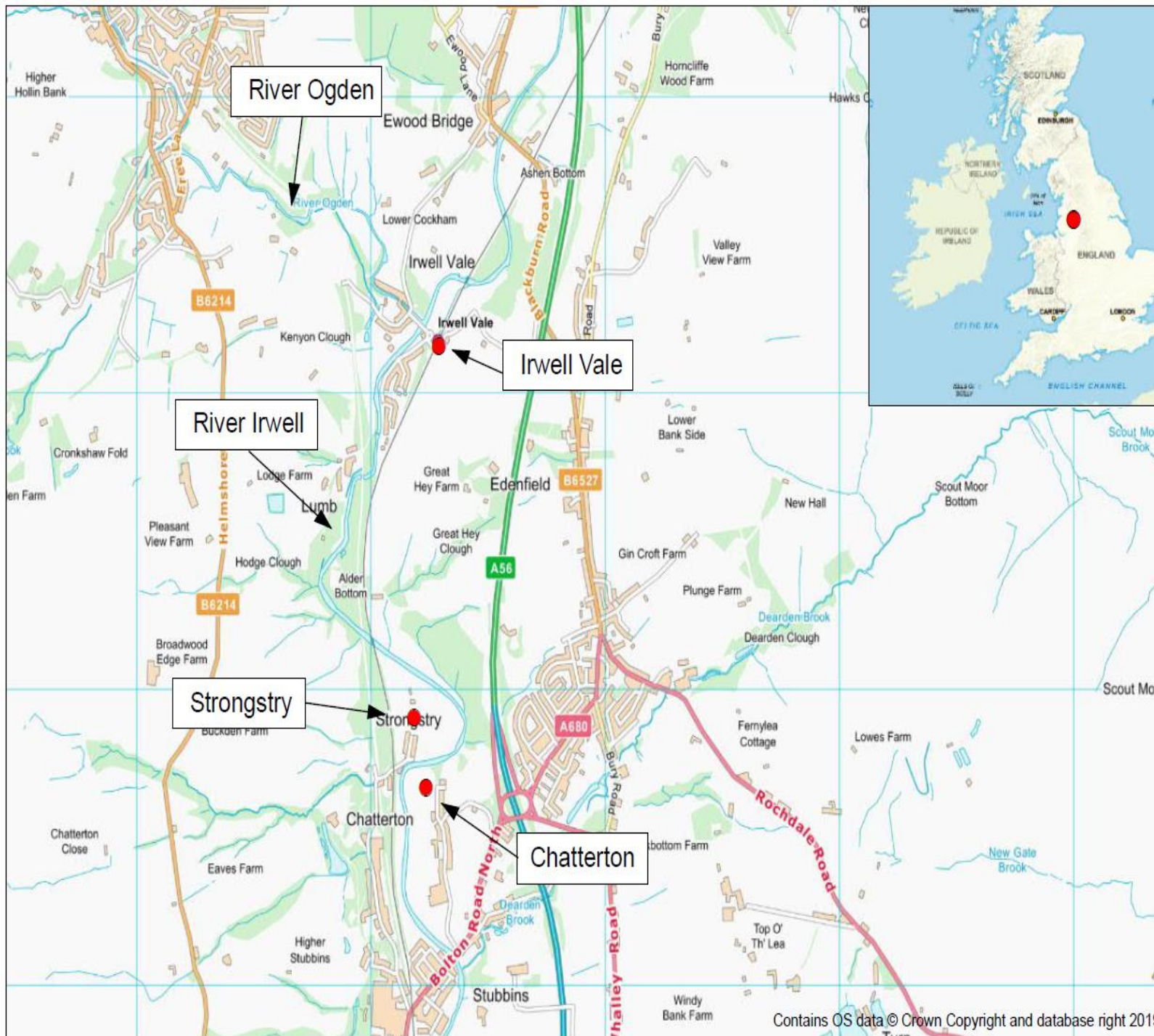


Irwell Vale, Strongstry and Chatterton Flood Risk Management Scheme (FRMS)

Community Update October 2023

Location

- **Irwell Vale** village is located on the confluence of the River Ogden and the River Irwell
- **Strongstry** and **Chatterton** are approximately 2 km downstream
- The River Irwell at Irwell Vale has a catchment area of 101km²



Summary of Options Considered

Flood Risk Management Option	Reduces flood risk to properties	Comments
Overland flow routing	✗	Overall - this measure will not reduce flood risk for most properties.
	✓	Some locations - this measure as part of surface water management measures will reduce surface water / pluvial flooding in a small number of properties.
Relocation of properties	✓	To those properties that are relocated.
Flood warning improvements	✓	No significant improvement identified at present; possible minor change identified
Channel widening	?	At present, there is insufficient information to confirm reduction of flood risk although, conceptually it does. Capital costs would be prohibitive and minimal opportunities to widen due to available space.
Flood storage	✓	A large volume (1,000,000m ³) of storage would be required to fully mitigate. Smaller volumes will reduce levels but value for money not tested. Suitable locations for large storage areas not possible in upper catchment.
Linear flood defences	✓	Mitigates flood risk to 2% SoP with an economic project (Benefit Cost Ratio > 1) but requires large amount of additional funding.
Trash screen around the inlet of the culvert running under the heritage railway embankment	✗	Very small scale - not known whether this reduces flood risk to properties.
Replacement / removal of Lumb Bridge	✓	Reductions in flood levels and hence reductions in flood risk are small (max of 0.5m close to bridge) and will only apply to some properties.

Flood Risk Management Option	Reduces flood risk to properties	Comments
Removal of Weir of River Ogden	✓	Reductions in flood levels and hence reductions in flood risk are small (max of 0.3m close to weir) and will only apply to some properties.
Diversion of River Ogden	✗	Ogden diversion to north of village would preserve village character and reduce challenge to buildability. However, Ogden contributes small amount to the river Irwell volume of water and hence, low reduction in flood levels.
Property Flood Resilience (PFR) (resistance)	✗	Many or most properties - depth of flooding too great and response time problematic.
	✓	Some properties - depth OK although response time problematic.
Property Flood Resilience (PFR) (resilience)	✓	ONLY reduces flood risk by reducing its impact as the properties will still flood.
Enhanced Gravel Dredging regime	✓	ONLY provides a small and localised reduction.
Natural Flood Management (NFM)	✓	NFM opportunities possible in wider catchment to help reduce water volume in river Irwell. Will require liaison with multiple landowners and quantification of flood risk benefits.
Temporary Flood Defences	✗	Issues of storage, deployment and reaction time indicates this is not a suitable option.
Improved emergency access	✗	Not directly related to flooding - although may be possible to identify a small reduction in consequences of flooding.

This is a list of all the options considered for reducing flood risk across the three communities. Ticks show where the option could reduce flood risk and crosses are where the option was considered as unsuitable due to site constraints, effectiveness and/or cost. The linear flood defences option (i.e. flood walls, gates and storage areas) was taken forward for further consideration. The list has recently been revisited to narrow down more cost-effective options.

Scheme costs and funding received to date

Estimated total scheme costs - £23m

Funding Source	Value
Flood Defence Grant in Aid	£5.1 million
Asset Replacement Fund	£4.65 million
Frequently flooded communities' fund	£2 million
Department for Education	£0.1 million
Local Levy	£2.2 million
Total Funding Secured	£14.05 million
Funding Gap	£8.95 million

This table details the amount of funding the scheme has sourced. There is a large funding gap of £8.95m and the Environment Agency project team have been working hard to fill this, through engaging with partners and the local MP. As the gap cannot be filled, the £14.05m of sourced funding cannot be spent on other, smaller works. The £14.05m must, in effect, be 'handed back' to the respective source. Government appraisal guidance ties this £14.05m into the specific 'linear defences' option and if any other option is taken forward it must complete its own economic appraisal to attract funding, which will be proportionate to the number of properties it better protects.

Criteria for Successful Scheme Delivery

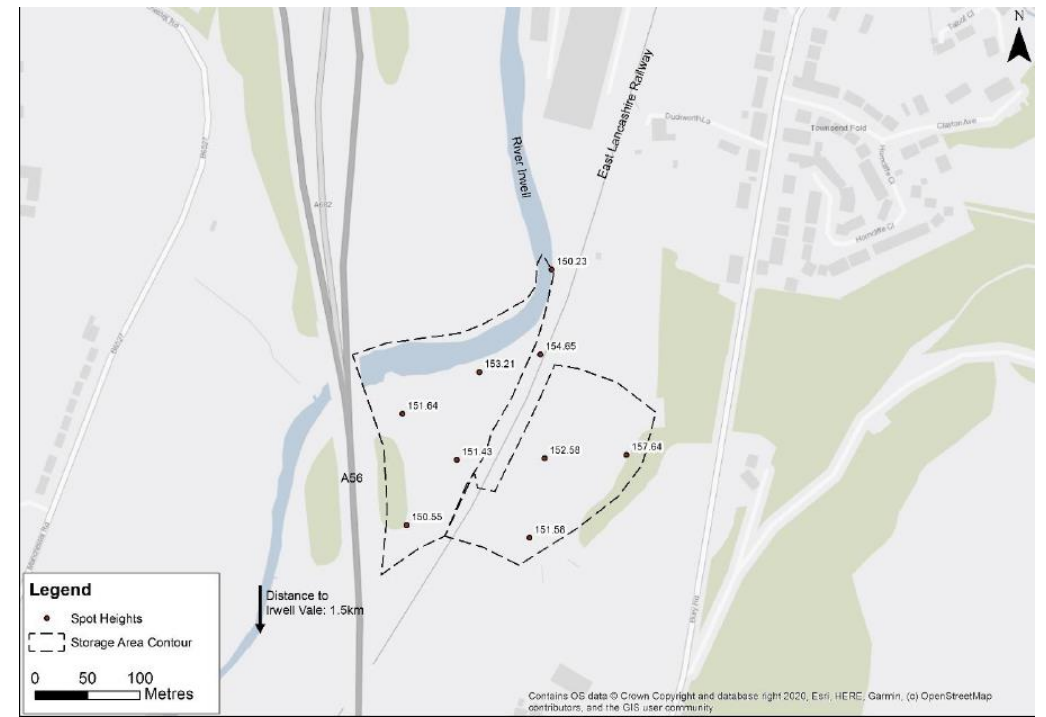
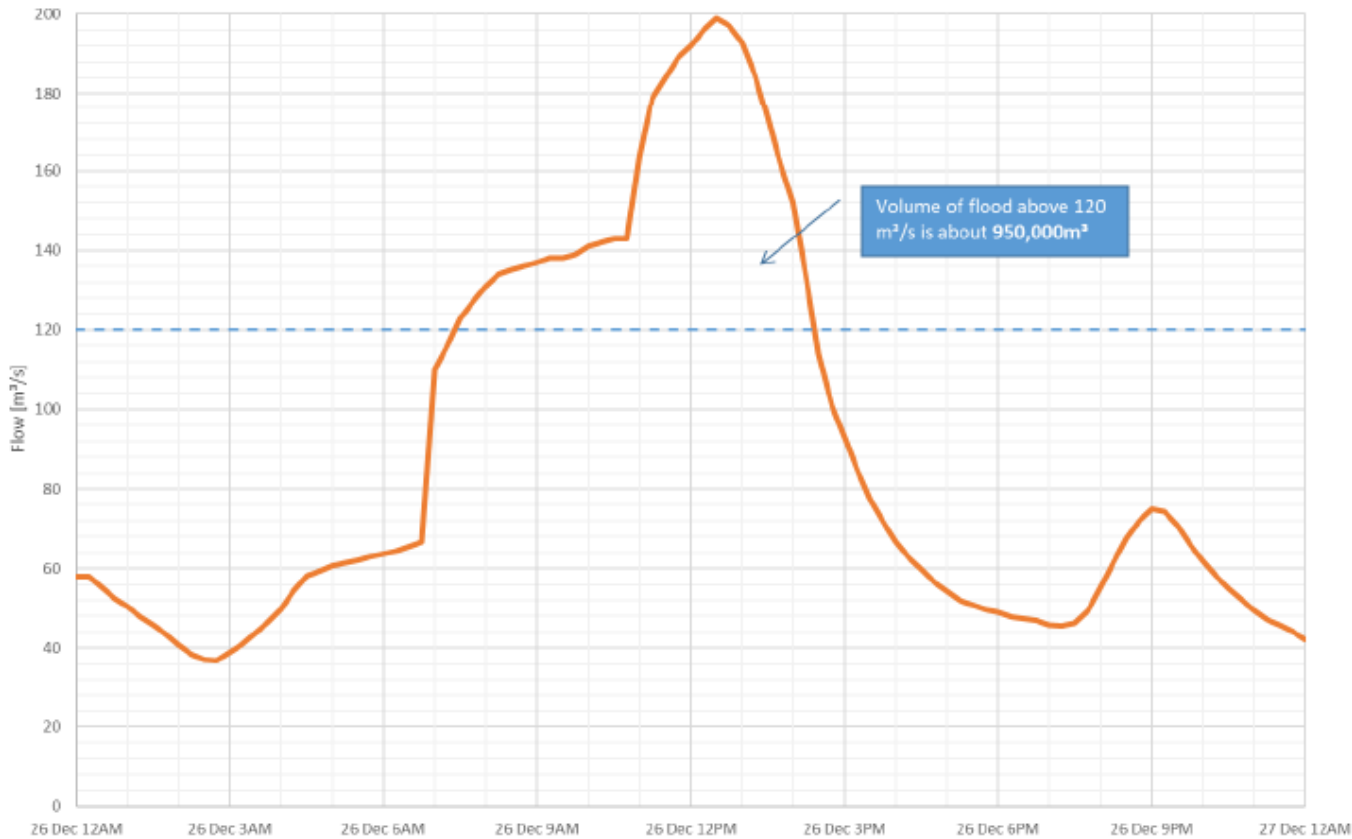
Criteria	Actual
Benefits Cost Ratio > 1	1.7
Cost of Scheme and Funding Gap	£23m cost, £8.95m funding gap
Planning permission/community acceptance	Moderate risk of acceptance
Buildability/ability to construct the scheme	Challenging with access issues/single points of access
Environmental Constraints	Biodiversity Net Gain opportunities are challenging, protected trees and in-channel working

The Environment Agency have held high level meetings with executive partners regarding funding and how we and partners can explore options to close the funding gap. Unfortunately, we, along with partners were unable to identify any further funding beyond that which they already contributed through the North-West Flood and Coastal Committee levy.

Unfortunately, due to the funding gap it will not be possible to take the scheme forward to the next stage, i.e. submitting an updated business case. At this stage we require full funding in place for the scheme before we can move forward.

Flood Storage Challenge

Irwell Vale Gauging Station - Boxing Day 2015 flood



This slide has been included as several residents have asked whether flood storage could reduce flood risk. Any storage upstream of the 3 communities would aim to take the peak of the hydrograph (orange line on the graph above the dotted blue horizontal line). This would require at least 950,000m³ of storage. The site to the right (underpass of A56 north of Irwell Vale as an example) could only provide a very small percentage of this. The EA and partners will pursue opportunities for flood storage where they can and where funding is available, but the availability of suitable locations may be limited.

In summary, the upstream catchment is steep, with limited permeability, narrow contained floodplain and urban development in the valley bottom. This leads to a river system that responds rapidly to rainfall run-off with limited scope for effective additional measures to hold water back beyond that of the natural absorption already afforded by the existing land-use.

Next Steps

The project team and partners are fully committed to supporting the community in reducing the risk of flooding, and we understand the frustration of being unable to continue with the flood risk management scheme at this stage. The Environment Agency and partners are fully committed to looking at alternative options to reduce flood risk, this will include:

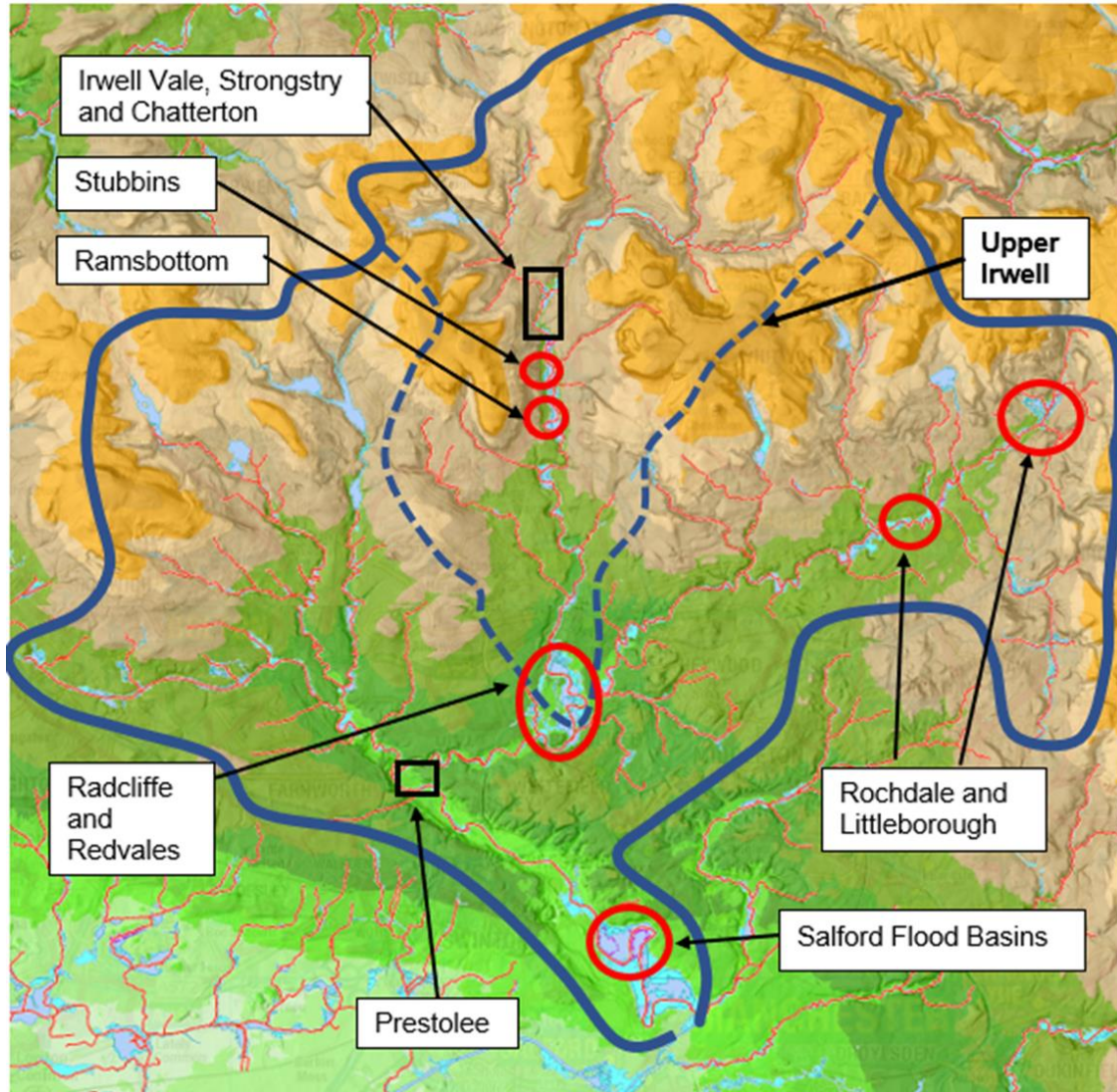
Raise Flood Scheme at
a high level

Surface
water

Support local
community initiatives

Irwell Strategy/ Natural
Flood Management

Irwell Strategy



Irwell Strategy – this will aim to provide a greater understanding of the flood risk across the wider Irwell catchment, working with United Utilities, Lancashire County Council, Rossendale Borough Council, Natural England, local communities and other partners to develop an Integrated Investment Plan for managing flood risk and improving the environment. It will involve Natural Flood Management (NFM), land management and catchment storage.

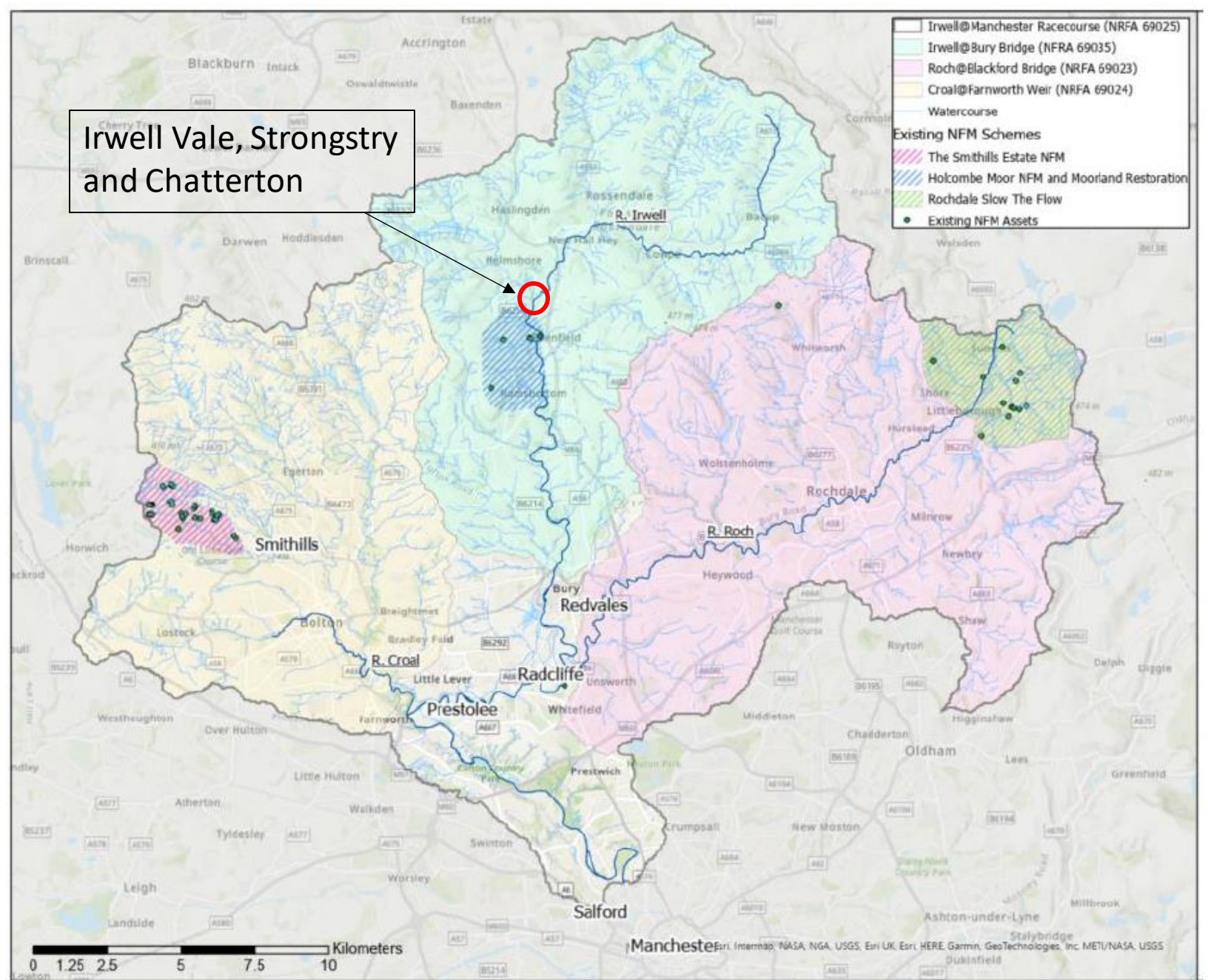
A programme of interventions along with the funding mechanisms will be established. Projects developed from this study will look to incorporate key partner and local stakeholder opportunities.

The strategy will focus initially on the Upper Irwell (area within the dashed blue line).

Existing NFM in the Irwell Catchment



Irwell Vale, Strongstry and Chatterton



A number of Natural Flood Management schemes have been developed across the wider catchment and further proposed sites are in development e.g. Whitworth. The EA and partners will hold a NFM landowner drop-in event in the coming months to identify areas of land suitable for NFM. The EA would welcome interest from landowners.