

Improving Places Select Commission

19th September 2023

**Update on:
The Council's Flood Risk Management works
across the borough & the Six Priority Flood
Alleviation Schemes**

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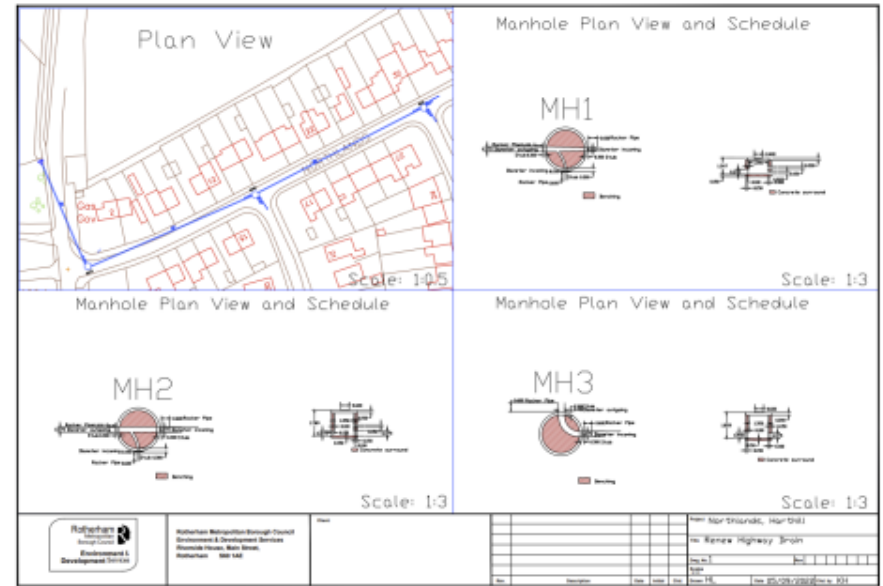
A1. Project locations – delivered since October 2022 IPSC meeting

Address	Village	Ward	Scheme	Outcome
Hardwick Lane	Aston	Aston and Todwick	Highway Drainage Repair	Reduced risk of flooding to highway
Workshop Road	Swallownest	Aughton & Swallownest	Replace Manhole	Repair to Highway
Ulley Lane	Aston	Aughton and Swallownest	Cleansing of watercourse	Maintenance
Church Street	Ravenfield	Bramley & Ravenfield	Flood Reduction Scheme – increased culvert capacity and reinstatement of existing ditch.	Properties at reduced risk of flooding
Hooton Lane	Ravenfield	Bramley & Ravenfield	Remediation Works	Maintenance
Pringle Road	Brinsworth	Brinsworth	Sink Hole Repair	Repair to Highway
Carr Lane	Thrybergh	Dalton and Thrybergh	Cleansing of watercourse	Maintenance
Coach Road	Greasbrough	Greasbrough	Root cutting and new gully connection	Reduced risk of flooding to highway
Toad Lane	Brampton	Hoober	Cleansing of watercourse	Maintenance
Elme Tree Road	Maltby	Maltby East	New road gully connection.	1 property reduced risk of flooding
Yew Tree Road	Maltby	Maltby East	Bunding Works	3 property reduced risk of flooding
Tickhill Road	Maltby	Maltby East	New manhole cover and frame	Repair to Highway
Elm Tree Road	Maltby	Maltby East	Diverting Gully connection	1 property reduced risk of flooding
Warren Vale	Rawmarsh	Rawmarsh East	Repair Penstock	Stop pollution
Clay Pit Lane	Rawmarsh	Rawmarsh East	Drainage Works on Field	Reduce flooding on field
Chailliner Mews	Catcliffe	Rother Valley	Cleansing of watercourse	Maintenance
York Road	Eastwood	Rotherham East	Repair collapsed road gully connection	Reduced risk of flooding to highway
Sheridan Drive	Herringthorpe	Rotherham East	Sink Hole Repair	Repair to Highway
Oaks Lane Depot	Kimberworth	Rotherham West	Relay foul sewer	Repair to council asset
Whiston Brook	Whiston	Sitwell	Cleansing of watercourse	Maintenance

A2a. Project examples – Northlands, Harthill

Residential properties have been affected by internal flooding on several occasions over the past 20 years.

After hydraulic modelling and design, a substantial scheme was carried out to increase the drainage capacity and remove a backfall in the pipework to reduce the risk of future flooding.



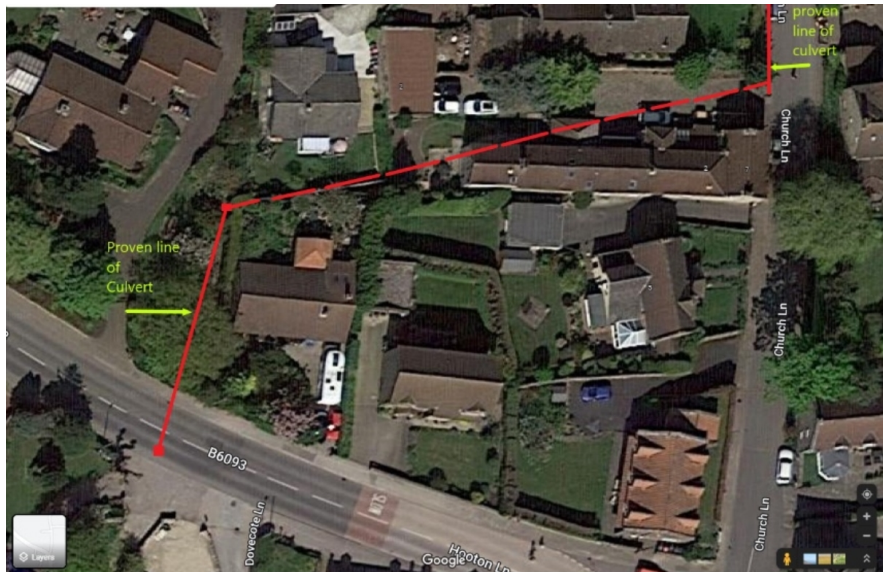
A2b. Project examples – Ravenfield & Firbeck

Ravenfield

A drainage scheme has been carried out to increase the size of existing culverted watercourse from 300mm to 600mm in diameter.

The scheme includes a new inlet bay with a trash screen and a new manhole for access to maintain the system.

Following the drainage scheme, a section of the field will be landscaped to divert water into the existing watercourse and remove the flow route to the highway.



Salt Hill, Firbeck

Regular surface water flooding occurs to residents on Salt Hill, Firbeck over the past few years due to collapsed highway drain in third party land.

A solution was designed to install 2x 4m diameter soakaway rings within the highway, then re-route half of the drainage from the defective pipe into the soakaway.

With the other half of the impermeable area being diverted to an existing highway drain.

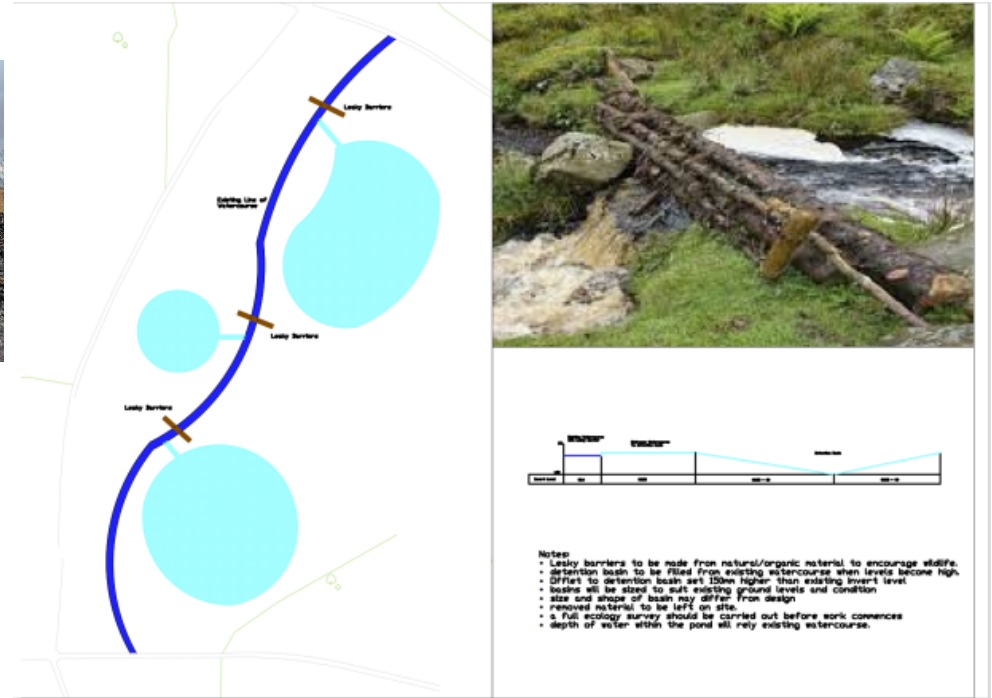
A2c. Project examples – Environmental improvement



Two new schemes have been carried out at Brookfield Park, Manvers and Firsby Reservoir.

The schemes are in place to allow water to hold in specific areas, increase bird activity and allow additional plant growth and improve water quality.

The schemes have been run with input from the national wildlife trust and the local bird association.



Flood Risk Benefits

- Attenuated water
- Reduction in silt deposits downstream
- Slowing the flow of water to “Main River”

A2d. Flood event on 18th June 2023

A rainfall event took place on Sunday 18th June 2023, causing widespread surface water flooding across the borough. Impacts included:

- Over 300 flooding reports received
- 15 residential dwellings (with internal flooding)
- 2 commercial properties flooded
- 2 primary school class rooms flooded

Note: No properties were affected by flooding in which a drainage scheme was recently carried out. Ravenfield, Harthill and Firbeck have had property flooding on moderate rainfall on several previous occasions, which was before recent drainage work was carried completed.



A3a. Connected by Water – overview of the partnership approach.

The flooding in November 2019 provided the catalyst for the creation of the “Connected by Water South Yorkshire Action 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 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 asked how can we reduce the risk and impact of flooding across the region

Connected by Water have now moved away from the themes and have now focused on specific projects that will make true partnership working across the catchment.

<https://connectedbywater.co.uk/>



**Connected
by Water**

A South Yorkshire alliance working with communities and businesses to build flood resilience and improve the impact of climate emergency

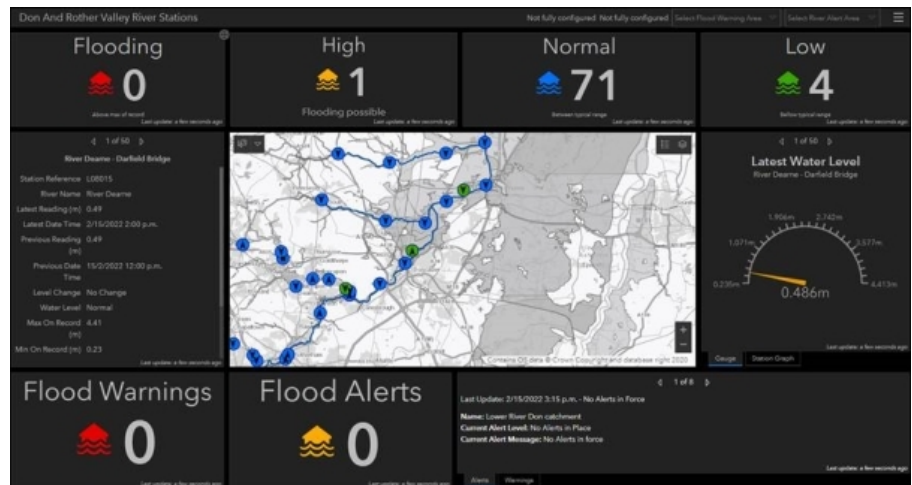
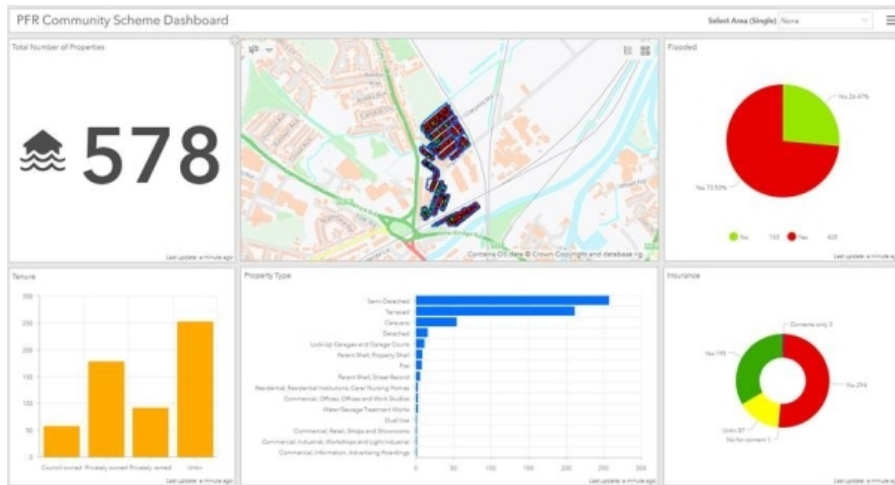
A3b. Connected by Water – Flood Risk Portal's

Several Dashboards have been created to make a user friendly, easy access to all data across South Yorkshire.

The Dashboards will highlight rivers at risk of over topping (with an alert function). Areas that have received flood defences (image to left). Footage of all flood events. Plus many more. These dashboards are to be rolled out to all RMA's in the coming months.



A South Yorkshire alliance working with communities and businesses to build flood resilience and improve the impact of climate emergency

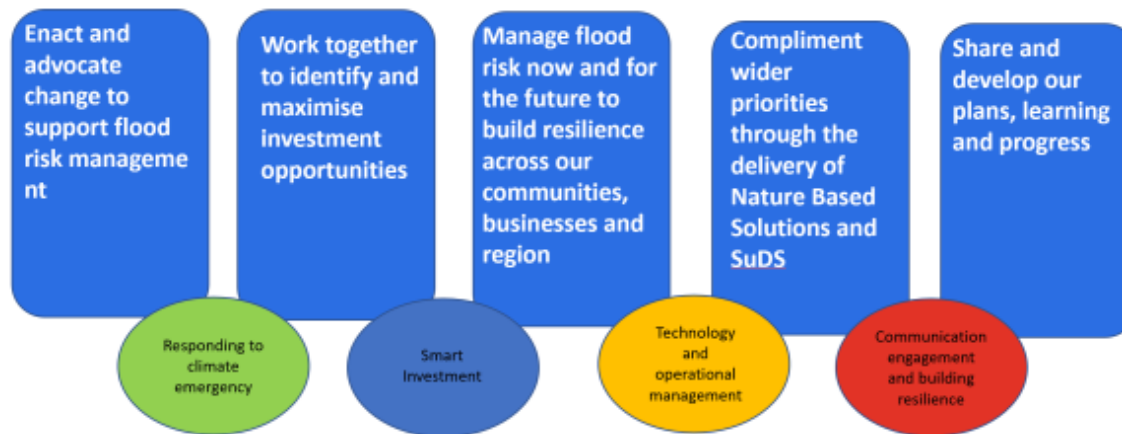
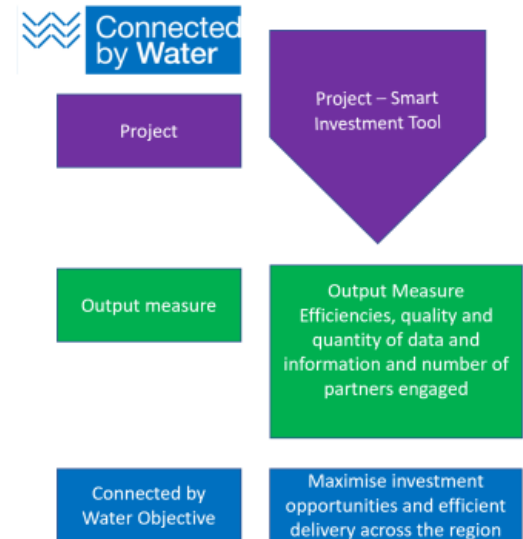


A3c. Connected by Water – Smart investment tool



Connected by Water Smart Investment Tool

- Smart investment is looking at maximising investment opportunities and ensuring efficient delivery of schemes across the region.
- The tool will allow us to map all aspects of modelling, flood risk, previously completed schemes and funding opportunities within the catchment.



A3d. Connected by Water – catchment wide flood risk resources.

Connected by Water are proposing to provide a new resource for catchment wide flood risk engineer apprentice/graduate

- Aim is to create a pool of shared resource with understanding of the whole catchment and flood risk engineering expertise
- This would respond to the resource issues currently experienced by partner organisations in these key roles
- Idea is a 6-month placement with each RMA creating a unique catchment wide experience and skill set
- Currently scoping out ambition and practicalities in all organisations

Leadership by Rotherham and Barnsley councils on behalf of the partnership



A South Yorkshire alliance working with communities and businesses to build flood resilience and improve the impact of climate emergency

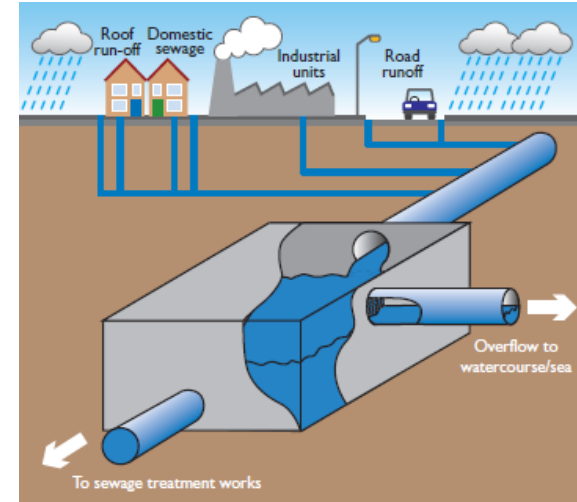
A3e. Connected by Water – Combined Sewer Overflows

The £180m plan is targeting overflows that discharge the most often or for the most time as we look to reduce its impact on water quality in the region's rivers. Over 180 overflows have been earmarked for investment before 2025.

The investment can broadly be split into four different types of work:

- Increasing storage within Yorkshire Water's wastewater treatment works
- Preventing surface water entering the sewer system
- Reducing infiltration into sewers
- Small changes to the operation of treatment works

Leadership by Yorkshire Water and Rotherham Council on behalf of the partnership



A4. Gully Cleansing Dashboard



The gully cleansing schedule is now fully electronic, the team are collecting data on all gullies that are cleansed with information on:

- Silt Levels
- Defects
- Cover and Frame Data
- Location

This information will be collected over the next 2 years to give an informed decision on moving to risk based approach

Cleansing the right gullies at the right time.

Other data is also being collected – manholes, soakaways, interceptors etc



Ready

1688m Selection

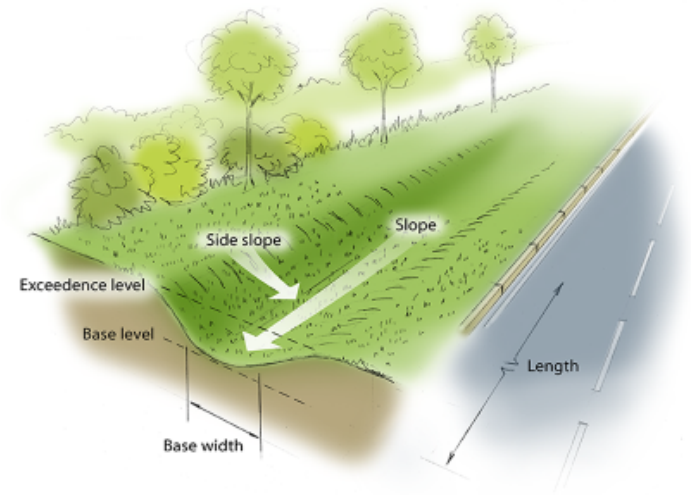
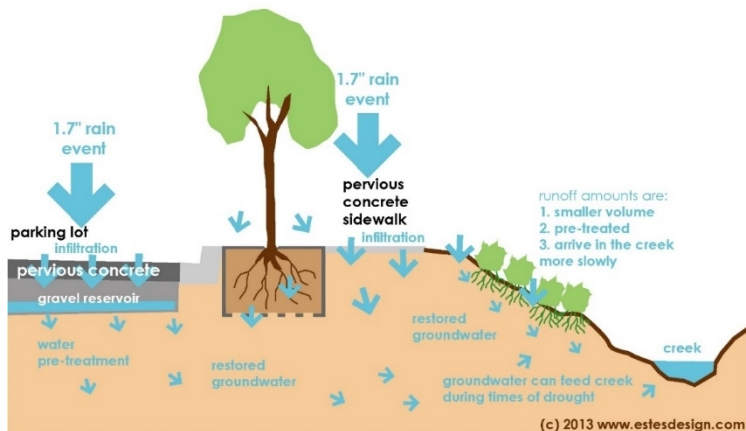
GULLIES 130 NORTHFIELD LANE

Activity	GCX	19/05/2022 (Done)
	Parameters	Done
Defect	GCL Inspection	
Gully Inspect	Cleansed	
Silt Depth	50%	
Location	O/S no 65	
Description	Cover cracked and needs a re	

A5. SAB (SuDS Approval Body)

The SAB was first introduced in 2010 as schedule 3 of the Flood and Water Management Act. The schedule was not enacted at that time due to constraint issues.

A cabinet report will be brought forward at the end of 2023 to outline the plans for introducing the SAB within Rotherham.



The SAB is now to be enacted in 2024 as stated in the FWMA 2010. This involves:

- All major planning applications will have to implement SuDS features
- Must be approved by the LLFA
- Must be adopted by the LLFA
- Must be maintained going forward by the LLFA

PART A: Questions

Questions on Part A?



PART B: Progress update on the six Priority Flood Alleviation Scheme Projects

B1. FAS works already constructed

B2. Pre-construction works – process and progress

- a) Design and approvals process overview
- b) Estimated completion
- c) Progress examples

B3. Pre-construction works – finances and funding

- a) Overview of initial (2020) estimates & new (2023) estimates
- b) Funding position
- c) Funding bids

B4. Construction works – finances and funding

- a) Overview of initial (2020) estimates & new (2023) estimates
- b) Funding position
- c) Funding bids

B5. Potential advanced phases of work – the “No Regrets” approach

B6. Options for RMBC Capital bids

B1: FAS works already constructed

Work completed since November 2019 floods in Rotherham Town Centre and in Parkgate using Partnership Funding secured to date (from a several organisations):

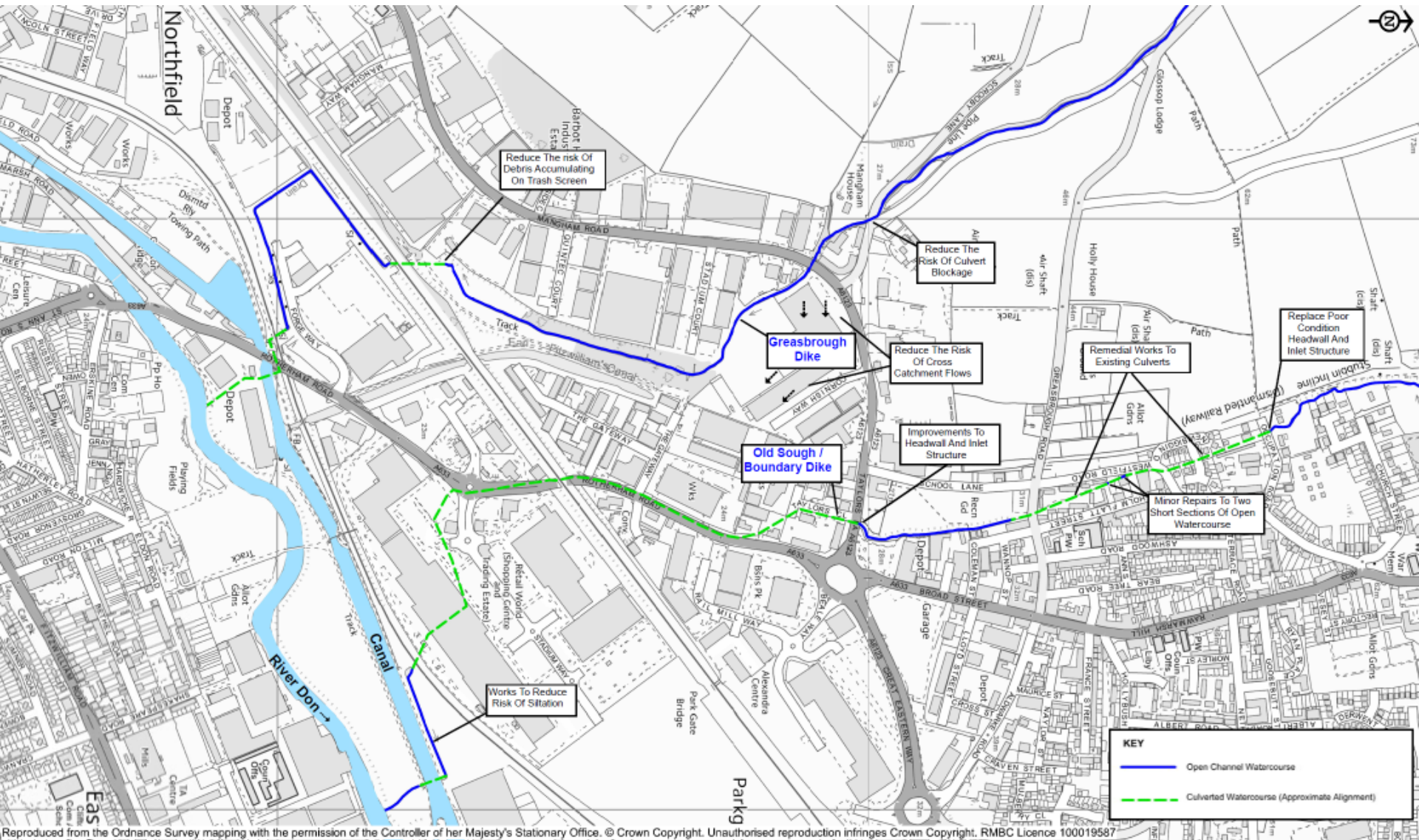


B1: FAS works already constructed

Work completed since November 2019 floods between Ickles Lock and Rotherham United FC stadium using Partnership Funding secured to date (from a several organisations):



B1: FAS works already constructed



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B1: FAS works already constructed

Site access issues at downstream end of Boundary Dike, at Parkgate:



Before, during & after the main clearance works of Boundary Dike, at Parkgate:



B2a: Pre-construction progress – design and approvals process overview

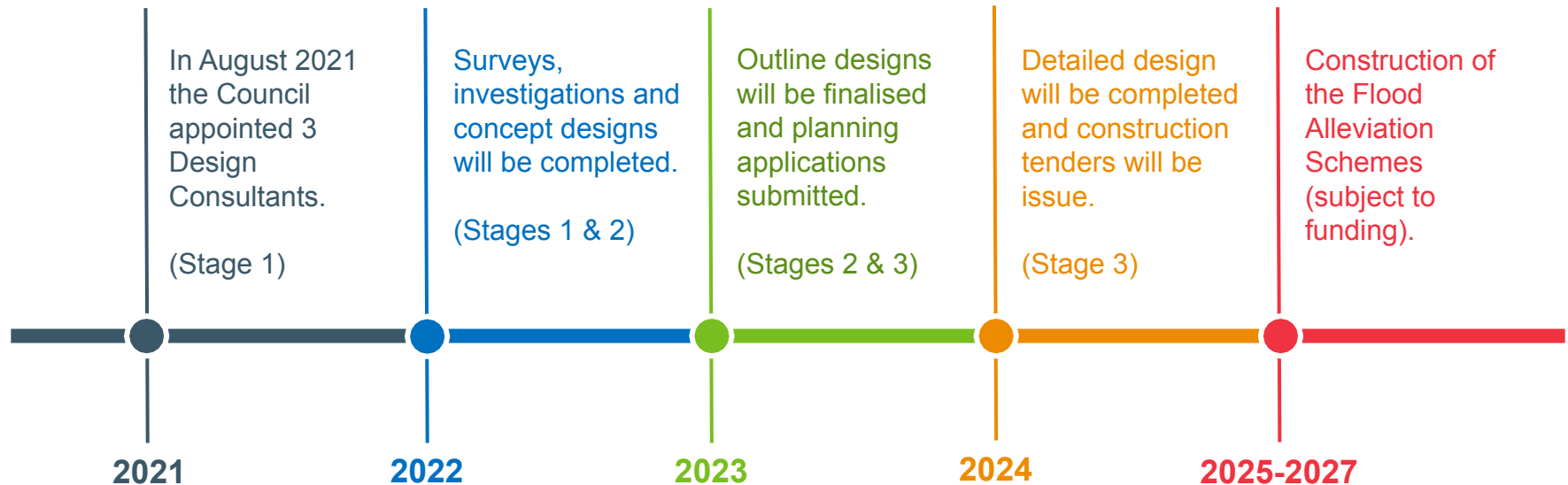
The October 2022 IPSC meeting provided information on the early phases of work on:

- Delivering a three staged approach for each of the six priority FAS projects to achieve “Shovel Ready” status in 2024, with concurrent working across the six projects
 - Stage 1: Mobilisation of resources, surveys and investigation
 - Stage 2: Initial design work and engagement with third parties
 - Stage 3: Detailed design, finalisation of third party approvals and work up to procurement of construction suppliers
- Working with stakeholders and landowners on these complex FAS projects
- Attracting funding to fully deliver the schemes in future and protect residents, businesses and road/rail/tram-train networks from flooding in the future



B2a: Pre-construction progress – design and approvals process overview

On programme to complete the “Shovel Ready” process in 2024, but there are still significant risks that need to be managed over the last 2 years of the programme (more detail later)



B2b: Pre-construction – estimated completion

Scheme	Stage 1: Mobilisation of resources, surveys and investigation	Stage 2: Initial design work and engagement with third parties	Stage 3: Detailed design, finalisation of third party approvals and work up to procurement of construction suppliers
Rotherham Renaissance FAS (Note: multiple phases)	Completed	Autumn 2023	2024
Parkgate & Rawmarsh FAS (Note: multiple phases)	Autumn 2023	Winter 2023	2024
Whiston Brook FAS	Autumn 2023	Winter 2023	2024
Eel Mires Dike FAS	Completed	Autumn 2023	2024
Catcliffe Pumping Station	Autumn 2023	Winter 2023	2024
Culvert Renewal Programme (Note: 13 Nr culverts)	Spring 2023	Winter 2023	Subject to Business Case

Note: Where Stage 1 work is set out as “Completed”, this is in relation to all of the major survey and investigation work. It is likely that the design teams will need to do additional localised “infill surveys” as part of the Stage 2 and/or Stage 3 work to be able to complete the detailed design.

B2c: Pre-construction – progress

Various surveys, investigations and landowner/stakeholder engagements are ongoing for all six Priority Flood Alleviation Scheme projects.

Survey and investigation allows the Design Team to establish the extent, scale and size of each FAS project – i.e. the work up to “Approval In Principle” through 2023.

So far positive feedback has been received from landowners alongside watercourses and with other people and organisations impacted upon by flooding.

Ongoing design work and engagement with third parties

- Consultant's working on outline engineering drawings of new flood defences
- Key part of this work is to establish how new flood defences will interact with all of the adjacent asset owners and landowners
- Detailed engineering and environmental studies/surveys that are needed to support planning applications
- On track to complete Approval in Principle (AiP) documentation in 2023

Significance of completing the AiP documentation

- Sets the standard of protection of the scheme (aiming for a 1 in 100 year plus climate change, with a design life of 120 years)
- Assists discussions with stakeholders, funders, asset owners and landowners
- Gives a basis on which legal and funding agreements can start to be progressed
- Facilitates updated estimation of construction costs (and associated risk allowances)



B3a: Financial Risks

There are several risk factors outside RMBC's control that are emerging across both the pre-construction and construction phases, with typical examples being:

- Inflation and increased labour costs within the external supply chain
- Busy supply chains and high staff turnover in some parts of the Consultancy sector
- Complexities of the engineering requirements – e.g. utilities and poor ground conditions
- Number and type of asset owners and landowners – many approvals to secure
- Delivery can only progress at the pace of the “slowest cog in the wheel” – this is a particular issue when trying to get approvals from large external organisations (who have different priorities to RMBC)
- Legacy impacts of the Covid pandemic and the war in Ukraine

Due to the forementioned risks factors, the costs of the pre-construction and construction phases are likely to differ from the initial (2020) estimates.



B3b: Cost estimates & spending to date

Updated cost estimates for pre-construction and construction phases

	Pre-Construction (to achieve “Shovel Ready” status)		Construction	
Scheme	Initial (2020) cost estimate	New (2023) cost estimate	Initial (2020) cost estimate	New (2023) cost estimate
Rotherham Renaissance FAS	£2.0m	£2.7m	£22.0m	TBC during 2023
Parkgate & Rawmarsh FAS	£2.0m	£2.6m	£12.0m	TBC during 2023
Whiston Brook FAS	£0.5m	£1.0m	£3.5m	TBC during 2023
Eel Mires Dike FAS	£0.6m	£1.0m	£2.4m	TBC during 2023
Catcliffe Pumping Station	£0.6m	£0.9m	£4.4m	TBC during 2023
Culvert Renewal Programme	£0.1m	£0.1m	£1.9m	TBC during 2023
Total	£5.8m	£8.3m	£46.2m	TBC during 2023

Current spend to the end of June 2023 is £2.1m

	Rotherham Renaissance FAS	Parkgate & Rawmarsh FAS	Whiston Brook FAS	Eel Mires Dike FAS	Catcliffe Pumping Station	Culvert Renewal Programme
Total spend to end of June 23	£910k	£520k	£140k	£440k	£80k	£30k

Various high cost items will be incurred in 2023 – i.e. the remaining surveys/investigation costs, core design team costs, design documentation and drawing production costs.

B4a: Secured funding

Pre-Construction

£7.8m of pre-construction funding has been secured to date. Additional funding bids are being prepared to try to secure the remaining £0.5m through Environment Agency (Yorkshire & Trent) to match the new (2023) cost estimate of £8.3m.

Funding source	Funding secured to date
Rotherham Metropolitan Borough Council (RMBC)	£5.8m
Yorkshire Regional Flood and Costal Committee (Local Levy)	£1.9m
South Yorkshire Mayoral Combined Authority (SYMCA)	£0.1m
Total	£7.8m

Construction

£17.2m of construction funding has been secured, and used to deliver advanced phases of the Rotherham Renaissance FAS, against the initial (2020) estimate of £46.2m (i.e. £29.0m still needed on this basis) to deliver ongoing construction works.

Funding source	Funding secured to date
Rotherham Metropolitan Borough Council (RMBC)	£5.95m
European Regional Development Fund (ERDF)	£4.35m
South Yorkshire Mayoral Combined Authority (SYMCA)	£3.3m
Yorkshire Regional Flood and Costal Committee (Local Levy)	£0.7m
Levelling Up Fund	£2.5m
Network Rail	£0.4m
Total	£17.2m

B4b: Further funding options

Funding bids in preparation (i.e. funding identified, but not yet secured)

Bids and business cases will still need to be submitted before funding could be drawn upon to construct the FAS projects.

- £11.7m of Other Government Department (Additional Grant in Aid) funding for Rotherham Renaissance FAS
- £2.9m of Other Government Department (Additional Grant in Aid) funding for Whiston Brook FAS
- £2.4m of Department for Education funding for the Kilnhurst phase of Rotherham Renaissance FAS
- Approximately £8.0m of “Standard” Grant in Aid across all six priority FAS projects
 - Note: The allocations on the current version of the Environment Agency Medium Term Plan only total £3.2m, so this will need to be updated in the Spring 2024 “MTP refresh”.

Other ongoing external funding discussions (i.e. funding opportunities not yet quantified)

- Network Rail developing their own funding bids within their next internal “Control Period” (which is from 2024 to 2029)
- Environment Agency (Yorkshire) and South Yorkshire Mayoral Combined Authority are in the early stages of discussions about economic growth funding
- Discussions with Yorkshire Water Services Ltd for locations where risk to their pumping station network could be reduced
- Environment Agency (Trent) with regards to funding for Eel Mires Dike FAS
- Meetings to be held with large businesses about contributions

B5: Options for RMBC Capital bids

Currently considering the options that could be presented for use of RMBC funding, and if pursued, these will need Council support:

1) To fund construction works on advanced phases of projects (ideally, in 2024/25 and 2025/26)

- Could target at the areas where flooding is of a greater frequency or has the most adverse impacts
- Could be utilised to construct some of the “No Regrets” works (some prioritisation needed)
- These are typically small to medium sized capital works projects that can easily be procured

2) To enable RMBC funding to be set out within business case documentation (ideally, in 2024/25)

- All six priority FAS projects will need funding to be sourced from several organisations
- External funding organisations will expect to see a commitment from RMBC before they contribute
- To help lever in in external funding from partners, early commitment from RMBC is advantageous
- Business cases are more likely to be approved if a fully funded situation is presented
- Scale of RMBC commitments needs to be worked though in 2023/24 and 2024/25 Financial Years
- Actual spend would be for the 2025/26 Financial Year and beyond

Note: The Environment Agency’s Medium Term Plan will be refreshed in Spring 2024. This is an ideal place to set out the profiling of external funding, because information on the MTP is shared between funding organisations and used within the lobbying process.

PART B: Questions

Questions on Part B?

