

Love My River Northwich



**Delivering SUDs
for Communities
in North West England**

**SUSDRAIN Event
25 February 2020**



Love My River Northwich – Background & Aims



Love My River Northwich

- Community volunteering and schools engagement programme
- Operating since Autumn 2016, funded principally by the Environment Agency and delivered by Groundwork CLM.



Overall aims of the project:

- To engage the community in identifying why the Rivers Weaver and Dane in Northwich are failing under the Water Framework Directive (WFD)
- Develop actions to improve the health of the rivers and their value to local people.

Weaver Gowy Catchment Partnership area

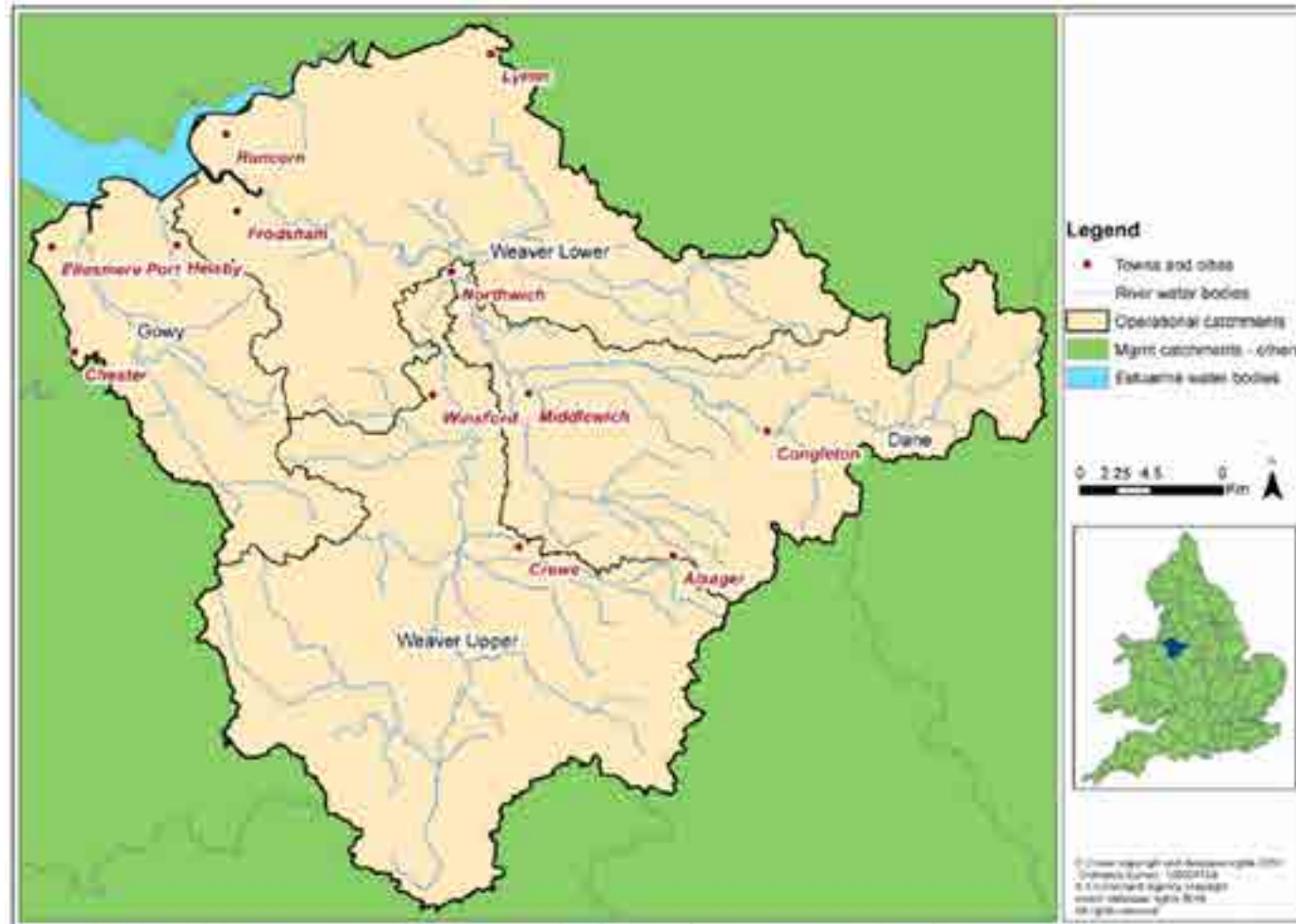


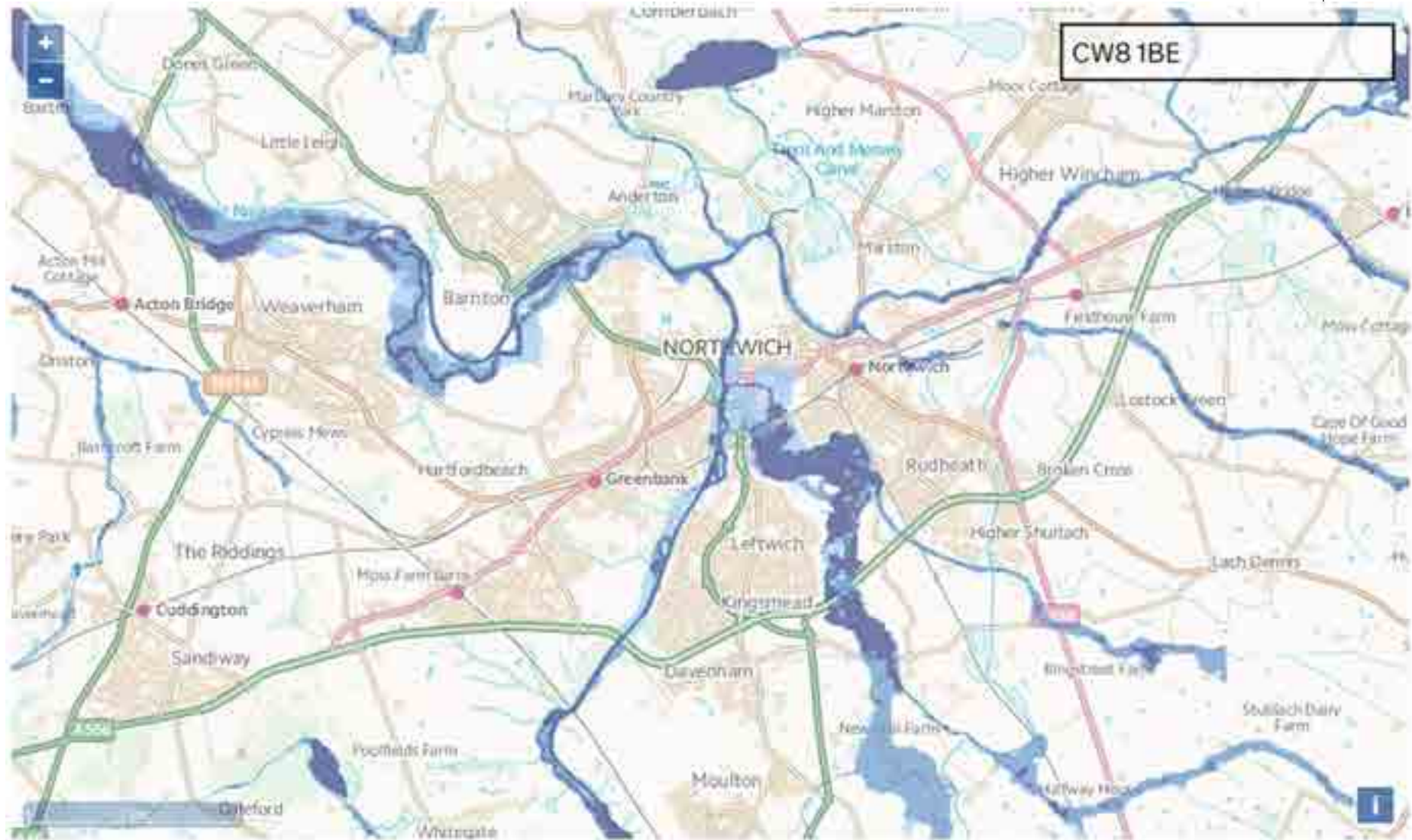
Figure 3 - Map of the Weaver Gowy Management Catchment and the operational catchments within it

Love My River Northwich – Local Context



Love My River Northwich – Local Context

<https://flood-warning-information.service.gov.uk/long-term-flood-risk/map>



Extent of flooding from rivers or the sea

- High
- Medium
- Low
- Very low

Love My River Northwich – Local Context





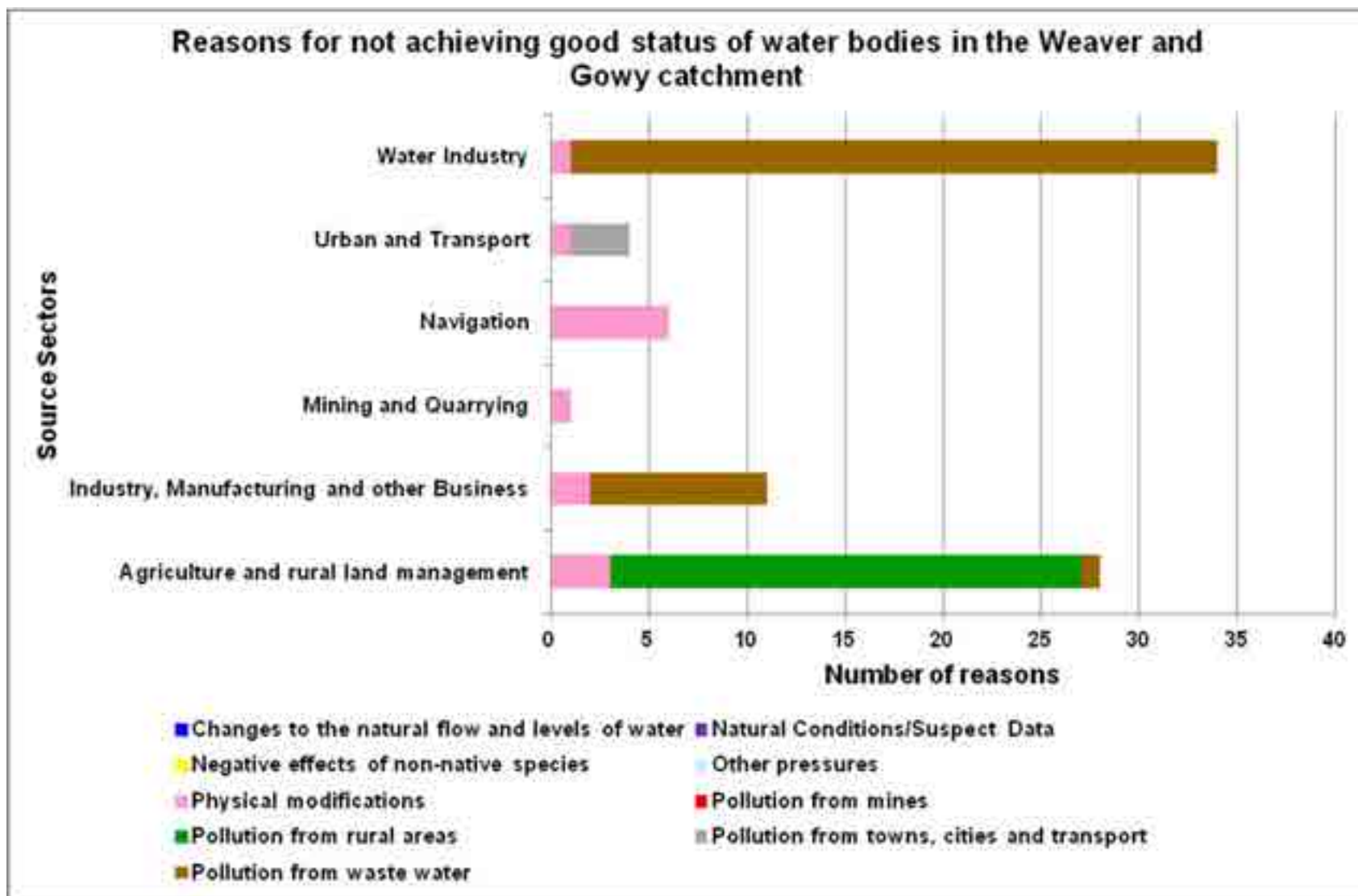
Love My River Northwich – Local Context



Flooding in Northwich in October 2019



Groundwork Cheshire, Lancashire & Merseyside
Web: www.groundwork.org.uk/clm
Tel: 01606 723175



Source: The Weaver Gowy Management Catchment: A summary of information about the water environment in the Weaver Gowy Management Catchment (Environment Agency 2014)

Love My River Northwich – Objectives & Themes



Love My River project themes align with agreed objectives within the Weaver Gowy Catchment Partnership Action Plan



These include:

- Developing a robust evidence base
- Improving Water Quality
- Managing Water Quantity
- Engaging with Business and Communities
- Enhancing and promoting the Natural Aspects of the Catchment

Love My River Northwich – Project Themes

Evidence Gathering - Walkover surveys



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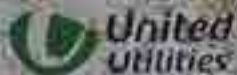


Greenbank Lane

Combined Sewer Overflow

Please report any pollution by
phoning: 0800 0151 230

Please Quote Reference: VRY 0073



Love My River Northwich – Project Themes

Evidence Gathering - Citizen Science Sessions & Northwich River Guardians Project



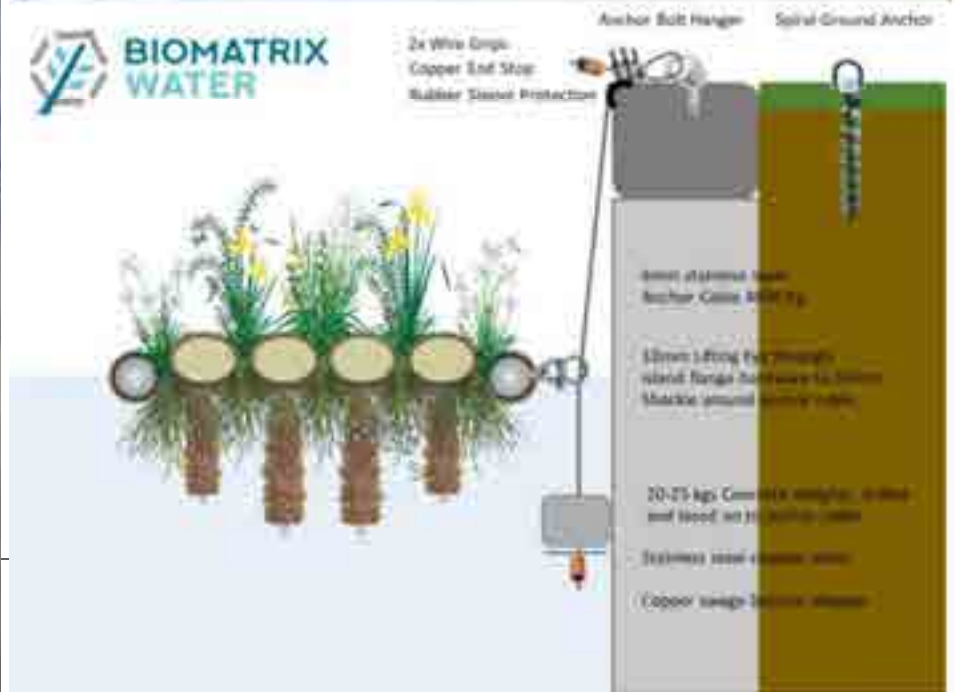
Love My River Northwich – Project Themes

Enhancements for Nature – Managing Invasive Species (INNS)



Love My River Northwich – Project Themes

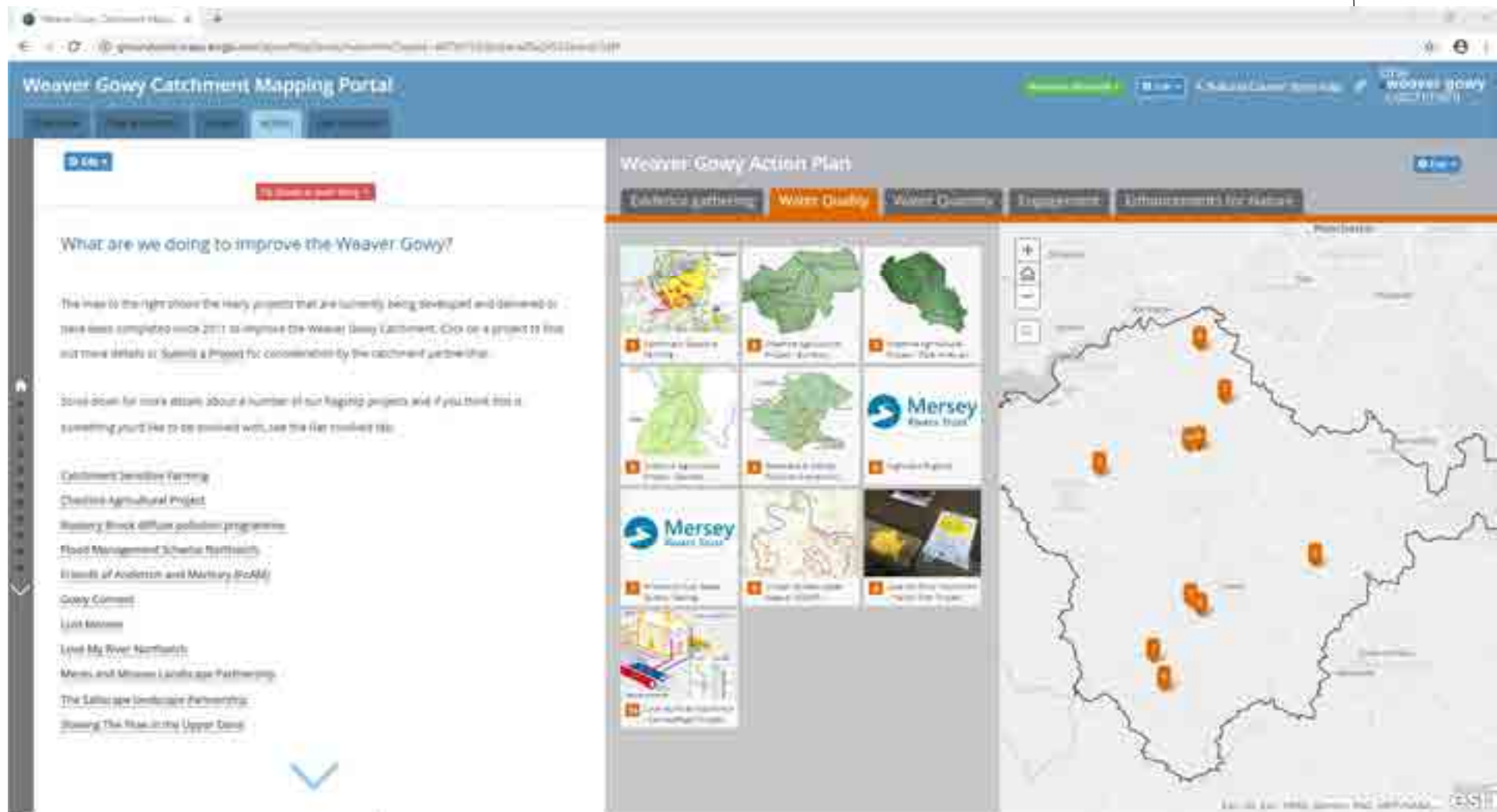
Enhancements for Nature – River Weaver Floating Habitats Project



Love My River Northwich – Project Themes

Engaging with Business and Communities -

Weaver Gowy Story Map: <https://arcg.is/I CarSv>



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Love My River Northwich – Project Themes

Improving Water Quality - Priorities



Northwich's sewage and surface water drainage infrastructure features both **Separate** and **Combined** sewer systems:

In **Separate** sewer systems, usually in areas developed from 1960s onwards,

- dedicated pipe networks carry foul sewage to the local wastewater treatment works and surface waters directly to local watercourses.
- pollution of watercourses can occur when foul drains or appliances are misconnected to surface water drains, or when polluting substances enter roadside gullies

In these localities, current Love My River Northwich priority actions for improving water quality focus on raising awareness and reducing incidents of pollution entering surface water drains through our '**ConnectRight**' and '**Yellow Fish**' programmes.

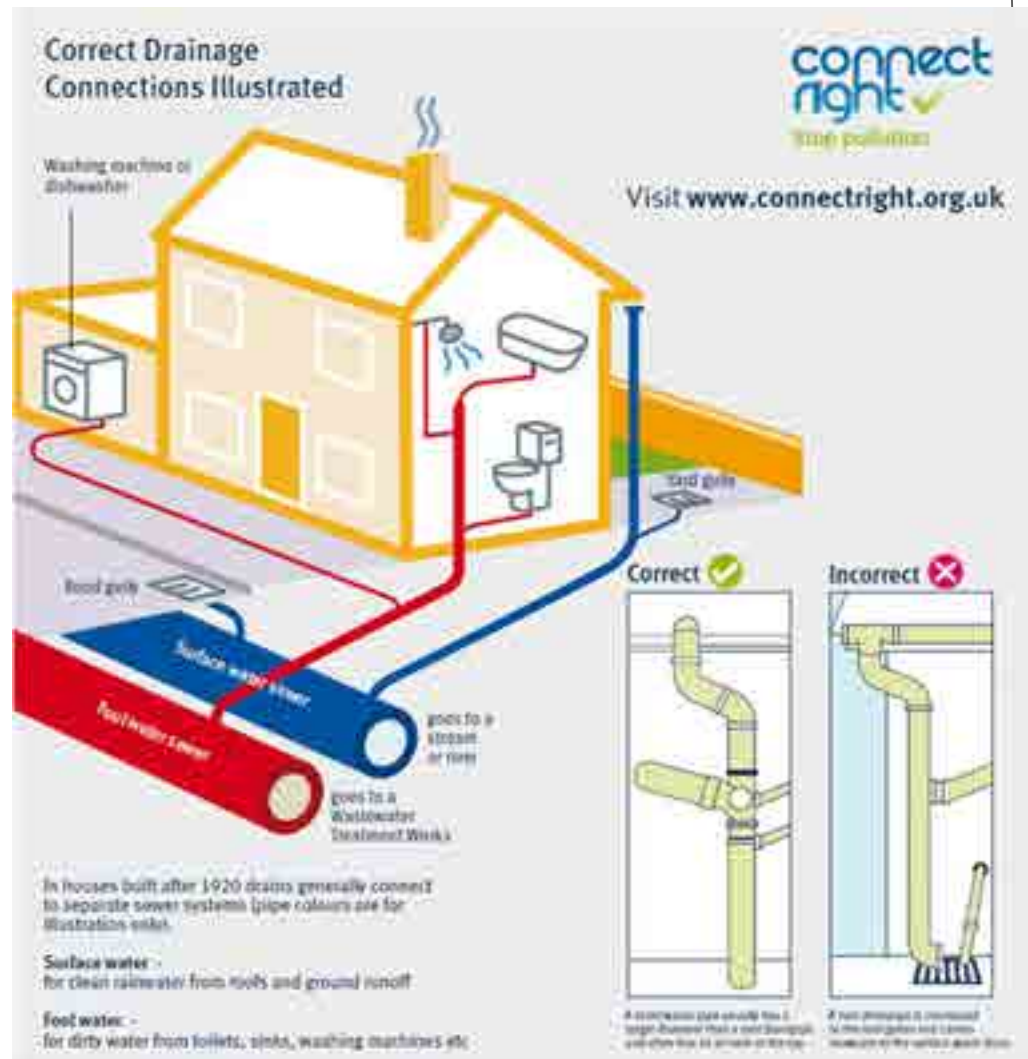
Love My River Northwich – Project Themes

Improving Water Quality - ConnectRight Project



connect right ✓
Stop pollution

Is your home connected right?



Love My River Northwich – Project Themes

Improving Water Quality - ‘Yellow Fish’ Project



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Love My River Northwich – Project Themes

Improving Water Quality - Priorities



In **Combined** sewer systems, usually in areas developed before the 1960s,

- a single pipe network carries both foul and surface water drainage to the local wastewater treatment works
- in periods of peak rainfall, excess surface water may cause combined sewers to overflow, carrying untreated sewage into local watercourses

For localities with combined sewer systems, Love My River Northwich is working with partners to identify priority locations and deliver SUDs projects which help **reduce the risk of Combined Sewer Overflows** by diverting peak rainfall away from the sewer network and into Rain Gardens/Soakaways

Love My River Northwich – Project Themes

Improving Water Quality & Managing Water Quantity

Community SUDS Projects



Castle Community Centre
Excavated Rain Garden



Grozone Community Garden
Sedum Roof project



Victoria Road Primary
School SUDS planter



Charles Darwin Community
Primary School SUDS planters



Northwich Youth Centre
SUDS planter, with soakaway



Excavated Rain Garden Demonstration Project

Castle Community Centre, Barbers Lane, Northwich CW8 1DT



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Excavated Rain Garden Demonstration Project

Castle Community Centre, Barbers Lane, Northwich CW8 1DT



Project partners:

- Age UK (Premises managers);
- Environment Agency GMMC team (Project funding).
- Groundwork CLM – Love My River Northwich (Project design, management and volunteer co-ordination);
- Crewe Conservation Volunteers;
- Vale Royal Conservation Volunteers;
- Grozone Community Garden Volunteers
- Love My River Northwich Volunteers;

Excavated Rain Garden Demonstration Project

Castle Community Centre, Barbers Lane, Northwich CW8 1DT



Project aims

- Reduce the risk of pollution from Combined Sewer Overflows (CSO's) by diverting all rainfall from the centre's roof, away from the combined sewer network.
- Provide rainwater collection and storage for use in the centre's garden.
- Create new seasonally wet habitat to benefit wetland species and pollinators.
- Create new, attractive, sustainable, low-maintenance feature within a programme of developments within the centre's garden
- Contribute to Northwich's North West in Bloom entry for 2019.
- Adapt best practice as outlined in current literature eg:
 - UK Rain Garden Guide (CIRIA, Thames Water, Environment Agency):
<https://raingardens.info/wp-content/uploads/2012/07/UKRainGarden-Guide.pdf>
 - Royal Horticultural Society – Advice on Rain Gardens:
<https://www.rhs.org.uk/advice/profile?pid=1009>
- Create a learning opportunity for all partners, demonstrating opportunities for other local community premises to develop multi-benefit SUDs projects.











SUDS Planter Boxes

Victoria Road Primary School, Charles Darwin
Primary School & Northwich Youth Centre



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Merseyside
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SUDS Planter Boxes

Victoria Road Primary School, Charles Darwin
Primary School & Northwich Youth Centre



Project partners:

- Victoria Road Community Primary School, Charles Darwin Community Primary School & Northwich Youth Centre (Premises managers);
- Environment Agency GMMC team (Project funding).
- Groundwork CLM – Love My River Northwich (Project design, management and volunteer co-ordination);
- Grozone Community Garden Volunteers
- Love My River Northwich Volunteers;
- School children, school gardening clubs and Youth Centre clubs (Planting & on-going maintenance)

SUDS Planter Boxes

Victoria Road Primary School, Charles Darwin
Primary School & Northwich Youth Centre

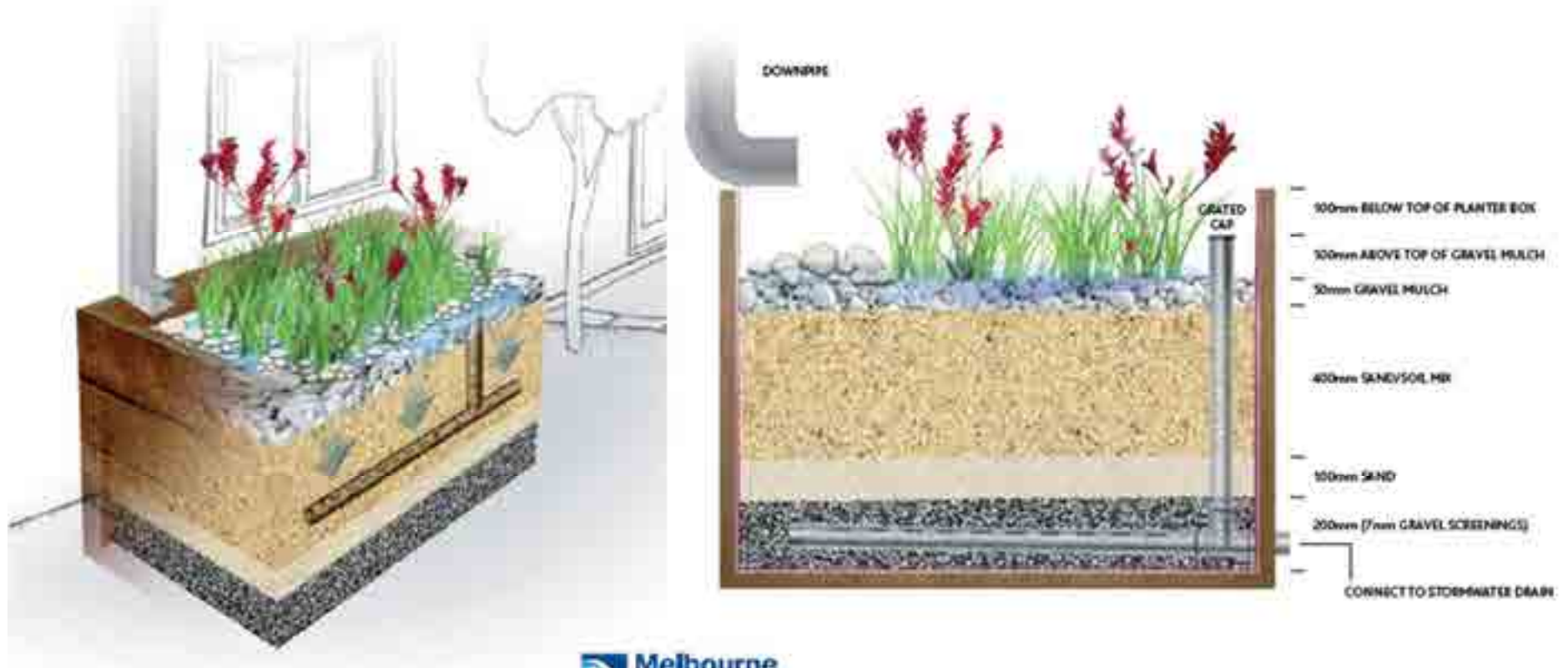


Project aims

- The planters are designed to reduce the risk of pollution from Combined Sewer Overflows (CSO's) by soaking-up rainfall from parts of the school or youth centre roofs and release it slowly as it filters through the compost, sand and gravel layers.
- In both school projects water drains back out to the combined drains after the peak rainfall event has passed, providing a rain garden option where it is not practicable to divert rainwater to an excavated soakaway.
- The Northwich Youth Centre project includes a small soakaway in the nearby lawned area, with a divertable pipe to enable either soakaway of combined drains to be used
- Adapt best practice as outlined in current literature eg:
 - Melbourne Water – Building a planter box raingarden (instruction sheet)
<https://www.melbournewater.com.au/media/448/download>
 - Royal Horticultural Society – Advice on Rain Gardens:
<https://www.rhs.org.uk/advice/profile?pid=1009>
- Create a learning opportunity for all partners, demonstrating opportunities for other local community premises to develop multi-benefit SUDs projects.

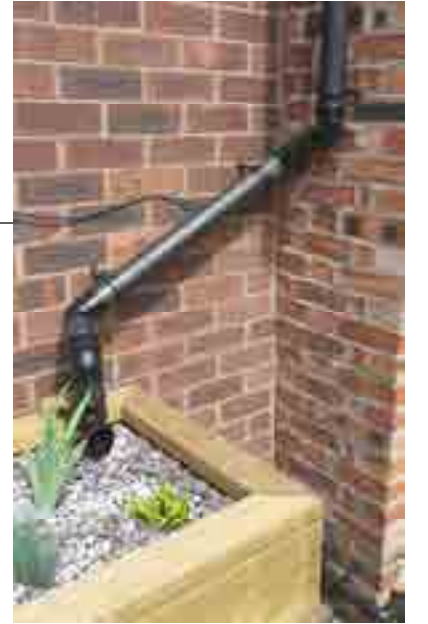
Melbourne Water – Building a planter box raingarden

<https://www.melbournewater.com.au/media/448/download>









Sedum Roof Project

Grozone Community Garden



Project partners:

- Grozone Community Garden (Premises managers);
- Environment Agency GMMC team (Project funding).
- Groundwork CLM – Love My River Northwich (Project design, management and volunteer co-ordination);
- Crewe Conservation Volunteers
- Grozone Community Garden Volunteers
- Love My River Northwich Volunteers;

Sedum Roof Project

Grozone Community Garden



Project aims

- The sedum roofs on two shipping container tool stores at Grozone are designed to reduce the risk of pollution from Combined Sewer Overflows (CSO's) by soaking-up rainfall from these roofs which would otherwise run direct to combined drains and release it slowly as it filters through the sedum vegetation root system and its gravel substrate.
- Create new habitat to benefit pollinators.
- Create new, attractive, sustainable, low-maintenance feature within a programme of developments within the centre's garden
- Contribute to Northwich's North West in Bloom entry for 2019.
- Trial an all-in propriety Green Roof system which could have potential applications elsewhere within the project: <https://www.greenroofsdirect.com/products>
- Create a learning opportunity for all partners, demonstrating opportunities for other local community premises to develop multi-benefit SUDs projects.

Sedum Roof Project - Grozone Community Garden

Propriety system: <https://www.greenroofsdirect.com/products>



OUR GREEN ROOF BUILD UP







Delivering SUDs for Communities in North West England

Key considerations and lessons learned



- Importance of support and trust from all partners involved
- Capacity, skills and appropriate support of community volunteer workforce
- Planned systems to mitigate against potential problems, eg:
 - overflows at times of peak rainfall
 - siltation/blockages in pipework
- Maximising multiple benefits – aesthetic, habitat/wildlife, links to other programmes
- Learning in advance from published experience from other projects worldwide and from specialist suppliers in the sector
- Arrangements for ongoing monitoring, maintenance and resolution of any issues arising
- Developing opportunities to expand beyond the ‘demonstration project’ scale to achieve meaningful impacts on reducing pollution and flood risk.

Groundwork CLM



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