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Natural Flood Management Saving the Highway

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www.wigan.gov.uk



[WiganCouncilOnline](#)

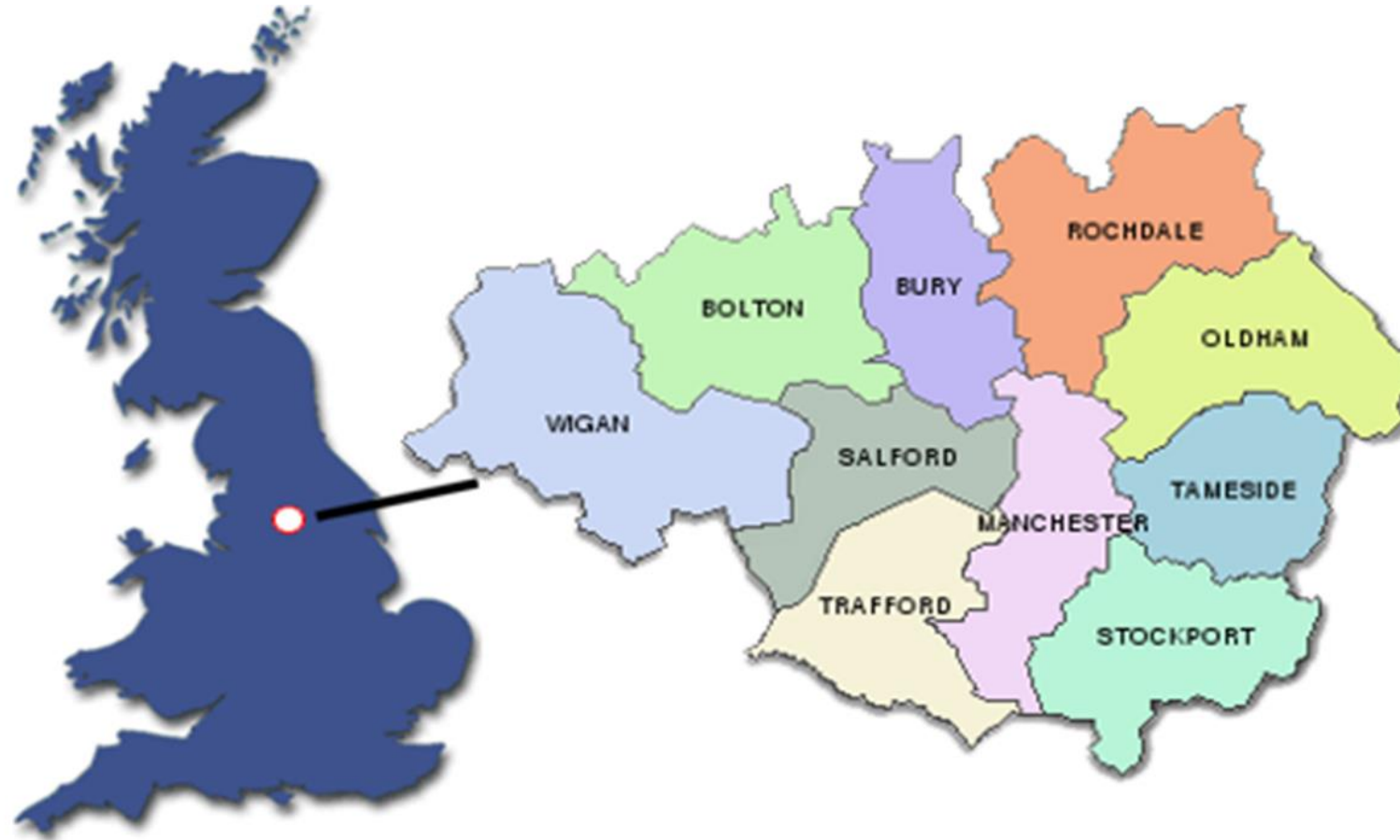


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Wigan Council Overview



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Drivers for Change



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OUTLINE CLIMATE CHANGE STRATEGY

NET ZERO CARBON - VISION 2038

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Jan 5

⚠️ A flood alert has been issued for Upper River Douglas & ... rainfall. **BBC**

We are monitoring ...

👉 For the <https://ch>
👉 Sign up <https://wv>

For advice 1 month ago
do if a flood occurs, visit: [Wigan.gov.uk/Flooding](https://wigan.gov.uk/Flooding)



ITVX

Council calls on Government to provide aid to victims of New Years flooding | ITV News

More than 400 people were forced from an apartment complex's after it's car park and ground floor were flooded on 31 December.

6 days ago



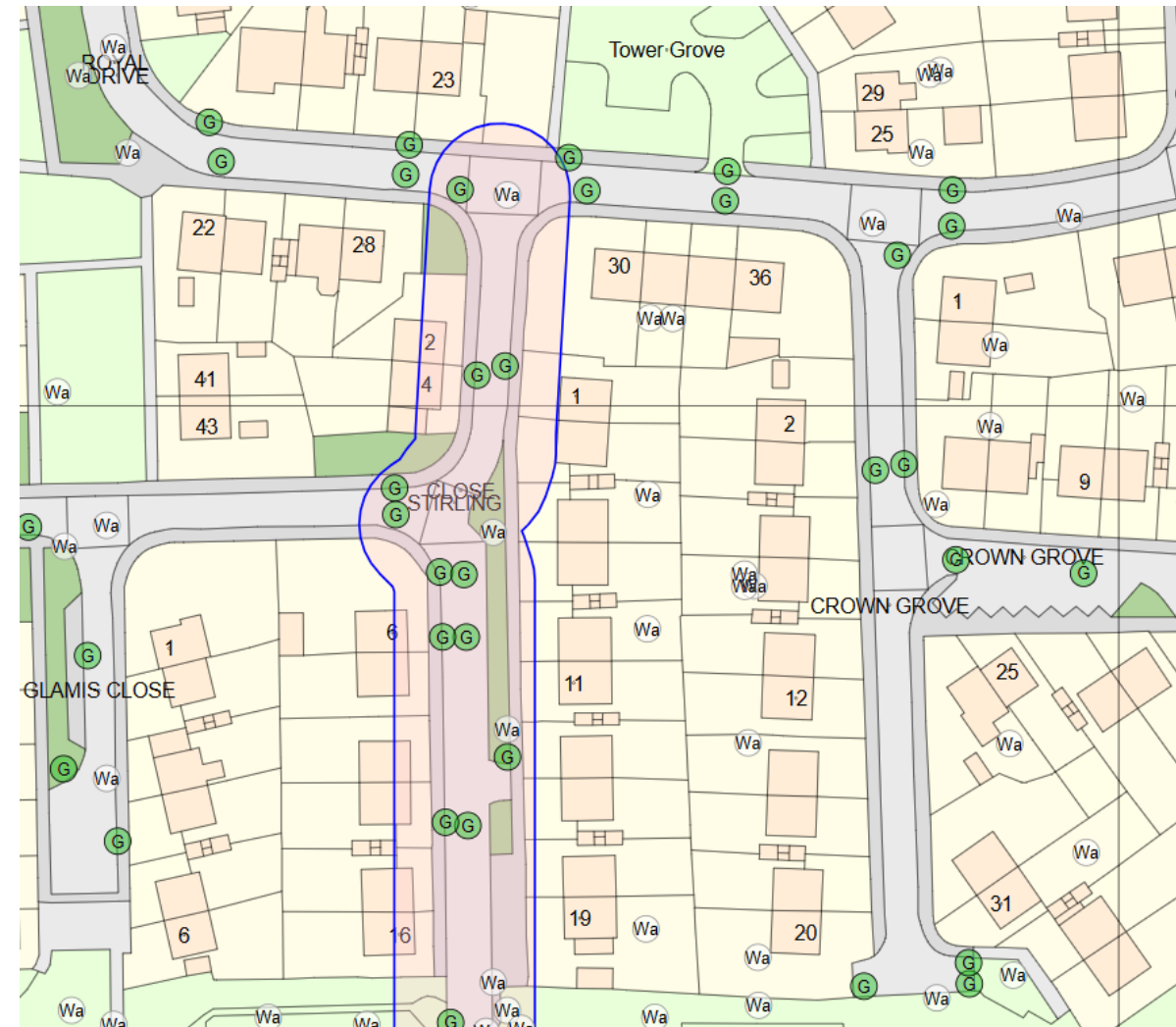
There's also still time to come along to one of our sessions on Community Flood Action Groups, later today (Thurs 30 Jan):
▶ The Salvation Centre, Chapel Street, Ashton





Flood Risk Innovation

- HMEP Guidance on the Management of Highway Drainage Assets (2012)
 - Improved asset data inventory
 - Efficient and effective use of budgets
- Developing our risk based approach
 - Asset condition data and performance
 - Profile on silt build up
 - Hierarchy - flood risk zone, resilient network
 - Defect category, investigation levels, response time
- Frequency – planned clean / inspection



Flood Risk



From Oct 2022 to March 2024 the UK saw the highest amount of rainfall for an 18 month period since records began



Increased number of severe weather events across the country



Sewer systems and water courses unable to cope with increased demand



Increasing numbers of highway flooding events, resulting in:

- disruption to highway users
- damage to highway infrastructure
- flooding to residential/commercial properties

- Natural flood management (NFM) uses natural processes to reduce the risk of flooding.
- In September 2023 the Environment Agency and Defra announced £25 million funding for improving flood resilience through a new NFM programme.
- The EA/Defra target is for 260 NFM projects between 2021 and 2027.

Case Study – Leaky Dams



- Flooding to highway
- Closure of key route
- Restricted access to Crooke Village and nursery
- No issue on culvert
- Flooding from private land



Case Study – Leaky Dams



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NFM in Policy



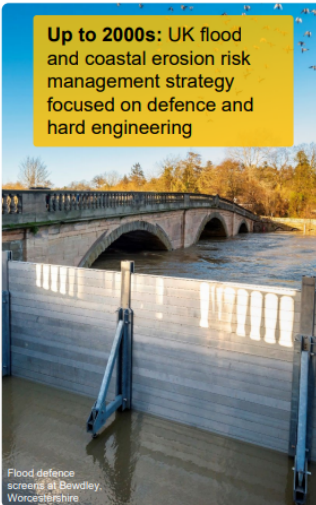
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Driving policy innovation over two decades: Natural Flood Management

- **Context:** Flooding costs UK economy £2.2bn a year, projected to rise by 27% by 2050
- **Collaboration:** NERC, Defra, the Environment Agency and partners worked together to identify and de-risk a more sustainable way to deliver flood and coastal resilience
- **Policy innovation:** Thanks to a strong evidence base Natural Flood Management is now key to UK flood and coastal erosion strategy

Benefits:



Up to 2000s: UK flood and coastal erosion risk management strategy focused on defence and hard engineering

Natural Flood Management (NFM) gradually taken up in UK flood management strategy

2004-05: Defra report changes flood risk narrative - *making space for water* rather than stopping it

2008: Pitt Review emphasises working with nature to reduce impact of flooding

2010-17: Environment Agency recommends NFM approaches pioneered by NERC-funded researchers

2018: Defra 25-year Environment Plan highlights importance of NFM and intention to expand use

2020: NFM becomes prominent in national strategies. Government commits to doubling NFM projects

2022: Environment Agency report on NFM pilot programme shapes work to mainstream NFM

Powered by evidence from experts, research and real-world trials delivered by NERC, Defra, the Environment Agency and partners

2000-10: NERC research and training addresses emerging government interest in NFM by evaluating different approaches

2009: Defra and NERC pilot projects demonstrate that NFM can reduce flood risk and deliver protection at a lower cost

2015-21: Defra, NERC, Environment Agency, Scottish Environment Protection Agency and Natural Resources Wales co-develop NFM research following successful pilot projects

2021: NFM is key part of £150m Defra / Environment Agency Flood and Coastal Resilience Innovation Programme, building on previous research and involving NERC-funded scientists



Now: Strategy focused on resilience and adaptation through a basket of measures including NFM

Environment Agency launches £25m NFM programme (2023), as well as investing in NFM through Defra's £5.6bn 2021-27 Flood and Coastal Erosion Risk Management Investment Programme

2024 onwards: £40m NERC investment in Floods and Droughts Research Infrastructure will provide near real-time data and new technologies that will support NFM delivery

"NERC's investment in research, and partnership approach to working with us and Defra, has played an influential role in changes to flood and coastal erosion strategy and investment. The academic research provided essential evidence that increased confidence in the effectiveness of NFM measures and steered the design of new investments".

Environment Agency Research Manager, Floods and Coastal Erosion Risk Management

Next Steps...

Natural flood management techniques

1. In stream structures for example debris
2. Blocking of moorland drainage
3. Woodland planting
4. Land and soil management practices such as crops, hedgerows, suitable crops
5. River morphology and floodplain restoration for example removal of embankments and re-meandering
6. Inland storage ponds and wetlands
7. Protecting riverbanks for example fencing
8. Sustainable urban drainage systems for example swales, wetlands, green roofs, permeable pavement, detention ponds, filter strips
9. Saltmarsh restoration
10. Coastal managed realignment
11. Coastal change management

Taken from the [National Flood and Coastal Erosion Risk Management Strategy for England](#)





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**Thank you for your time
and attention.**