



United Utilities Chorley Liaison Committee

21st March 2024



Water for the North West

Agenda

- 1. Background – UU Business Plan proposals sent to Ofwat**
- 2. How the wastewater system works including CSO's**
- 3. What we are doing to reduce CSO spills in Chorley?**
- 4. Investment is taking place in the wider catchment**

Building a plan for the North West

7.3 million people and **200,000 businesses**

Industrial heritage and Victorian infrastructure

Rainy, hilly region so water stored mainly in **reservoirs**

12% of households affected by water poverty

29 designated bathing waters

34% of land in the region has environmental protection

Annual water runoff **28% more** than rest of country

54% of sewer system is combined, with **2,200 storm overflows**



Challenges facing our region

A growing population

1 million more people over the next 25 years

Climate change

More severe rainfall events

Diverse communities

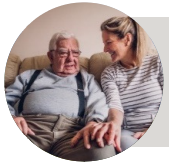
Differing levels of prosperity across the region's communities

Growing expectations

Environmental requirements driving unprecedented levels of investment over next 30 years

This is what customers and stakeholders told us is important

We've spoken to 95,000 customers and these are the areas they said matter most and we should be addressing



Great quality water now and in the future



Improvements in the natural environment, in particular storm overflows and river water quality



Reduce the amount of leakage



Support vulnerable customers



Ensure the North West is a great place to live and work



Spend money wisely and efficiently

So we're proposing to deliver on things that matter to them

£13.7bn plan

Largest for over 100 years



1.4 million customers

Improved water quality



7x increase

In value of the environmental programme



60% spill reduction (decade to 2030)

£3.1bn investment



30,000 jobs

7,000 new roles



500km of rivers

Protecting and enhancing rivers across the region



2 million people

Safeguarding water supplies



Halving the chance

of a hosepipe ban



£525m affordability support

Helping one in six customers



Addressing your priorities in Lancashire – our proposed plan



Stronger

- ✓ 55,300 supported with affordability help, this will double by 2030
- ✓ 66,600 supported through Priority Services
- ✓ Employing more than 860 people across Lancashire, with more green jobs created
- ✓ Promoting sustainable development



Greener

- ✓ £870 million to improve the 35km rivers of Lancashire
- ✓ Improving fish and eel migration at Stocks reservoir and the Calder River intake
- ✓ Partnerships to improve rivers, coastlines and peatland with the Fylde Hub, Turning Tides, Ribble Rivers Trust, Wyre NFM, RSPB and more
- ✓ £729 million to reduce spills from 91 storm overflows



Healthier

- ✓ Protecting freely accessible land at nine sites across Lancashire
- ✓ Reducing impacts on taste, smell and appearance of water
- ✓ £270 million to improve four bathing waters and protect shellfish waters
- ✓ £1 billion to ensure resilient water supplies, by improving the Haweswater Aqueduct

Background - Wastewater Sewer Network

Foul Sewers

Foul sewers carry used wastewater to a sewage works for treatment



Surface Water Sewers

Surface water sewers carry uncontaminated rainwater directly to a local river or stream.



Combined Sewers

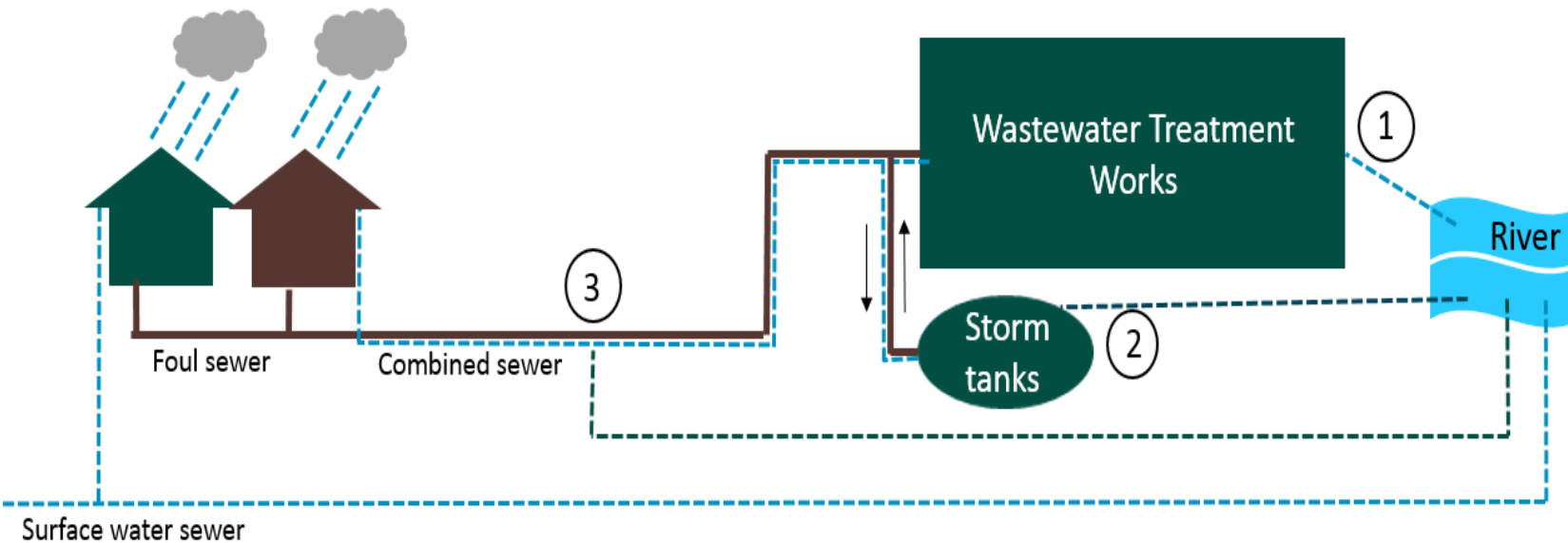
Combined sewers carry rainwater and wastewater to sewage treatment works in the same pipe. They have CSOs which act as a pressure relief valve when there is too much rainfall, allowing rainwater, mixed with sewage, to rise inside the sewer and eventually enter a separate pipe which flows into a river or the sea. Sewers operate this way to help prevent the flooding of streets, homes and businesses



Background - The wastewater system explained

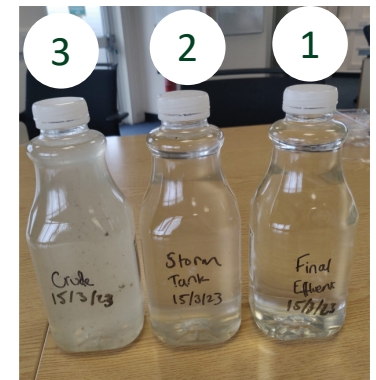
Much of the UK has a combined sewer system, with rainwater and wastewater draining to sewage treatment works in the same pipe.

- At times of heavy rainfall the combined sewer system risks becoming overloaded.
- Storm overflows have been an integral part of this country's sewer system for over 150 years.
- With sewers typically no more than 15% full during dry conditions, its heavy rainfall that causes the overflows to activate.
- Key to reducing the need for storm overflows is to reduce the increased volume of rainwater and run-off finding its way to the sewer in the first place.
- Increased development has replaced naturally water absorbing surfaces, like grass, with paving or other artificial surfaces. Combined with population growth and heavier rainfall due to climate change, we're now seeing increased volumes of water in our sewerage system.



Combined sewer system discharge points

1. Treated final effluent
2. Storm spills at treatment plants
3. Combined Sewer Overflows (CSOs)



Rainwater Management Strategy – Hybrid Schemes

We will work collaboratively to develop how we work in partnership and incentivise what, where and how Natural Flood Management (NFM) is installed within catchments.

There is approximately 2,000km of surface water sewer connected into combined sewers in the North West. We will identify where these can be disconnected without compromising water quality and flood risk.



Capture

Disconnect



Attenuate

Controlling everyday rainfall at source. By managing the first 5mm of rainfall, to reduce peak flow to sewers.

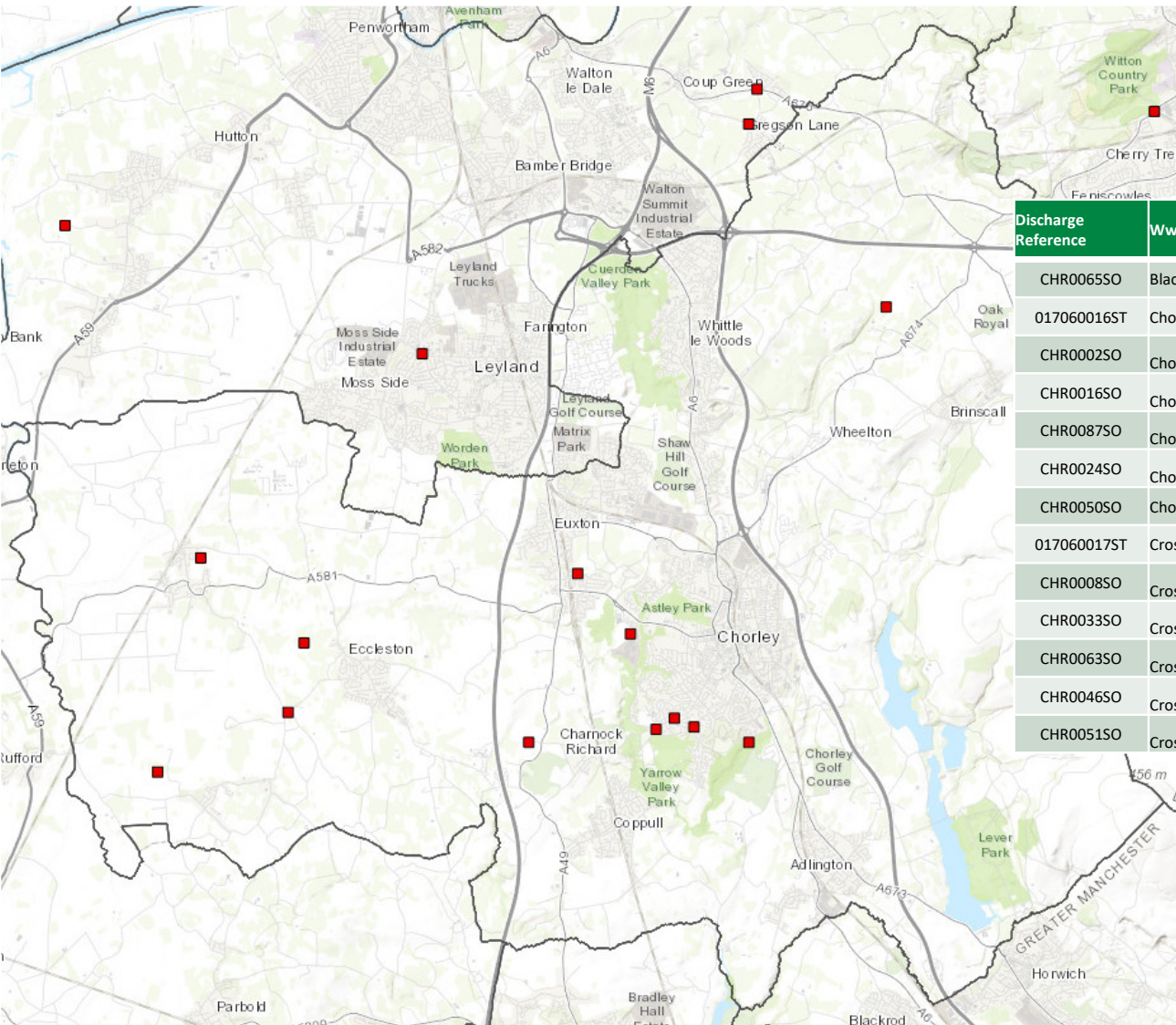
This can be achieved through use of blue green infrastructure (BGI) such as Swales or Rain Gardens in domestic, commercial and public realm environments.



Reuse

This strategy embraces rainwater as a valuable resource by recycling and reusing surplus surface water.

Chorley Local Authority



~£85m of investment up to 2030

Discharge Reference	WwTW	Overflow Name/Location	Solution Type	Volume	Average spills 20/21
CHR0065SO	Blackburn	Withnell Fold PS	Hybrid	1,427	177
017060016ST	Chorley	Chorley WwTW	Grey	3,020	57
CHR0002SO	Chorley	EARLSWAY CSO	Grey	205	73
CHR0016SO	Chorley	Eaves Green Brook CSO	Grey	190	14
CHR0087SO	Chorley	Moor Road/Eaves Green Road CSO	Hybrid	3,721	70
CHR0024SO	Chorley	Adjacent Duxbury Mill Pumping Station CSO	Grey	2,140	62
CHR0050SO	Chorley	Coppull New, Butterworth Brow	Grey	2,000	100
017060017ST	Croston	Croston WwTW	Grey	FTFT	85
CHR0008SO	Croston	Behind 33 The Orchard CSO	Grey	750	21
CHR0033SO	Croston	Brook Lane PS	Hybrid	627	35
CHR0063SO	Croston	North of Blackmoor Road CSO	Grey	2,480	55
CHR0046SO	Croston	Robin Hood PS	Hybrid	419	50
CHR0051SO	Croston	Eccleston Bridge D/S CSO	Grey	5,130	102

10 sites to meet Environment Act 10 spills P/A
 1 site to meet 3 spills per bathing season
 2 sites to meet WQ in the Yarrow

Similar Construction Processes



017060016ST - Chorley WwTw Point of Interest

AMP 8 Proposed Solution
Grey: 3020 cubic meters detention tank construction.



Access to Site: Access route to the proposed site via Common Bank Lane off Foxhole Road.

1 Proposed Location for additional storage: A tank of 3020 cubic meters is proposed to be built at a space within the Chorley WwTw.

2 Existing Outfall: Discharges overflow into River Yarrow via the Chor diversion.

3 Existing Overflow Chamber: An existing underground chamber that accommodates excess flow.

4 Construction Access: Existing access to be utilised for the works



5 Little G's Preschool Limited: Academic institution located along the access route to the site.

Common Bank Industrial Estate: Industrial estate area.

53.6495°

CHR0002SO – Earls Ways CSO Point of Interest



-  **Access to Site:** Access route to the proposed site via Empress Way off Princess way.
- 1** **Proposed Location for additional storage:** A tank of 205 cubic meters is proposed to be built in a space within the residential area.
- 2** **Existing Overflow Chamber:** An existing underground chamber located along Princess Way to accommodate the excess flow.
- 3** **Existing Outfall:** Discharges overflow into Chapel Brook.
-  **Rail Track:** Norther rail track at 100m to the proposed site.

Slide 13

WR0 [@Akinboyejo, Abiodun] can we please increase teh size of this map to include more area to the East - proposed solution is now in the field adjacent to Chapel Brook at edge of Empress Way

Wilkinson, Mathew (Better River, 2024-03-18T14:50:34.583

AA0 0 I will do that immediately

Akinboyejo, Abiodun, 2024-03-18T15:05:45.947

AA0 1 [@Wilkinson, Mathew (Better Rivers)] Kindly recheck.

Akinboyejo, Abiodun, 2024-03-18T18:05:07.304

CHR0016SO – Eaves Green RD CSO Point of Interest



AMP 8 Proposed Solution
Grey: 190 cubic meters detention tank construction.

➔ **Access to Site:** Access route to the proposed site via Eaves Green Road Way.

- ① **Proposed Location for additional storage:** A tank of 190 cubic meters is proposed to be built in a space within the residential area.
- ② **Existing Overflow Chamber:** An existing underground chamber to accommodate the excess flow.
- ③ **Existing Outfall:** Discharges overflow into Plock Wood Stream via a surface water sewer.
- ④ **Eaves Green Community Centre:** Proposed site next to the eaves green community centre building.
- ⑤ **All St. Church of England Primary School:** School building at 200m to proposed site.
- ⑥ **St. Gregory Primary School:** School building at 200m to proposed site.

CHR0024SO – Adj Duxbury Mill P.S. CSO Point of Interest



➔ **Access to Site:** Access route to the proposed site via Myles Standish Way.

① **Proposed Location for additional storage:** A tank of 2140 cubic meters is proposed to be built in a space within the Duxbury Woods.

② **Existing Overflow Chamber:** An existing underground chamber to accommodate the excess flow.

③ **Existing Outfall:** Discharges overflow into River Yarrow.

ⓓ **Duxbury Woods:** Existing ancient woodlands.

AMP 8 Proposed Solution

Grey: 2140 cubic meters detention tank construction.

CHR0050SO – Coppull New Rd/Butterworth Rd CSO Point of Interest

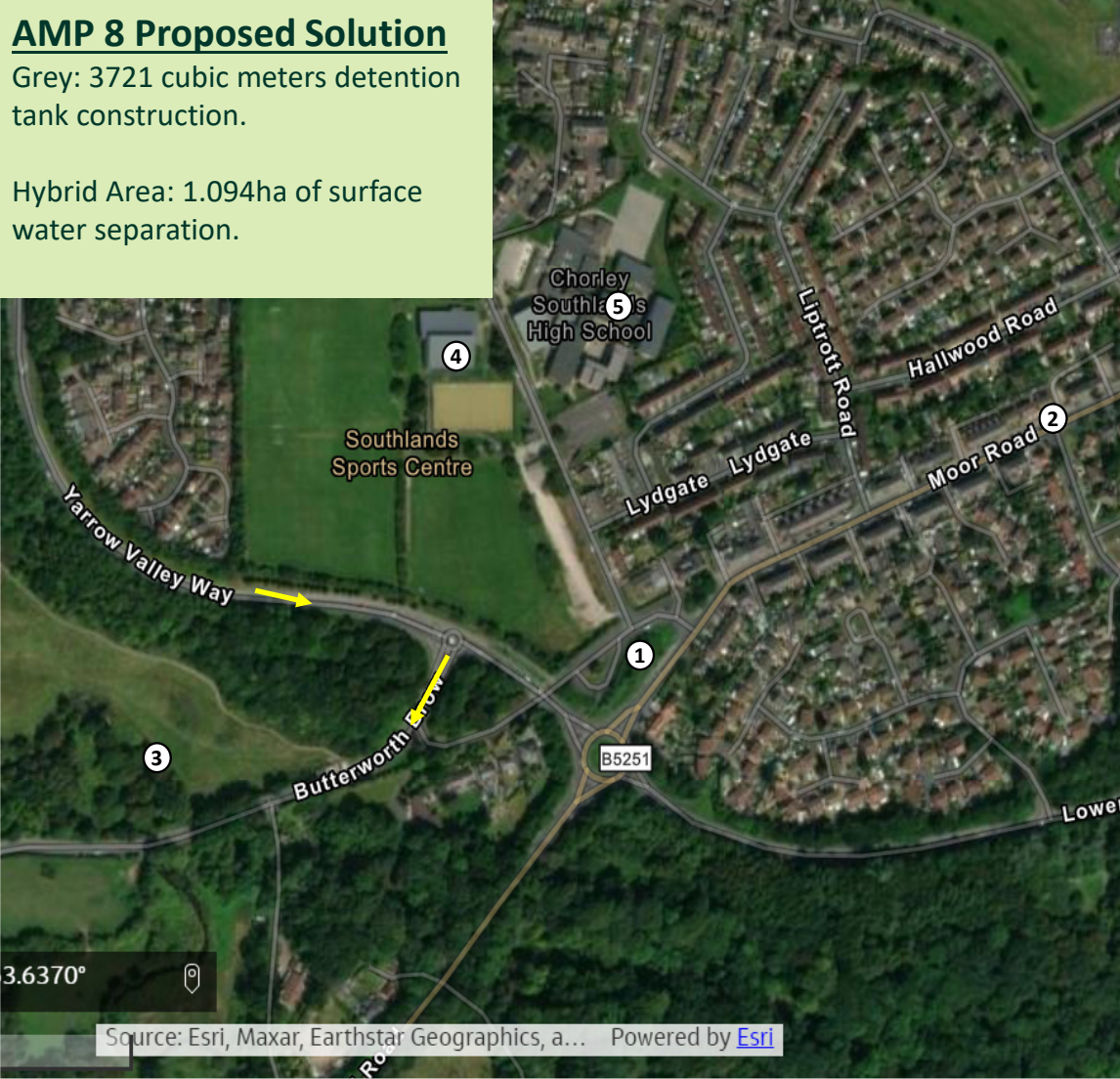


- ➔ **Access to Site:** Access route to the proposed site via Butterworth Brow and Yarrow Valley Way.
- ① **Proposed Location for additional storage:** A tank of 2000 cubic meters is proposed to be built at a location approximately 150m away from the Southland Sports Centre Field.
- ② **Existing Overflow Chamber:** An existing underground chamber located along Coppull road to accommodate the excess flow.
- ③ **Existing Outfall:** Discharges overflow into River Yarrow.
- ④ **Southland Sports Centre:** Proposed site at proximity to the sports field.
- ⑤ **Chorley Southlands High School:** 200m away from the proposed site.

AMP 8 Proposed Solution
Grey: 2000 cubic meters detention tank construction.

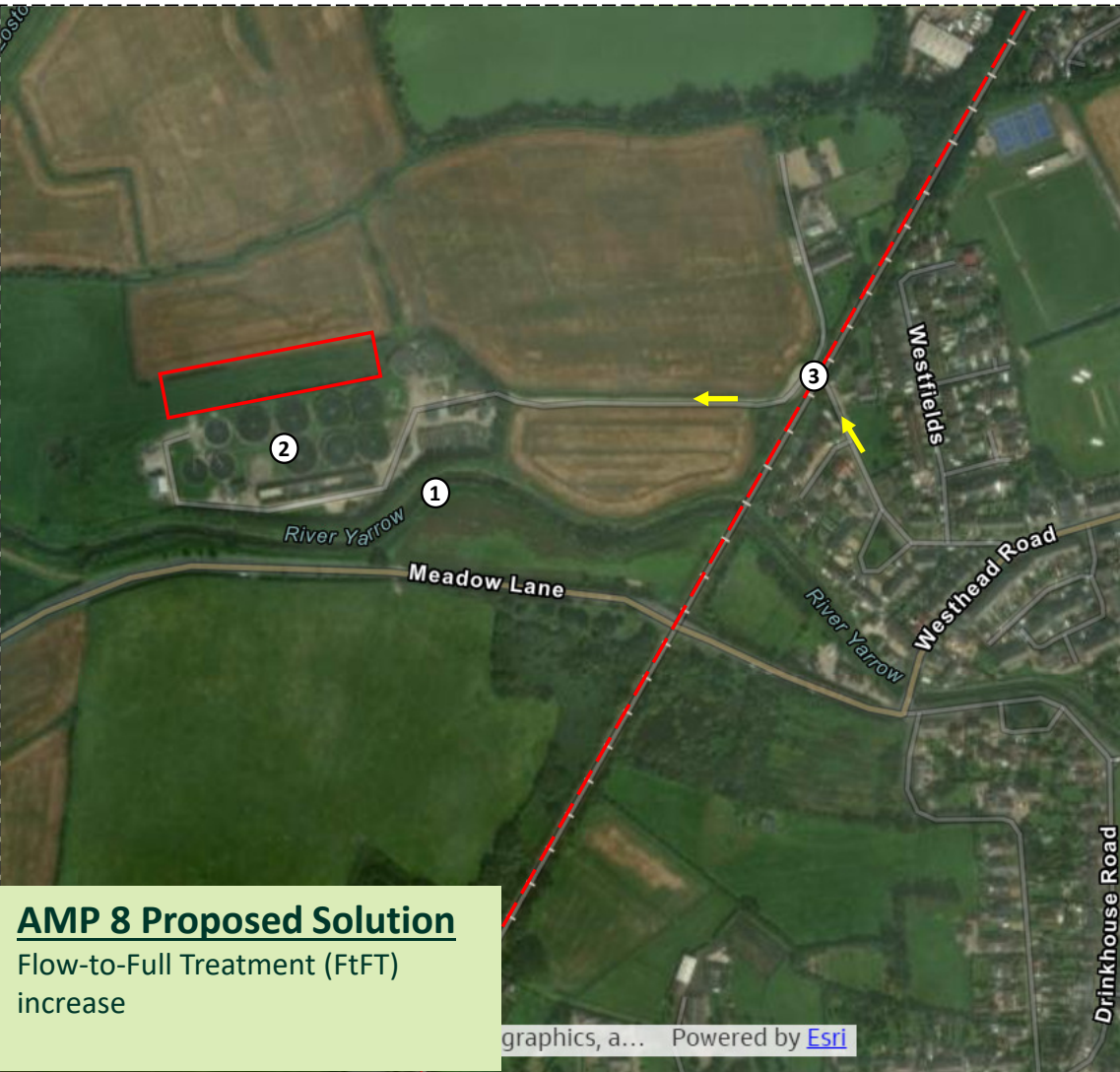
CHR0087SO – Moor Road Eaves Green Rd CSO Point of Interest

AMP 8 Proposed Solution
Grey: 3721 cubic meters detention tank construction.
Hybrid Area: 1.094ha of surface water separation.



- ➔ **Access to Site:** Access route to the proposed site via Butterworth Brow off Yarrow Valley Way.
- ① **Proposed Location for additional storage:** A tank of 3721 cubic meters is proposed to be built at a location approximately 300m away from the Southland Sports Centre Field.
- ② **Existing Overflow Chamber:** An existing underground chamber located along Moor road to accommodate the excess flow.
- ③ **Existing Outfall:** Discharges overflow into River Yarrow.
- ④ **Southland Sports Centre:** Proposed site in proximity to the sports field.
- ⑤ **Chorley Southlands High School:** 400m away from the proposed site.

017060017ST – Croston WwTw Point of Interest



- ➔ **Access to Site:** Access route to the proposed site via Riverside Cres.
- ▭ **Proposed Location for additional storage:** The area proposed for the WwTw upgrade. This is designed to increase the treatment capacity of the treatment works and achieve 10 spills per annum.
- - - **Rail Track:** Northern rail track in proximity to site.
- ① **Existing Outfall:** Discharges overflow into River Yarrow.
- ② **Croston WwTw Facilities.**
- ③ **Railway Crossing**

AMP 8 Proposed Solution

Flow-to-Full Treatment (FtFT)
increase

CHR008SO –Behind 33 the Orchard CSO Point of Interest



- ➔ **Access to Site:** Access route to the proposed site via the orchard off Moor Road.
- ① **Proposed Location for additional storage:** A tank of 750 cubic meters is proposed to achieve 10 spills per annum.
- ② **Existing Overflow Chamber:** An existing underground chamber to accommodate the excess flow.
- ③ **Existing Outfall:** Discharges overflow into the tributary of River Lostock.
- ④ **Bishop Rawstone Church of England Academy:** Religious institution at 250m away from the proposed site.
- ⑤ **Croston Recreational Ground:** 300m away from the proposed site.

AMP 8 Proposed Solution
Grey: 750 cubic meters detention tank construction.

CHR0051SO – Ecclestone Bridge CSO Point of Interest



- ➔ **Access to Site:** Access route to the proposed site via Lydiate Lane.
- ① **Proposed Location for additional storage:** A tank of 5130 cubic meters is proposed to be built at 500m away from residential area.
- ② **Existing Overflow Chamber:** An existing underground chamber to accommodate the excess flow.
- ③ **Existing Outfall:** Discharges overflow into River Yarrow.
- ④ **Residential Area**

AMP 8 Proposed Solution

Grey: 5130 cubic meters detention tank construction.

ered by [Esri](#)

CHR0033SO – Brook Lane Pumping Station CSO Point of Interest



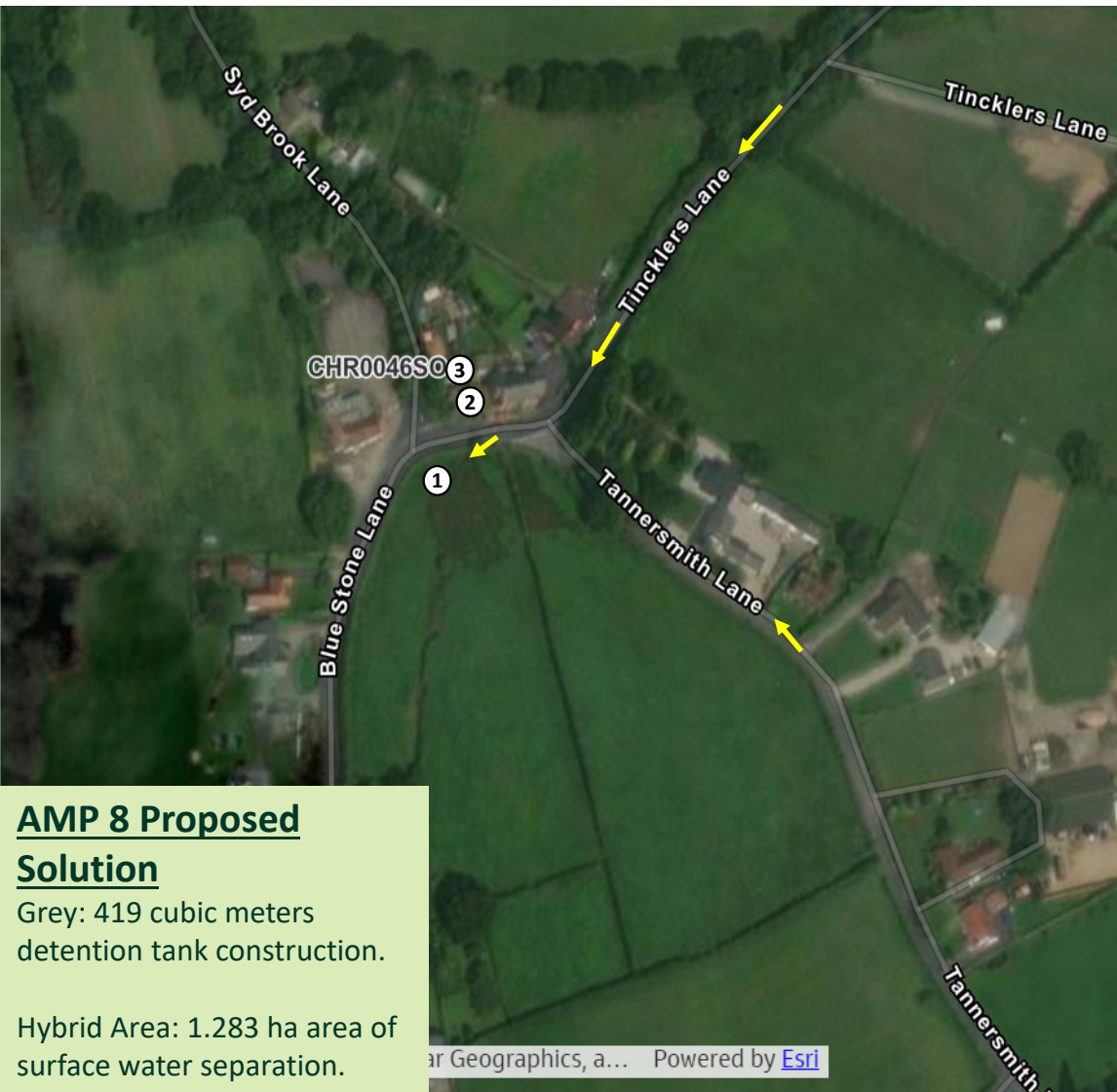
- ➔ **Access to Site:** Access route to the proposed site via Brook Lane off Preston Road.
- ① **Proposed Location for additional storage:** A tank of 627 cubic meters is proposed to be built to achieve 10 spills per annum.
- ② **Existing Overflow Chamber:** An existing underground chamber to accommodate the excess flow.
- ③ **Existing Outfall:** Discharges overflow into tributaries of Syd Brook, a tributary of the River Yarrow.

AMP 8 Proposed Solution

Grey: 627 cubic meters detention tank construction.

Hybrid Area: 0.932 ha area of surface water separation.

CHR0046SO –Robin Hood PS CSO Point of Interest



➔ **Access to Site:** Access route to the proposed site via Trinklers Lane.

① **Proposed Location for additional storage:** A tank of 419 cubic meters is proposed to be built to achieve 10 spills per annum.

② **Existing Overflow Chamber:** An existing underground chamber to accommodate the excess flow.

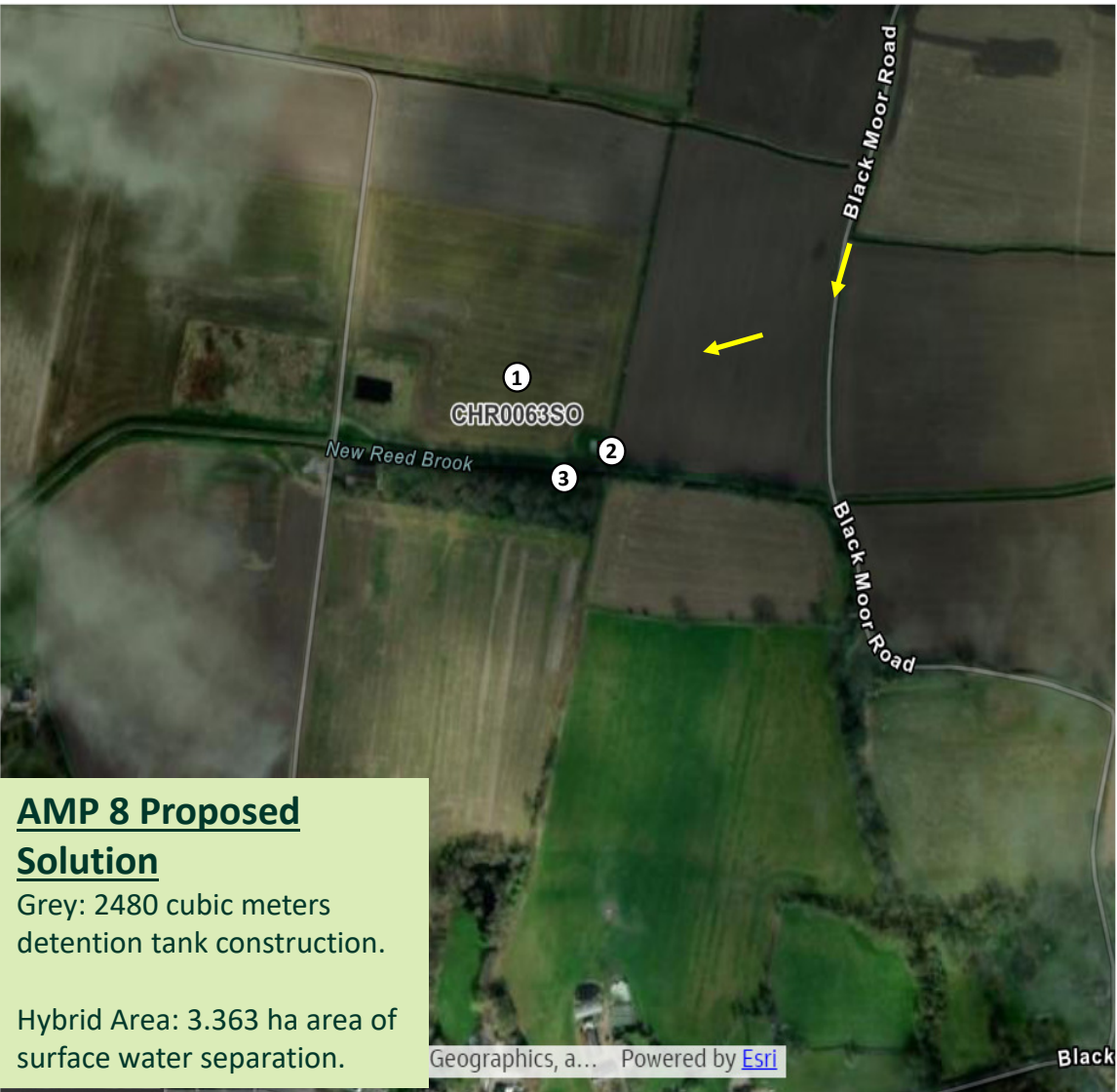
③ **Existing Outfall:** Discharges overflow into tributaries of Syd Brook, a tributary of the River Yarrow.

AMP 8 Proposed Solution

Grey: 419 cubic meters detention tank construction.

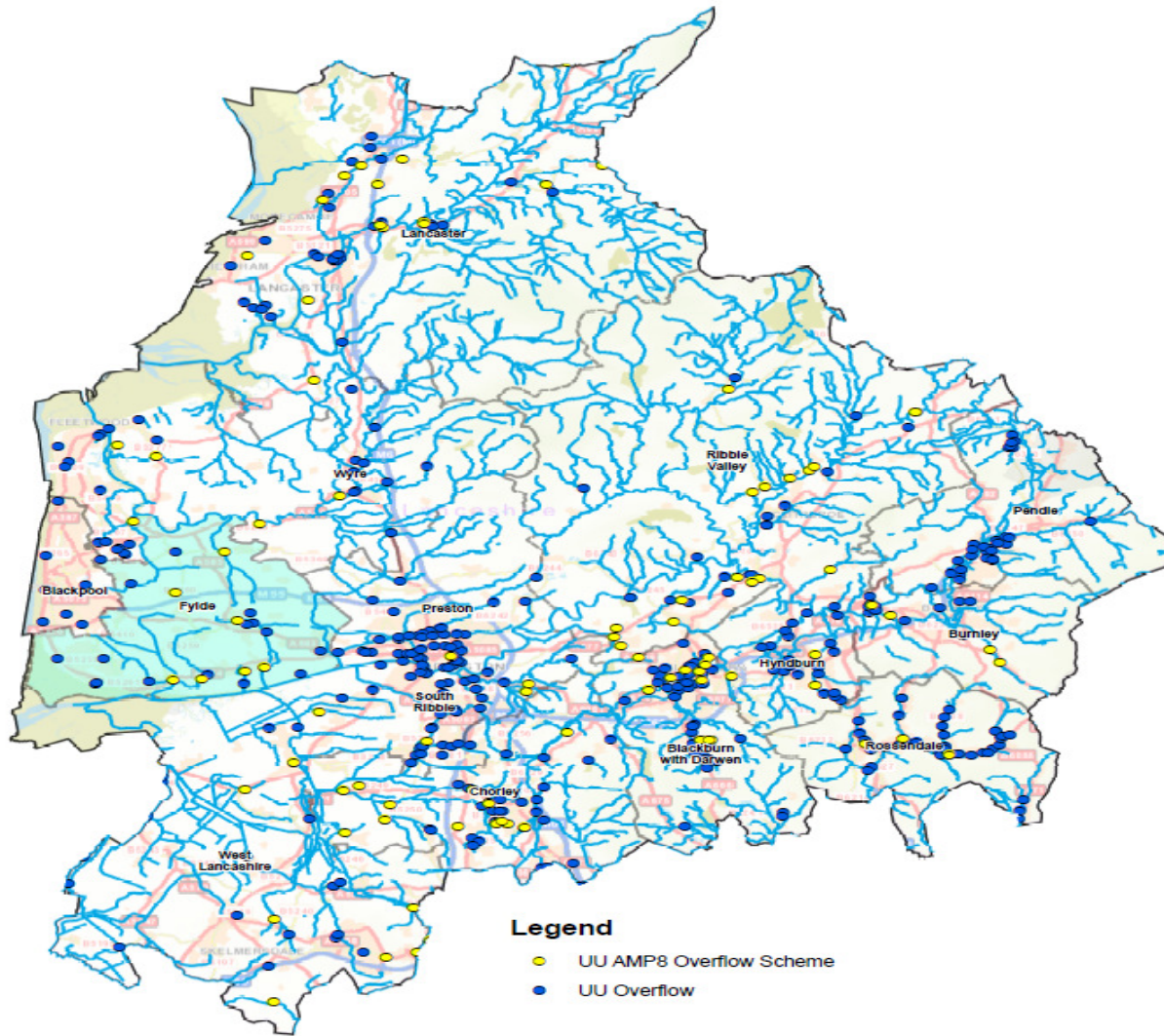
Hybrid Area: 1.283 ha area of surface water separation.

CHR0063SO –Blackmoor Road CSO Point of Interest



- ➔ **Access to Site:** Access route to the proposed site via Trinklers Lane.
- ① **Proposed Location for additional storage:** A tank of 2480 cubic meters is proposed to be built to achieve 10 spills per annum.
- ② **Existing Overflow Chamber:** An existing underground chamber to accommodate the excess flow.
- ③ **Existing Outfall:** Discharges overflow into New Reed Brook.

Wider CSO investment across Lancashire will contribute to improvement in river quality in Chorley Community.



- 91 projects within Lancashire will be completed by 2030. These will cost circa £730m.
- We are looking for opportunities to collaborate with Local Authorities and increase the % of Hybrid solutions we deliver
- Further large-scale investment will continue until 2050, when all CSO's in the UU region will have received investment to ensure that they meet the annual target of less than 10 spills per year.