardens, where appropriate and wanted</p>	2030	Environment Agency	Rotherham Metropolitan Borough Council Doncaster Metropolitan

	We will prioritise communities recently affected by river flooding and other identified high-risk communities.			Borough Council Doncaster Metropolitan Borough Council Sheffield City Council Yorkshire and Humber Drainage Boards
1.	<p>Working in partnership with key stakeholders we will increase community resilience and preparedness by training and supporting volunteers and communities to be better prepared</p> <p>We will prioritise communities recently affected by river flooding and other identified high-risk communities.</p>	2030	Environment Agency	Rotherham Metropolitan Borough Council Doncaster Metropolitan Borough Council Doncaster Metropolitan Borough Council Sheffield City Council Yorkshire and Humber Drainage Boards Doncaster East Internal Drainage Board
4.	<p>Produce a South Yorkshire wide communication and engagement plan.</p> <p>Step 1: To understand who all our stakeholders are and engage with these stakeholders on this Connected by Water plan. Stakeholders will include communities, businesses, political figures and landowners.</p> <p>Step 1 will also include starting to build on shared information/material e.g. photos, key messages etc.to inform the development of the communication and engagement plan.</p>	Step 1: 2022	Rotherham Metropolitan Borough Council Environment Agency	Doncaster Metropolitan Borough Council Barnsley Metropolitan Borough Council Sheffield City Council Yorkshire Water Sheffield City Region
4.	Develop a strategy for public facing engagement on what climate change	2023	South Yorkshire	Sheffield City Council

	means for flood risk across South Yorkshire. <i>Links to modelling action in Climate section</i>		Mayoral Combined Authority	Environment Agency
4	Develop a specific landowner and farmer engagement plan, considering future climate change risks, commercial risks and food production risks to establish positive partnership working.	2022	Environment Agency	National Farmers Union Doncaster Metropolitan Borough Council
4	Create engagement material to support the understanding of flood risk in South Yorkshire: <ul style="list-style-type: none"> - How the River Don Catchment works - How the funding process works for flood risk projects - How flood defence schemes are developed and implemented (including flood modelling) - How reservoirs work - Flood risk roles and responsibilities across organisations - 	2024	Environment Agency Yorkshire Water	
	Develop a stakeholder engagement plan to help partners understand Yorkshire Water's funding processes.	2022	Yorkshire Water	
4.	Review the Chesterfield modelling study and implement actions to improve flood warnings along the Rivers Upper Rother, Hipper, Drone and Doe Lea.	TBC	Environment Agency	
4.	Review the Humber modelling study to inform any updates to existing flood warnings in Doncaster.	2023	Environment Agency	Move to grey
4.	Implement Flood Warning updates along the Middle and Lower Don, in Rotherham, Barnsley and Doncaster, based on the modelling review completed in 2021.	2022	Environment Agency	Yorkshire and Humber Drainage Board East Doncaster Internal Drainage Board Doncaster Metropolitan Borough Council Barnsley Metropolitan

				Borough Council Rotherham Metropolitan Borough Council
4.	Review the Blackburn Brook Flood Warnings in Sheffield to establish if any updates are required and implement as required.	2022	Environment Agency	Doncaster Metropolitan Borough Council Barnsley Metropolitan Borough Council Sheffield City Council
4.	Introducing more 'impact thresholds' for our Flood Alerts. This involves having a greater understanding at what levels there are impacts across a Flood Alert area, e.g flooding to roads, farmland. We will use these levels to better inform our decision making on when Alerts are issued, to help give better information and preparation lead time to customers.	Ongoing	Environment Agency	Yorkshire and Humber Drainage Board Doncaster East Internal Drainage Board Doncaster Metropolitan Borough Council Barnsley Metropolitan Borough Council Sheffield City Council Rotherham Metropolitan Borough Council
4.	Working in partnership with professional partners we will deliver training to help increase understanding of how at-risk communities can be better supported and prepared. Step 1 – This will be initially be with Rotherham and Doncaster Councils.	Step 1: 2022	Environment Agency	Rotherham Metropolitan Borough Council Doncaster Metropolitan Borough Council
4.	Working in partnership with stakeholders deliver annual training to existing Flood Warden's.	Ongoing	Environment Agency	Doncaster Metropolitan

				Borough Council Barnsley Metropolitan Borough Council Sheffield City Council Rotherham Metropolitan Borough Council
	Working in partnership with stakeholders to deliver induction training for new Flood Wardens.	Ongoing	Environment Agency	Doncaster Metropolitan Borough Council Barnsley Metropolitan Borough Council Sheffield City Council Rotherham Metropolitan Borough Council
4.	<p>Create 6 action plans for priority areas across Rotherham to engage with Parish Councils, community groups and businesses on Flood Risk, Resilience, and the council's future plans and commitment to reducing flood risk.</p> <p>The 6 priority areas are: Rotherham Town Centre Rawmarsh and Parkgate Kilnhurst Village Laughton Common Catcliffe Village Whiston Village</p> <p>Step 1 will be piloted with Laughton Common.</p>	Step 1 - 2022	Rotherham Metropolitan Borough Council	Environment Agency
4.	Develop and deliver Property Flood Resilience schemes at Riviera Parade, Willow Cottages, Fishlake Nab and Daw Lane in Doncaster.	2022	Doncaster Metropolitan Borough Council	Environment Agency
4.	Develop and deliver Property Level Protection measures at Emmett Carr Lane, Renishaw, Derbyshire.	2022	Derbyshire County Council	Environment Agency

4.	Replace / Refurbish existing Property Level Protection measures in Denaby, Doncaster.	2030	Doncaster Metropolitan Borough Council	Environment Agency
	Develop a Recreational infrastructure improvement strategy surrounding Langsett Reservoir to enhance community connection to nature and water.	2030	Yorkshire Water	Barnsley Metropolitan Borough Council Sheffield City Council Highways England
	Community engagement pilot in Sheffield S5, looking at testing a new engagement model to understand customers' needs of us as an organisation and then work with community to build relationships	2022	Yorkshire Water	TBC

DRAFT

Appendix 1: Overview of the South Yorkshire Flood Risk Management Investment Programme

The South Yorkshire programme comprises of three levels:

- The Overall Programme:
 - Approximately 100 projects, with a total value of nearly £400 million.
 - To better protect over 17,000 homes and businesses, plus regionally significant infrastructure.
- The Priority Programme (sub set of the Overall Programme):
 - 27 priority projects, with an original total value of £217 million (now revised to £257 million).
 - To better protect over 10,000 homes and businesses, plus regionally significant infrastructure.
 - These 27 projects were collectively identified as regional priorities following the November 2019 floods.
- The Shovel Ready Programme (sub set of the Priority Programme):
 - 9 projects, with an original total value of £66 million (now revised to £63 million).
 - To better protect over 1,400 homes and businesses, plus regionally significant infrastructure.
 - These 9 projects were collectively identified as local priorities to get shovel ready from the Priority Programme.

Summary tables on the overall programme, the priority programme and the shovel ready programme are provided on the following pages. A list of the 27 priority projects and the 9 shovel ready projects, broken down by location, is also provided.

The Three Levels of the South Yorkshire Programme

Overall Programme								
Area	Number of Projects	Projects by Lead Organisation	Total Project Costs (£million)	UK Government Funding (£million)	Partnership Funding (£million)	Funding Gap (£million)	Homes better protected	Businesses better protected
Barnsley	12	7 Council 5 Environment Agency	17.2	4.9	1.2	11.1	1,986	29
Doncaster	47	14 Council 30 Environ	210.6	42.7	4.3	167.9	4,590	674

		ment Agency 8 Yorkshire and Humber Drainage Boards						
Sheffield	17	9 Council 8 Environment Agency	97.1	71.9	17.1	8.1	4,275	1,785
Rotherham	19	9 Council 10 Environment Agency	67.9	33.9	12.0	22.0	3,785	399
Catchment Wide	1	1 Environment Agency	2.0	0	0	2.0	0	0
Totals	96		394.8	153.4	34.6	211.1	14,636	2,877

Priority Programme: Updated Picture								
Area	Number of Projects	Projects by Lead Organisation	Total Project Costs (£million)	UK Government Funding (£million)	Partnership Funding (£million)	Funding Gap (£million)	Homes better protected	Businesses better protected
Barnsley	5*	4 Council 1 Environment Agency*	13.2	1.4	1.1	10.7	177	29

Doncaster	9	5 Council 4 Environment Agency	96.0	31.4	2.0	62.6	3,326	505
Sheffield	5	3 Council 2 Environment Agency	85.2	63.9	13.3	8	2,359	1,724
Rotherham	8*	6 Council 2 Environment Agency*	60.7	28.6	11.6	20.5	1,693	399
Catchment Wide	1	1 Environment Agency	2.0	0	0	2.0	0	0
Totals	27*	27*	257.1	125.3	28.0	103.8	7,555	2,657

* The Nature Based Solutions Programme in Mid Don (an Environment Agency led scheme), covers both Barnsley and Rotherham. This project has been counted in both areas, but the costs and funding have been split.

Shovel Ready Programme: Updated Picture								
Area	Number of Projects	Projects by Lead Organisation	Total Project Costs (£million)	UK Government Funding (£million)	Partnership Funding (£million)	Funding Gap (£million)	Homes better protected	Businesses better protected
Barnsley	2	2 Council	6.0	0.2	1.1	4.7	104	0
Doncaster	5	4 Council 1 Environ	11.4	4.7	1.9	4.8	424	71

		ment Agency						
Sheffield	1	1 Council	25.0	20.3	1.6	3.1	370	253
Rotherham	1	1 Council	21.0	12.3	7.7	1.1	20	245
Totals	9	9	63.4	37.4	12.3	13.7	917	569

List of the Priority Projects and Shovel Ready Projects

Bold text denotes a Shovel Ready Project

Barnsley

Barnsley led projects:

1. **Lundwood Flood Alleviation Scheme**
2. **Barnsley Culvert Programme**
3. Worsborough Reservoir
4. Church Street, Darton

Environment Agency led projects:

5. Nature Based Solutions Programme in Mid Don (Barnsley and Rotherham)

Doncaster

Doncaster led projects:

6. **Bentley Flood Alleviation Scheme**
7. **Conisbrough Natural Flood Management**
8. **Tickhill Natural Flood Management**
9. **Doncaster Borough Wide Surface Water Alleviation Scheme**
10. Fishlake Flood Alleviation Scheme

Environment Agency led projects:

11. Nature Based Solutions Programme in Lower Don
12. Refurbishment and Replacement of Lower Don Embankment
13. Wheatley Park Embankment Refurbishment
14. **St Mary's Bridge Wall Refurbishment**

Rotherham

Rotherham led projects:

15. **Rotherham To Kilnhurst Flood Alleviation Scheme**
16. Parkgate Flood Alleviation Scheme
17. Catcliffe Pumping Station
18. Eel Mires Dike Flood Alleviation Scheme Flood Alleviation Scheme
19. Rotherham Culvert Renewal Programme

Environment Agency led projects:

- 20. Don Catchment Regulators
- 21. Whiston Brook Flood Alleviation and Storage (Partnership project with Rotherham)
- Nature Based Solutions Programme in Mid Don (Rotherham and Barnsley) (Repeat of no 5)

Sheffield

Sheffield led projects:

- 22. Blackburn Brook Flood Alleviation Scheme
- 23. Sheaf Catchment Flood Alleviation Scheme**
- 24. Upper Don Flood Alleviation Scheme

Environment Agency led projects:

- 25. Upper Don Reservoir Storage
- 26. Nature Based Solutions Programme in Upper Don

South Yorkshire Wide

Environment Agency led:

- 27. South Yorkshire Catchment Plan (Barnsley, Rotherham, Sheffield and Doncaster)
Needs to be re-titled as Connected by Water Plan – TBC based on front page / branding.

BACK PAGE

Add contact page at end

*IF YOU WOULD LIKE TO KNOW MORE ABOUT CONNECTED BY WATER
PLEASE CONTACT SYPSO@environment-agency.gov.uk*

INCLUDE ALL PARTNER LOGOS

DRAFT