



The River Irwell at Kearsley Flood Risk Management Scheme

Summary

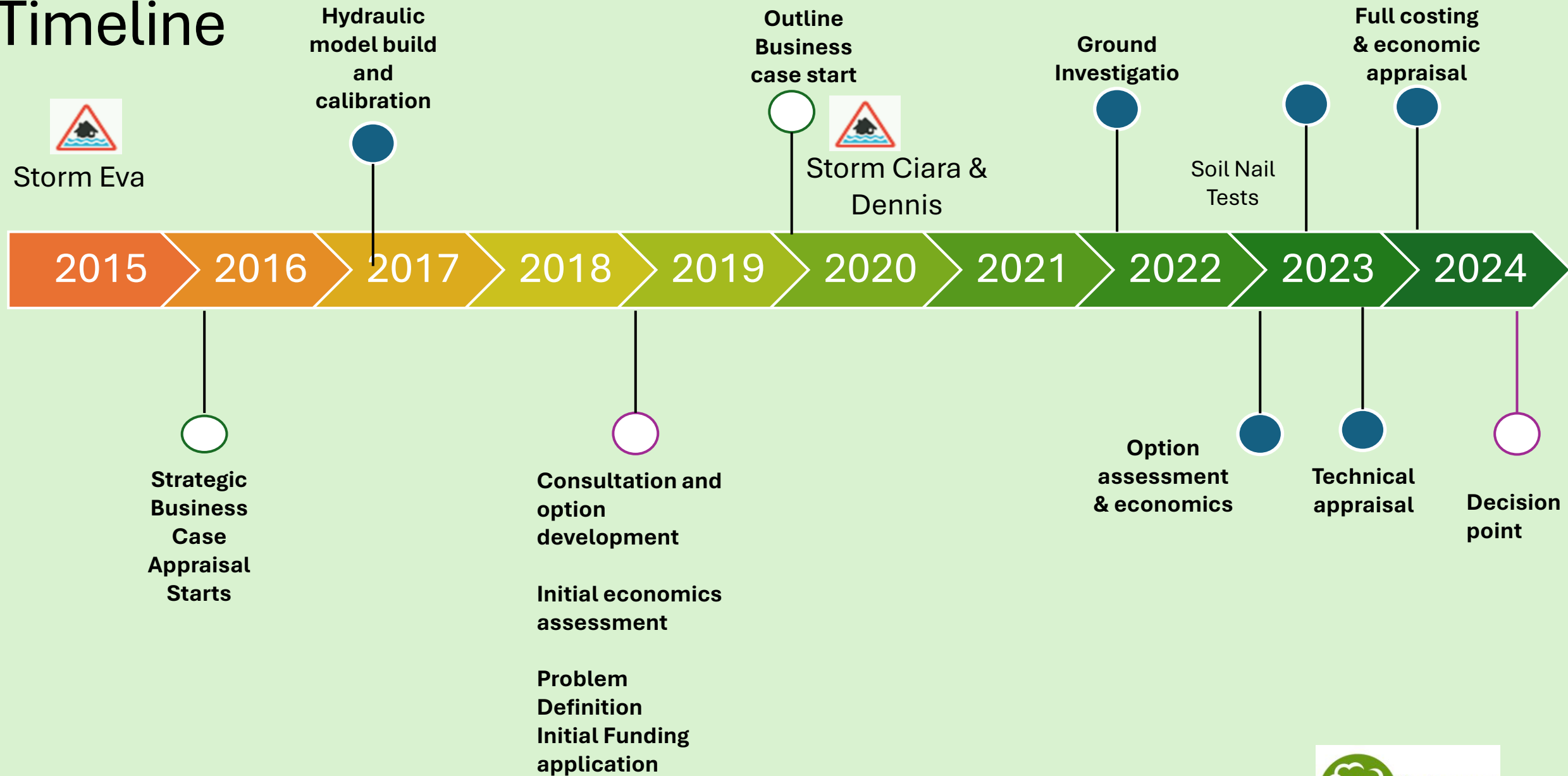
The Environment Agency understand the devastating impacts that flooding has had on the community in Kearsley and we have been working very hard to reduce the flood risk in the area.

As a project team we wanted to reassure you that we have looked at numerous options to reduce the risk of flood at Kearsley. Some of which we revisited once ground investigations had been concluded.

Following these investigations, we had one proposed option to further investigate.

Unfortunately, due to estimated construction costs rising, engineering difficulties in preliminary works, and the complexities involved, we are unable to proceed with the project.

Timeline



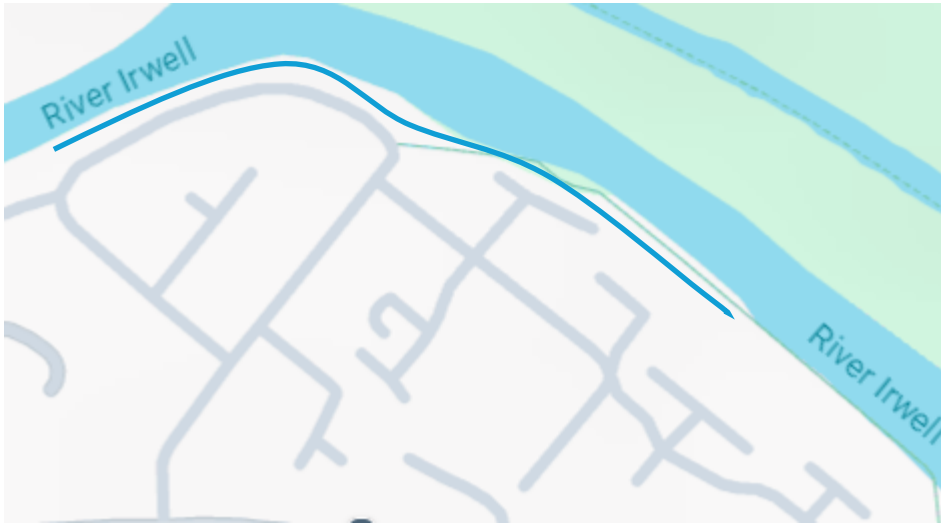
Work to date

Event	Date	Tasks
Problem definition (SOC)	January 2016	Understanding what happened and why including the wider catchment Reviewing previous reports and information Updating the modelling Looking for solutions
Long list of options to short list	January 2020	Working through each solution to find the most suitable short list of options (over 14 options)
	March 2021	Reviewing the short list of options to find leading option(s)
Ground Investigation	April 2022	Understanding the ground conditions
Options Assessment	January 2023	Revisiting the long/short list and finding alternative solutions
Soil Nail Testing	July 2023	Seeing if the soil nails can be driven into the bank
Appraisal of proposed option	October 2023	Additional geotechnical reports, review & assessment
Conclusion	May 2024	Collating all information, updating costs, reviewing maintenance, considering alternatives, peer reviewing
Community Engagement	September 2024	Community drop-in sessions followed up with flood hub updates.

Post Ground Investigation Options (excludes proposed option)

Option	Title	Not Viable because
1	Construct a bund above slope	Additional load and increased height will decrease stability of slope
2	Construct a flood wall above slope	Additional load and increased height will decrease stability of slope
3	Offset flood wall with slope regrade	Regrading makes the slope more stable. Adding extra load is more viable but this option would demolish 18 houses which makes it unviable
4	Construct a flood wall above slope with piles and rock-bags to stabilise slope, plus small slope regrade	Rock bags at the bottom of slope to provide stability, this makes adding the flood wall viable if founded on concrete piles. Access constraints for large plant results in complicated construction sequencing
5	Construct a flood wall above slope with piles and soil nails to stabilise slope, plus small slope regrade	Soil nails at the bottom of bank provide stability. Potential clash between soil nails and piles makes installation difficult. Cofferdam will be needed increasing the risk
6	Construct embedded retaining wall using sheet piles	Risk of more slope eroding into the river causing instability. Access issues as large excavators required
7	Redi Rock block, flood wall defence built along the riverside with infill	Soil nails provide stability to the bank. Potential clash between soil nails and piles makes installation difficult
	Construct flood wall with sheet piles, set back from riverbank	Compulsory purchase and demolition of 18 properties making the option unviable
	Soil nails, rock-bags and flood wall – above 1.5m in height	Significant increase in flood defence extents required, raising of bridges up and downstream, significant services to divert making the option unviable

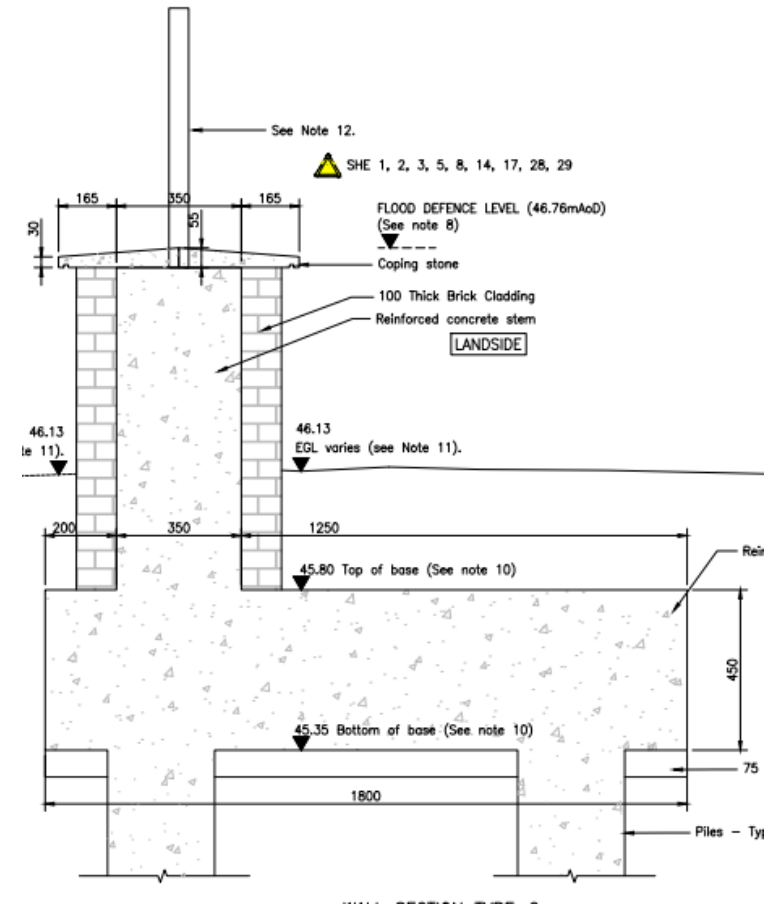
Proposed Option (8) Right bank



Conceptual Design

Brick clad concrete wall

L foundation sited on pile base



Proposed Option (8)- Left Bank Soil Nails, Rock-bags and Flood Wall

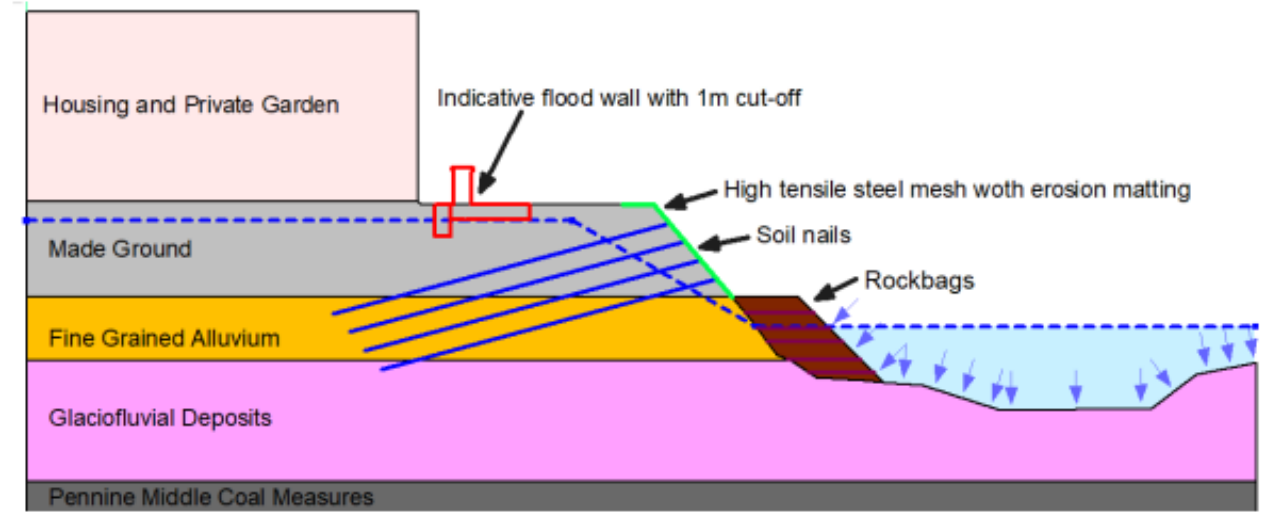


Figure 5: Schematic of proposed flood defence and riverbank stabilisation measures (Not to scale).

Conceptual Design

Rock bags placed in watercourse for bank stabilisation

Soil nails driven and grouted into bank for stabilisation

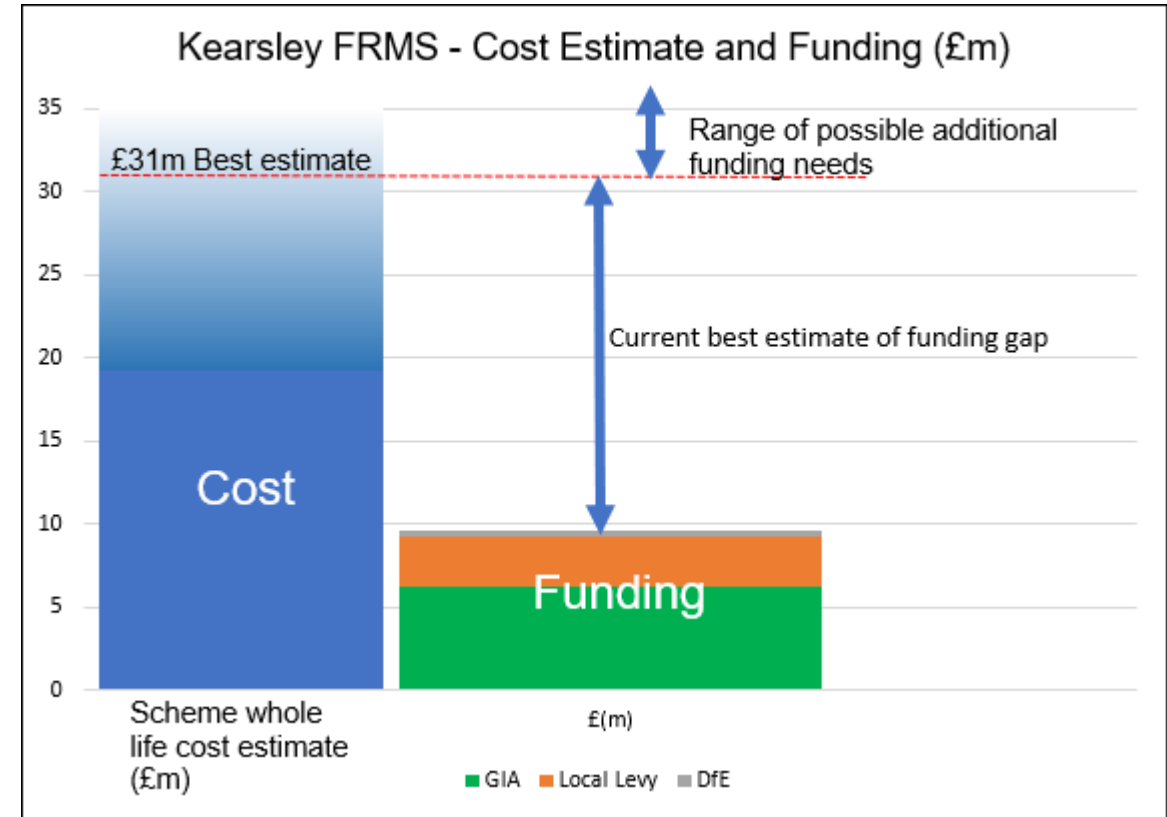
Steel mesh with erosion matting for stabilisation

1.5m high wall on slab foundation with assumed 1m seepage cut off, offset to bank crest

Estimated Scheme Costs and Indicative Funding

Current estimated Whole Life Costs £31-£35 million

Funding Source (indicative)	Value
Flood Defence Grant in Aid	~£6 million
Local Levy	£3 million
Department for Education	£0.35 million
Total Indicative Funding	~£9.35 million
Current Funding Gap	£22-25 million



Funding sources were never received by the project team they were an indicative allocation. These funds will remain with the designated source of funding. Any funding indicatively allocated would only be attributed to this project for example couldn't be spent on other projects within this community.

Proposed Option (8)

Criteria	Actual
Benefits Cost Ratio > 1	2.2
Economical viability	£31-£35m (estimated) cost, £22-25m funding gap
Social Acceptability	Acceptance by community, low standard of protection,
Technical Suitability	Significant stability issues, unknown risks and/or impact to properties medium/long term, pinch points
Environmental Acceptance	Environmental impact issues that would still need to be addressed

The project has a significant funding gap which the project team have worked hard to reduce. The project team have approached all avenues of funding opportunities and have been unsuccessful. There remains significant challenges to overcome including technical, environmental and social acceptability of the scheme.

Next Steps

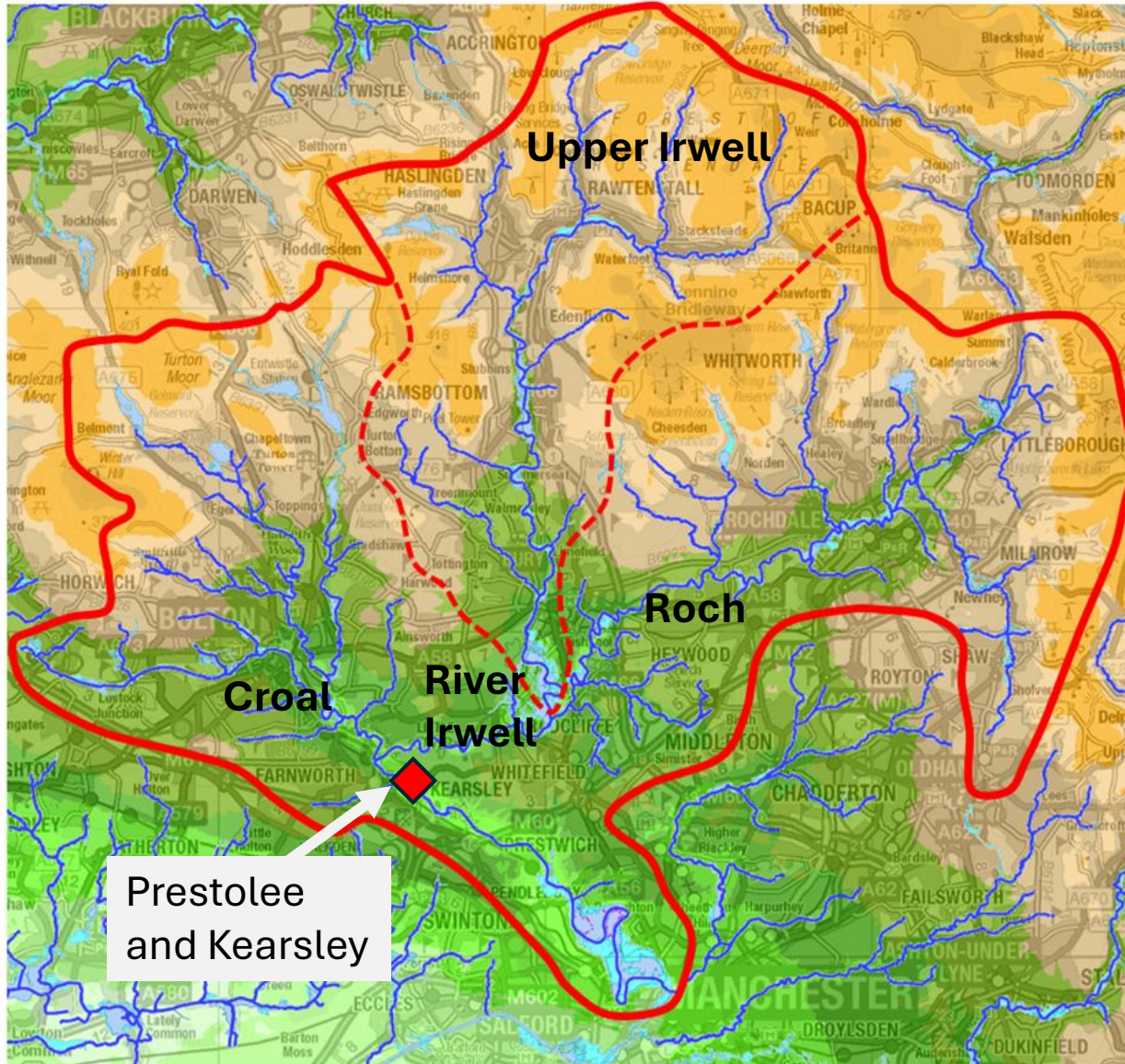
Upper Irwell Strategy

Natural Flood Management

Resilience Measures

Forecast River Levels on the
Internet

Upper Irwell Flood Risk Strategy



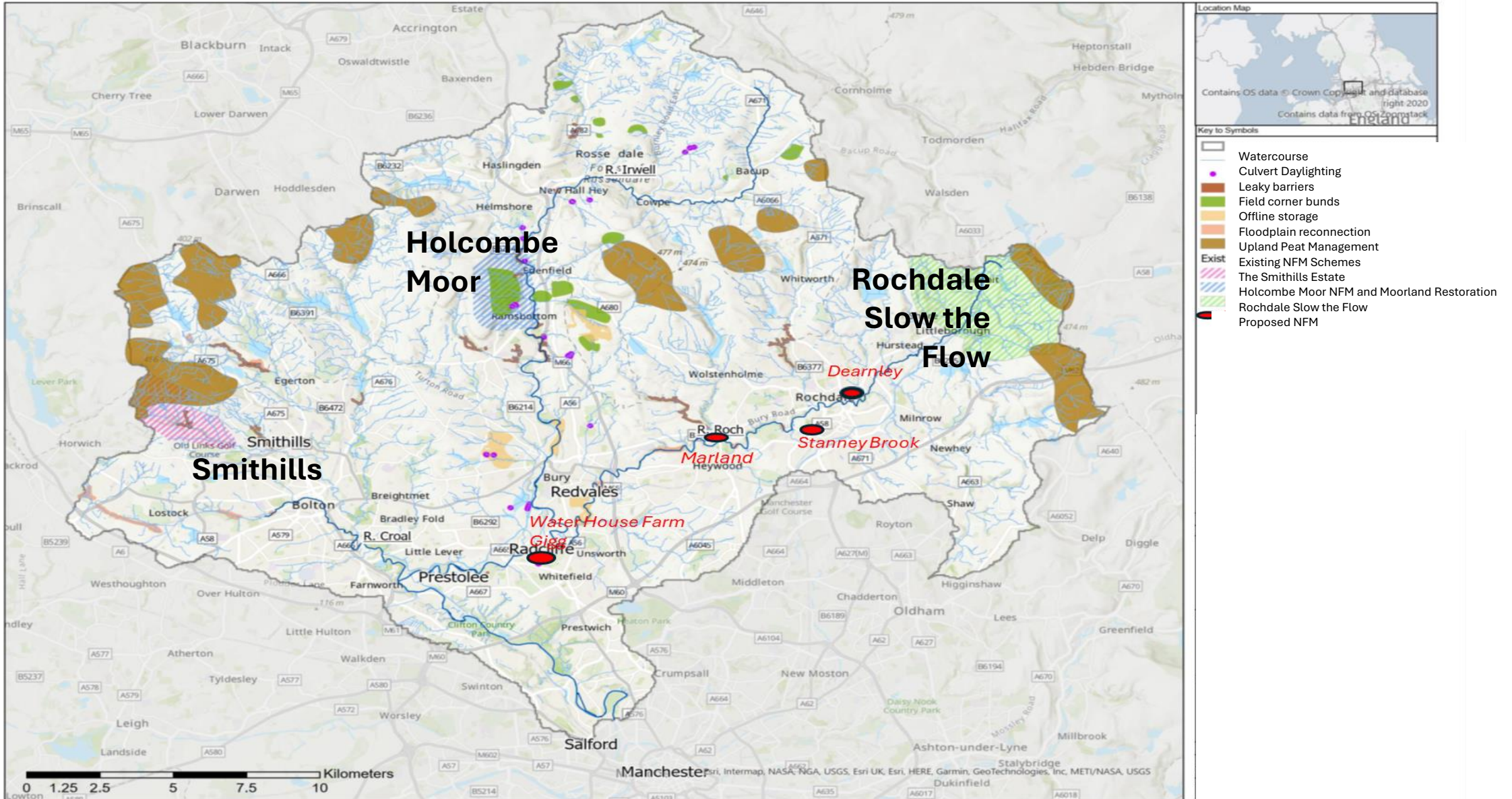
- The Environment Agency is working with Groundwork Manchester, Lancashire County Council, Greater Manchester Combined Authorities, United Utilities, Natural England, all local authorities and other like the National Trust to:
- Develop a programme of natural flood management projects that will reduce risk to downstream communities.
- This will benefit all downstream communities.
- It will take many years to implement

Further information on Natural Flood Management is available on the Flood Hub at the following link

<https://thefloodhub.co.uk/nfm/>



Natural Flood Management in the Catchment



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River levels on the Internet

Improvements have been made to the river levels on the internet for Kearsley. A forecast is now available on this site. River levels on the internet available at the following link <https://check-for-flooding.service.gov.uk/station/5076>

River Irwell level at Kearsley

[Map](#) [Upstream](#) [Downstream](#) [Nearby levels](#)

Latest at 10:45am on 5 September ⓘ

Height
0.74m ⓘ

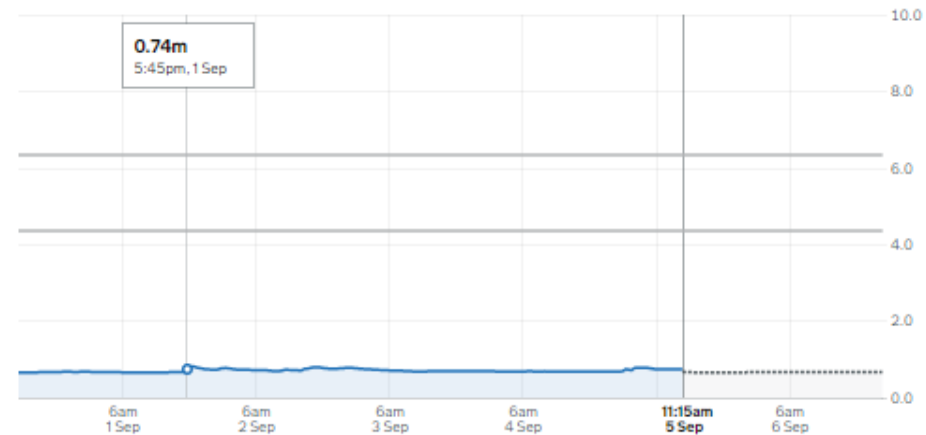
Trend
Falling ⓘ

State
Normal ⓘ

Normal range 0.62m to 4.05m

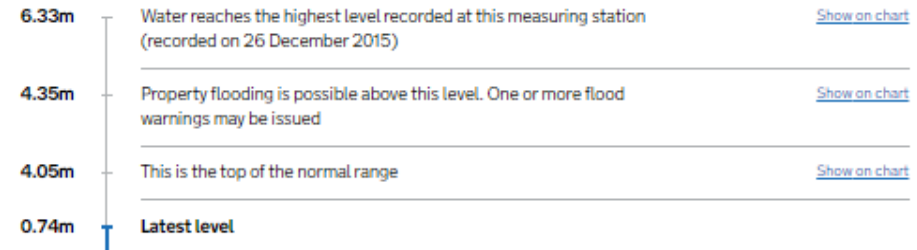
Height in metres over the last 5 days and up to 36 hour forecast

ⓘ This station includes an automated model. The highest level in the model is 0.68m on 5 September at 10:45am. [Read more about how we forecast river levels.](#)



Download data CSV (16KB)

How levels here could affect nearby areas



Flooding might not happen again at the same historical levels. This may be because flood management schemes are now in place.