UUWR_38

PR24 Draft Determination: UUW Representation

Area of representation: Cost and PCD - Investigations

August 2024

This document outlines our response to Ofwat's Draft Determination on Ww WINEP Investigations.

Reference to draft determination documents: PR24-draft-determinations-Expenditure-allowances, section 3.2, PR24-draft-determinations-Expenditure-allowances-Enhancement-cost-modelling-appendix, Appendix A1
PR24-DD-W-Investigations.xlsx
PR24-DD-WW-Investigations .xlsx

United Utilities

Water for the North West

1. Key points

- **Ww investigations are key to the development of PR29**: Both for potential future investment in the North West and for the Water Industry in England and Wales a whole (CIP4 and N-TAL).
- **Alternative approach to cost modelling of investigations should be adopted by Ofwat:** Specifically for the large catchment wide investigations which currently sit outside the modelled allowance.
- **For chemical investigations it is not appropriate to have the level of efficiency applied:** This is due to the ceiling price on joint UKWIR projects where a set price is committed by each WaSC based on the UKWIR formula or a straight split.
- **The Price Control Deliverable needs to align with WINEP:** Currently the PCD requires delivery of all outputs by FY28. This is not in line with all AMP8 investigations as stipulated in the WINEP.

2. UUW's PR24 proposal

The UUW business plan submitted document UUW63 WINEP Investigations and fish weir removal included the detail of the investigations that were included within the WINEP and the associated costs at the time of the submission. The investigations included in this programme area were all required under the Water Industry National Environment Programme (WINEP) and support the robust identification of future needs and enhancement drivers.

As they are included as WINEP requirements they are over and above our base costs. Query OFW-OBQ-UUW-056 asked for further detail on the large catchment investigations. In response we detailed how these investigations support the long term plan for reducing storm overflow spills in these catchments and demonstrated that this plan is supported by both the Mayor of the Liverpool City Region Steve Rotheram and the Mayor of Greater Manchester Andy Burnham.

3. Draft determination position

The Draft Determination for investigations applied a 40% efficiency, primarily due to the size and therefore associated cost of the catchment wide investigations. Ofwat also applied a 20% efficiency for the Chemical investigation programme (CIP4) and Nitrogen technically achievable limit (N-TAL) investigations which are modelled separately.

Since submission there have been various changes made to the WINEP, details of these are included in New WINEP document UUWR_77 and are listed below:

Investigation enhancement scheme changes to the Ww WINEP since October 2023 submission:

- Removal of Worthington Lake investigation from WINEP;
- Removal of Pennington Flash investigation due to the implementation of a scheme in AMP8;
- Removal of 96 transitional and coastal (TraC) EnvAct_INV4;
- Addition of 529 EnvAct_INV4 storm overflow investigations; and
- Addition of bathing water investigations due to the 2024 bathing season designations two additional at Coniston and one at Derwent Water. Removal of Daisy Nook and Pennington Flash investigations from WINEP.

4. Issues and implications

Table 1 below shows the number of investigations broken down by WINEP driver. This provides a breakdown of the type and costs of investigations covered by UUW proposed cost allocation to lines CWW3.103-CWW3.114. This demonstrates the split across different WINEP / NEP drivers. As part of this table, we have split the EnvAct_INV4 driver into those which are single site EnvAct_INV4 and those catchment investigations that have the lead driver of EnvAct_INV4 and the secondary driver of 25YR_EnvAct. This distinguishes the unit cost of a complex single site investigation and the large catchment investigations which encompass multiple overflows and have a much broader scope.

Table 1: UUW response to OFW-REP-UU-003 detailing number of investigations by driver code and complexity

WW investigation WINEP driver	Nr of investigations by type (as per CWW20.61-63)			Totex by investigation type (as per CWW3.105, 108 & 111) (£m)			Total nr of investigations	Total totex (£m)
	Desk based	Simple	Complex	Desk based	Simple	Complex		
BW_INV2	0	0	5	0.0	0.0	1.8	5	1.8
BW_INV5	0	1	0	0.0	0.4	0.0	1	0.4
EnvAct_INV1	0	0	1	0.0	0.0	2.0	1	2.0
EnvAct_INV2	0	0	1	0.0	0.0	4.8	1	4.8
EnvAct_INV3	0	0	1	0.0	0.0	4.8	1	4.8
EnvAct_INV4	373	242	158	0.8	7.7	10.4	773	18.9
EnvAct_INV4 / 25YEP_INV	0	0	10	0.0	0.0	33.4	10	33.4
SW_INV	0	1	0	0.0	0.7	0.0	1	0.7
WFD_INV	0	0	0	0.0	0.0	0.0	0	0.0
MCZ_INV	3	3	0	0.0	0.3	0.0	6	0.3
HD_INV	0	3	0	0.0	0.1	0.0	3	0.1
HD_MOD	0	0	0	0.0	0.0	0.0	0	0.0
WFD_INV_CHEM	2	32	1	1.1	3.0	1.9	35	6.0
WFD_INV_MP	2	0	0	0.7	0.0	0.0	2	0.7
Total	380	282	177	2.6	12.1	59.1	839	73.8

Source: UUW analysis

We note that our list of investigations above includes WFD_INV_CHEM and WFD_INV_MP WINEP drivers. These two lines have their Totex mapped to the 'Chemicals and emerging contaminants monitoring, investigations, options appraisals' enhancement driver, as per CWW3 table guidance. To reconcile our Totex numbers for desk based, simple and complex, these two chemical drivers should be excluded.

4.1 Catchment Investigations

Within our enhancement case "UUW63: Investigations: section 4.2: Environment Act storm overflow investigations" we included detail of the large catchment wide investigations in our plan. In agreement with the

Environment Agency we have scoped these to define the long term integrated adaptive plan for storm overflows for the Davyhulme, Mersey Estuary and the River Irwell catchments.

These investigations come under the EnvAct_INV4 driver and a 25YEP_INV driver and cover catchment wide investigation, which all follow a common philosophy to the unique challenges and investigation bespoke to each area. However, they are more complex than a standard EnvAct_INV4 investigation. This is because they are looking at developing an overarching long term adaptive plan for the entire river catchment rather than for an individual asset which is the scope of a standard EnvAct_INV4 investigation. The aim of these investigations is to develop a holistic plan for the systems that will guide future investment and are essential for developing solutions that are best value and lower whole life costs overall. Due to the anticipated level of expenditure required to achieve the long term targets in these catchments there is the potential for these investigations to be a precursor to complex future schemes that may be delivered through the DPC (direct procurement for customers) mechanism.

Figure 1, 2 and 3 show the locations of these catchment investigations. As can be seen there are a large number of overflows in each catchment in extremely urban areas. Solutions to achieve the long term Environment Act targets of 10 spills per year on these overflows will be extremely large scale, complex and expensive. Therefore, investigations are required in AMP8 to understand the most efficient and effective strategic approach and adaptive pathway.

The need to take a more detailed and strategic, catchment wide approach for these investigations arose from analysis to inform our future Drainage and Wastewater Management Plan and WINEP development. When considering the potential costs and solutions to meet the requirements of the Storm Overflow Discharge Reduction Plan (SODRP) it identified the potential for significant costs and complexities in several catchments. The three largest of these were included in the WINEP.

We are confident that by looking at the whole catchment rather than just the components it will identify opportunities for a more innovative and transformative solution across the catchment and deliver best value for customers.

Key deliverables of these investigations are detailed in Appendix 1 and include:

- An Assessment of potential opportunities to reduce flows into network in identified catchments including surface water separation assessments, connectivity surveys etc.
- An assessment of options for providing additional treatment capacity at existing wastewater treatment works including process modelling to establish operational flow limits and assessment of potential impacts of additional stormwater
- Flow and asset surveys
- An Assessment of land ownership and access requirements at sites identified for development or investigation
- A detailed development review and updated network models where required
- A 25 year stakeholder development plan
- An Adaptive plan for delivery of catchment improvements to support DPC development.

Table 2 shows the number of overflows in each catchment, their total modelled annual spill duration and volume. From this it is clear that these are large and frequently spilling overflows. These cannot be investigated in isolation and a strategic catchment study is needed to understand the best long term solution for each catchment.

Table 2: Number and volumes of spills from overflows within the Catchment investigation areas

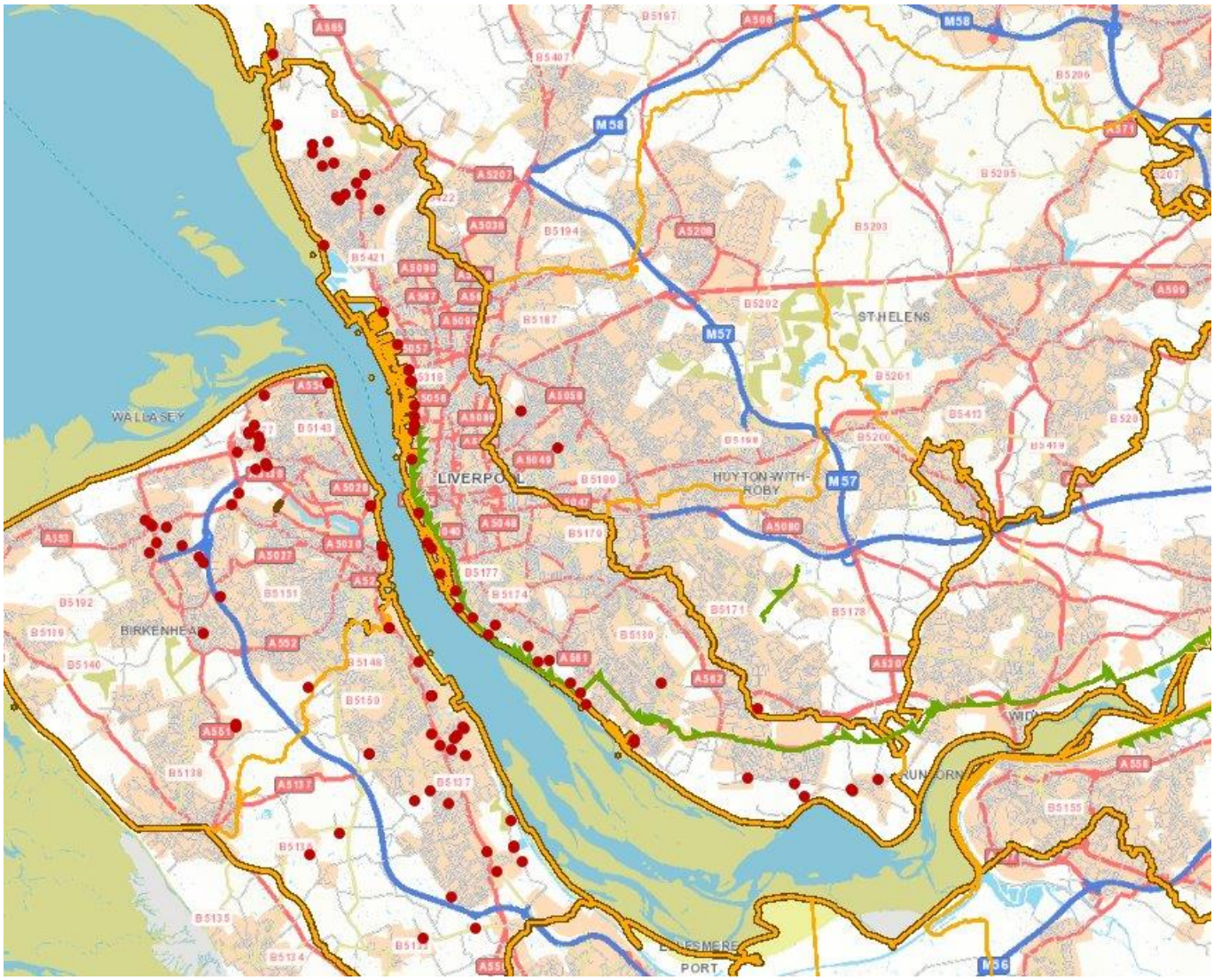
25 year plan investigation	Wastewater Treatment works catchment	Total CSOs	total annual spill duration - hours	total modelled annual spill volume	highest annual spill frequency CSO in catchment	annual average volume per overflow	annual average duration per overflow
Merseyside	Birkenhead	26	1,645	1,636,908	143	62,958	63
	Bromborough	19	2,500	1,435,827	145	75,570	132
	Liverpool (Sandon)	40	4,937	8,539,647	152	213,491	123
	Total	**85**	**9,082**	**11,612,382**	**152**	**69,264**	**106**
Irwell	Bolton	137	15,341	12,657,938	189	92,394	112
	Bury	39	3,754	2,569,648	165	65,888	96
	Oldham	31	4,859	3,090,274	368	99,686	157
	Rochdale	46	11,146	3,562,616	366	77,448	242
	Rossendale	43	3,101	1,903,491	135	44,267	72
	Total	**296**	**19,106**	**8,556,381**	**368**	**75,937**	**157**
Davyhulme	Davyhulme	180	6,904	8,438,088	141	46,878	38

Source: UUW analysis

The following three images highlight the strategic catchment areas, the overflows to be investigated and the cluster of overflows which supports the need for holistic approach.

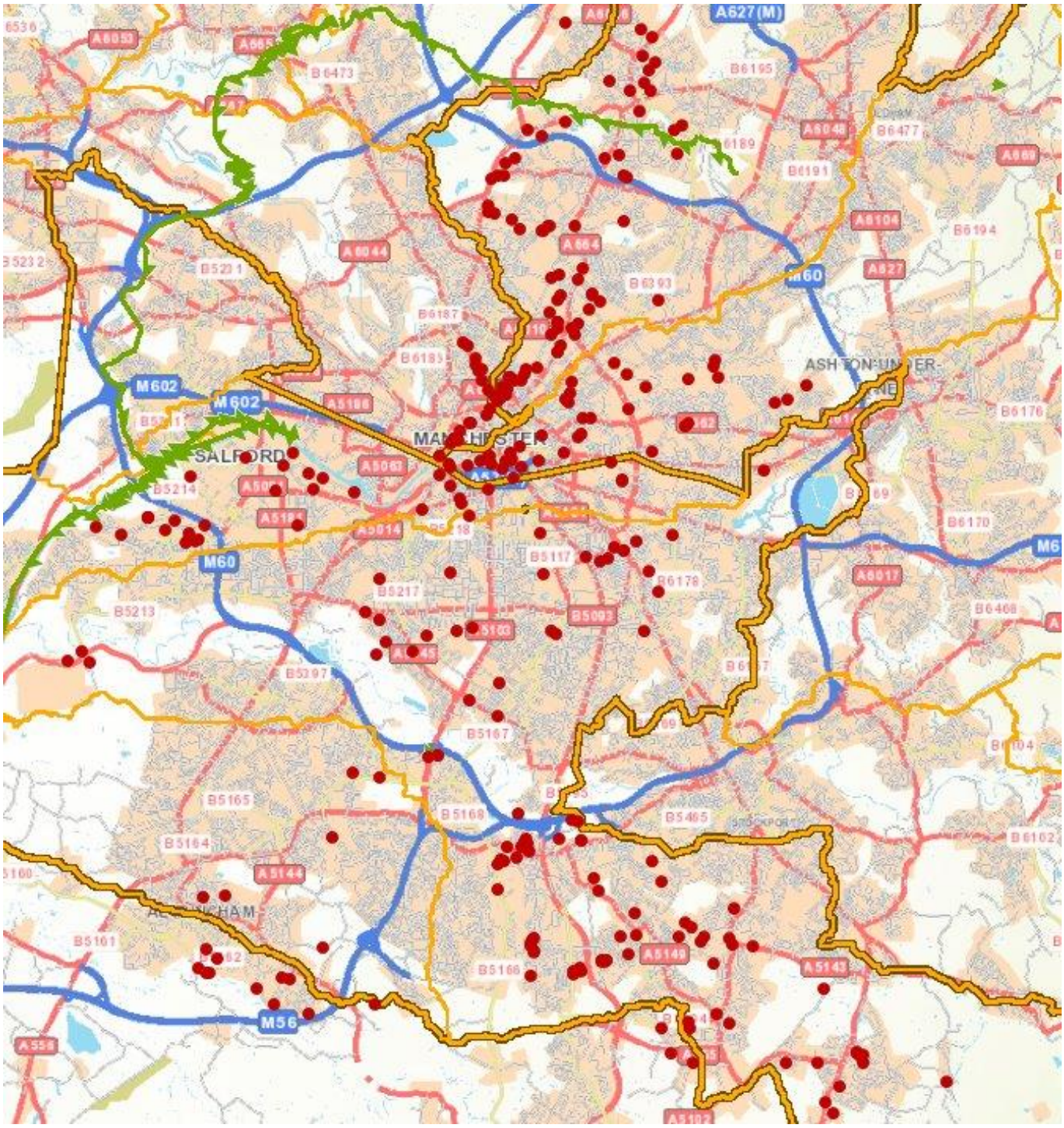
Figure 1 indicates the Mersey Estuary catchment, figure 2 is the Davyhulme catchment and figure 3 is the Irwell River catchment covering Bolton, Bury, Rochdale and Rossendale.

Figure 1: Location of overflows for inclusion in the Liverpool, Bromborough and Birkenhead (Mersey Estuary) catchment investigations



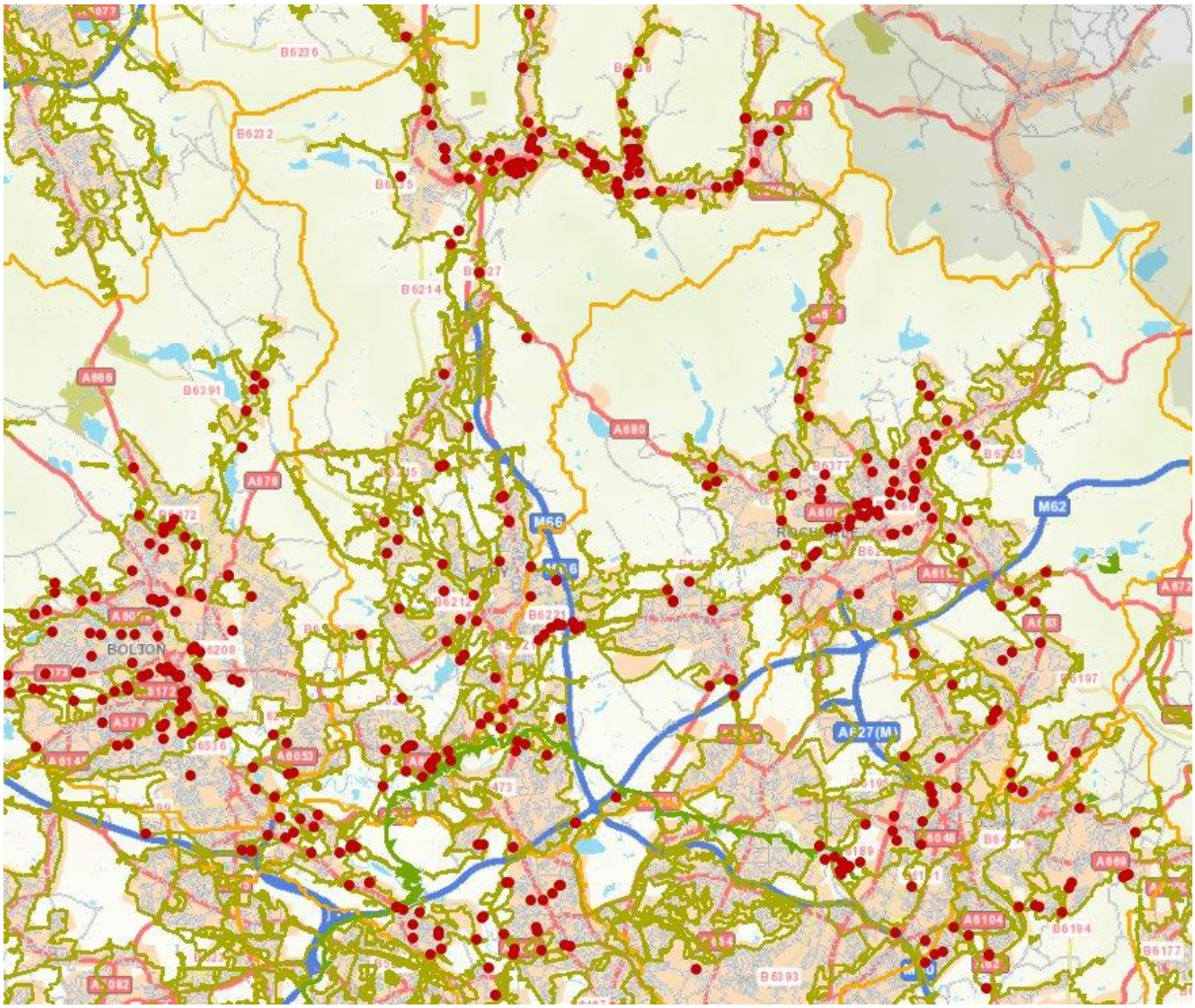
Source: UUW GIS mapping data

Figure 2: Location of overflows in Davyhulme catchment



Source: UUW GIS mapping data

Figure 3: Location of overflows in the Irwell river catchment covering Bolton, Bury, Rochdale and Rossendale



Source: UUW GIS mapping data

Mersey Estuary Strategic Catchment Investigation

The high level estimates for a conventional asset by asset solution in the Mersey Estuary to meet the requirements of the SODRP are in the region of £2bn. With the majority of that improvement needing to be delivered before 2035 due to the potential impact on bathing waters. Most of that expenditure is focused on Liverpool WwTW drainage area where 40 overflows have been identified as requiring improvement. In addition to this, Liverpool WwTW, which is currently permitted to treat 2 x dry weather flow, is an extremely constrained site in the docks area of the city, constrained on all sides by the city centre, the river Mersey, the dock basins and the Everton football stadium.

This is likely to make the future management of the catchment flows, including the drain down of conventional overflow solutions, very challenging and potentially unfeasible. Liverpool WwTW was originally designed to treat 2 x DWF due to the large dilution available (of both the final effluent from the WwTW and the discharges from upstream overflows) in the River Mersey, which has one of the largest tidal ranges in the UK. Since then, standards have significantly changed, and the new requirements of the Environment Act require all overflows to achieve 10 spills per annum by 2050.

The investigation will therefore need to identify solutions beyond those which a conventional investigation might consider. We plan to investigate each overflow identified, but also explore strategic opportunities for partnership schemes, catchment-wide or city-wide separation and SuDS, as well as the possibility of splitting the drainage

area and construction of a second wastewater treatment works. The work will be undertaken by closely working with stakeholders, such as the Merseyside City Region, to maximise partnership delivery.

Due to the scale of this potential investment, we have highlighted this area and potential scope that could progress via DPC. Due to the regulatory timescales involved we are aiming to use the investigation to enable us to complete stage 1 of the DPC process within AMP8.

Davyhulme Strategic Catchment Investigation

Davyhulme is our largest drainage area with several complexities including a highly urban catchment, significant growth and the limited dilution of the Manchester Ship Canal. In particular, there are a considerable number of overflows in the urban city centre of Manchester which are potentially very complex and significant interventions to address. Initial high level estimates for a conventional asset by asset solution to SODRP across the Davyhulme drainage area were in excess of £1bn over the next 25 years.

The investigation will develop a multi-sector plan in conjunction with critical stakeholders across the city region, which will be aligned with the Integrated Water Management Plan that has been co-developed with the Greater Manchester Combined Authority and the Environment Agency. This will maximise opportunities for leveraged funding and partnership solutions.

As well as exploring the opportunities for separation and SuDS with partners, the investigation will also explore other innovative solutions including stormwater treatment technologies and opportunities for better system management. Due to the scale and nature of the investigation at Davyhulme it has two WINEP lines; one for the large catchment investigation and another for stormwater treatment trials.

Due to the scale of this potential future investment, we have highlighted this area and potential scope that could progress via DPC. The outputs of this investigation will enable us to complete stage 1 of the DPC process.

River Irwell Strategic Catchment Investigation

The River Irwell catchment covers 777km^2 North of Manchester, and is an area dominated by post-industrial towns including Bolton, Bury, Oldham, Rochdale. In the most northern reach of the catchment, it is more rural with extensive moorland and the town of Rossendale. The Irwell catchment is upstream of and is the source of the Manchester Ship Canal.

Each of the drainage areas identified require significant investment to meet the requirements of the Environment Act and the SODRP. This investment has the potential to be transformative to the urban spaces identified but due to the catchment connectivity, a plan needs to be developed holistically to ensure that the solution does not negatively impact another part of the drainage system, including those not owned and operated by UUW.

High level estimates for a conventional asset by asset solution to SODRP across the River Irwell catchment are in the region of £4bn over the next 25 years. There is therefore significant opportunity to optimise and rationalise solutions for customers by exploring an integrated and holistic solution which would deliver wider benefits.

The investigation will develop a multi-sector plan in conjunction with critical stakeholders across the city region, which will be aligned with the Integrated Water Management Plan that has been co-developed with the Greater Manchester Combined Authority and the Environment Agency. This will maximise opportunities for leveraged funding and partnership solutions.

The potential constructability of some of the solutions, particularly in Bolton, is forecast to be very challenging due to the potential large storage volumes and drain down requirements. It is critical that we improve our knowledge of the system to better understand this and the wider opportunities. Therefore, as part of this investigation we propose to build an integrated urban drainage model. This will enable us to develop the most efficient and innovative adaptive plan for the catchment.

Due to the scale of this potential investment, we have highlighted this area and potential scope that could progress via DPC. The outputs of this investigation will enable us to complete stage 1 of the DPC process.

As these three investigations cover such geographically expansive and heavily populated catchments the expected investigation costs are beyond the average cost of a complex investigation. To ensure that this significant future investment is designed and scoped efficiently for the future we strongly believe that the submitted costs for these investigations should be allowed at Final Determination by Ofwat.

4.2 Chemical Investigations Programme

Within the draft determination we observe a 20% efficiency for the chemical investigation programme. Reducing the funding allowance from that submitted cannot be absorbed within the allowed costs for this programme. This is due to £1.722m of costs already being committed to fund the joint UKWIR coordinated projects. These have been set with a fixed price agreed through the steering group which Ofwat, Defra and the EA sit on. If we were to accept the Draft Determination costs it would put the burden of efficiency on the UUW led element of the programme, increasing the required percentage efficiency significantly above that applied. We ask Ofwat to revisit this cost assessment.

4.3 Investigation cost assessment drivers – complex modelling/multiple locations

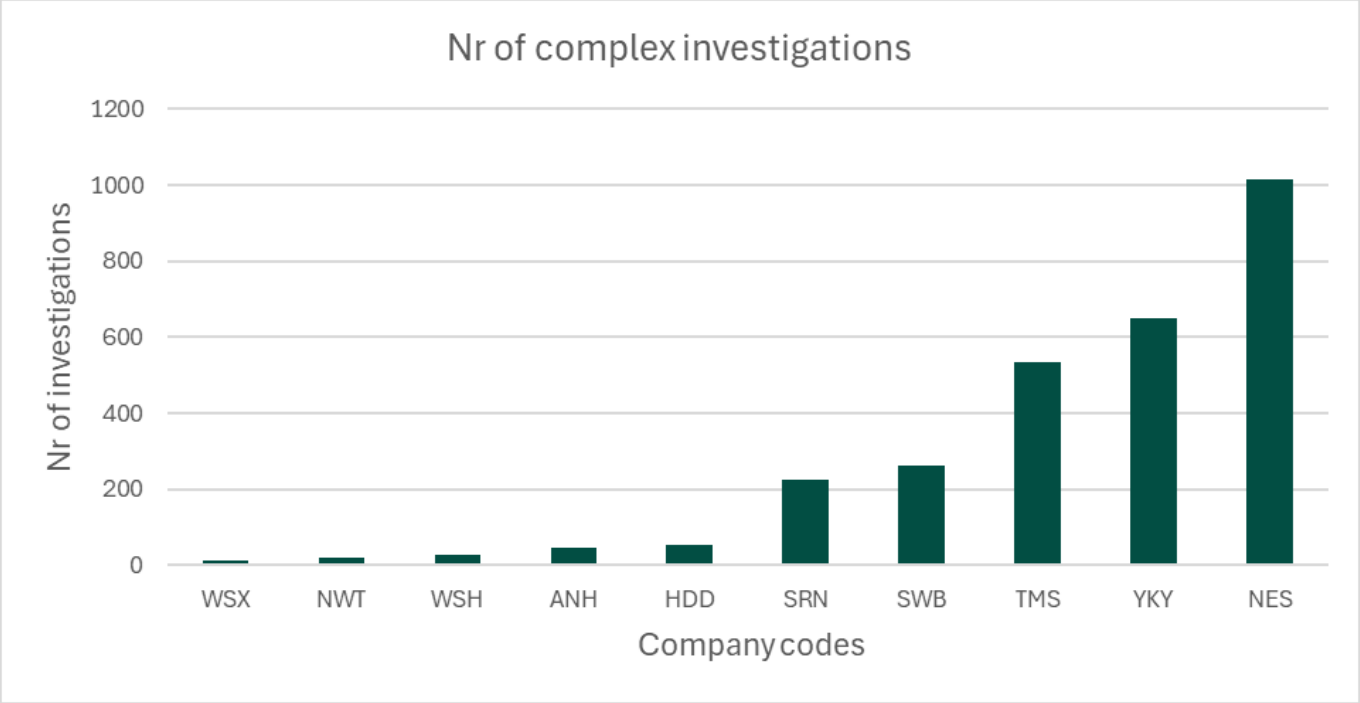
As previously outlined in our query response OFW-OBQ-UUW-056, complex investigations include the wider scale catchment investigations under EnvAct_INV4. Details of these are included in Section 4.2 Environment Act storm overflow investigations within the enhancement case document UUW63. These investigations are to define the long term integrated adaptive plan for storm overflows in the Davyhulme, Mersey Estuary, River Irwell and Pennington Flash catchments. These cover catchment wide investigations, which all follow a common philosophy plus unique challenges and investigation bespoke to each area. The nature of these investigations is fundamentally different in nature to those we and others have generally carried out. As such, any variations in the unit cost of investigations across the industry can generally be explained by differences in the nature of the investigation rather than relative efficiency.

We believe other water companies may have presented investigation cost driver data on a different basis to UUW, which proves crucial when assessing costs based on this data. It is key that Ofwat only assesses investigations against a comparable benchmark. If investigations are not separated into different categories correctly, companies may appear inefficient using a simple unit cost model. We consider Ofwat's data request, as discussed above, should alleviate some of these issues.

In our original submission, we reported our number of investigations at a catchment model level, as reflected in the WINEP. This methodology results in a relatively small number of 'complex investigations' reported in CWW20 compared to some other companies *(see Figure 4).* We believe that other companies may have reported their number of investigations based on the total number of individual overflows, rather than per catchment area, which gives a much greater number.

Comparative company investigation data can be seen below. This illustrates our point that UUW appear to have calculated cost driver data on a different basis to other companies, as our number of investigations seem unrealistically low comparatively.

Figure 4: Number of complex investigations as per Ofwat DD investigations model



Source: Ofwat DD Investigations model

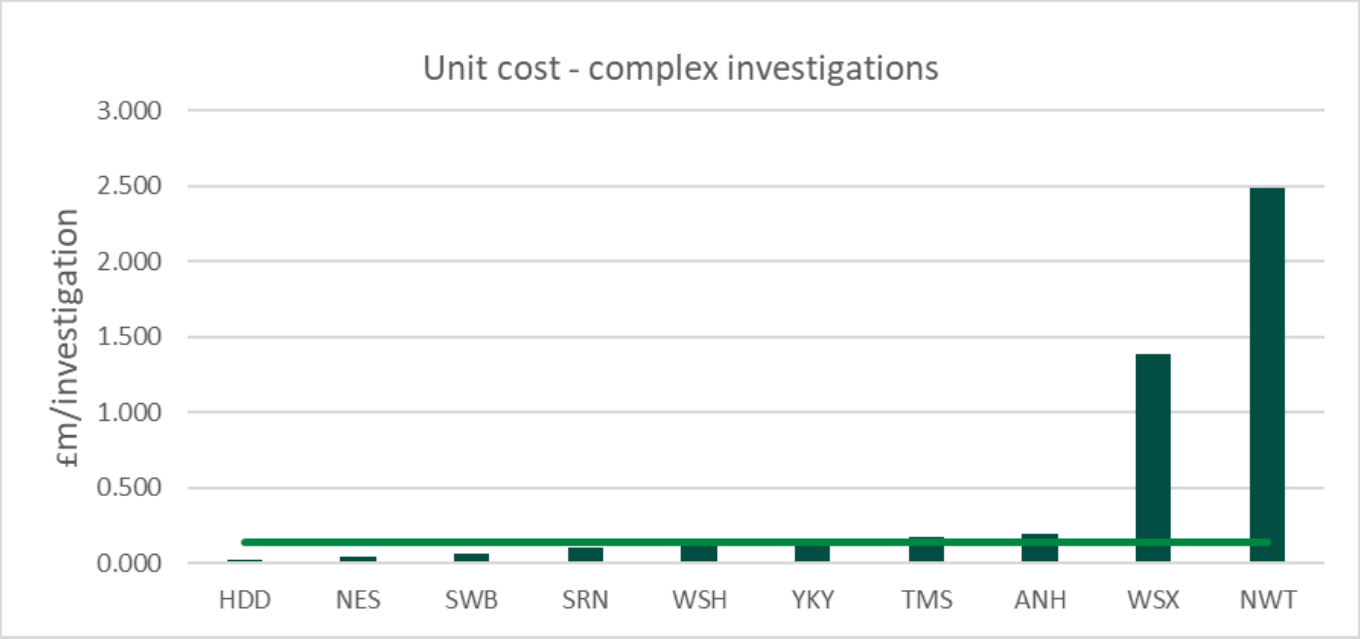
This variation in reporting method has a very high impact for UUW. We reported 19 complex investigations in our data table submission (as above). If we were to adopt an alternative method of reporting based on number of overflow sites, this would result in 176 complex investigations.

Unit cost model – Complex modelling/multiple locations

Figure 5 below demonstrates a simple unit cost graph, based on Ofwat's DD unit cost model for WW complex modelling investigations.

This coupled with the number of schemes above, results in a modelled allowance of just £2.7m for UUW, relative to a requested totex value of £47.2m. This further demonstrates inconsistencies with how cost driver data has been populated, as the variance in data is indicative of incomparable cost driver data.

Figure 5: Unit cost model – as per Ofwat DD investigations model



Source: Ofwat DD Investigations model

Revised cost driver data model – Expected to now change

We have therefore considered an alternative version of the above unit cost model, amending our cost driver data to reflect our updated CWW20 data table. This varies from our January submission, which classifies investigations at a catchment model level, in line with the WINEP. As stated above, we consider our 10 large catchment wide investigations under the EnvAct_INV4 driver and a 25YEP_INV driver should be assessed separately, outside of the standard unit cost model for complex investigations. We have therefore excluded their associated costs and cost driver data from this analysis.

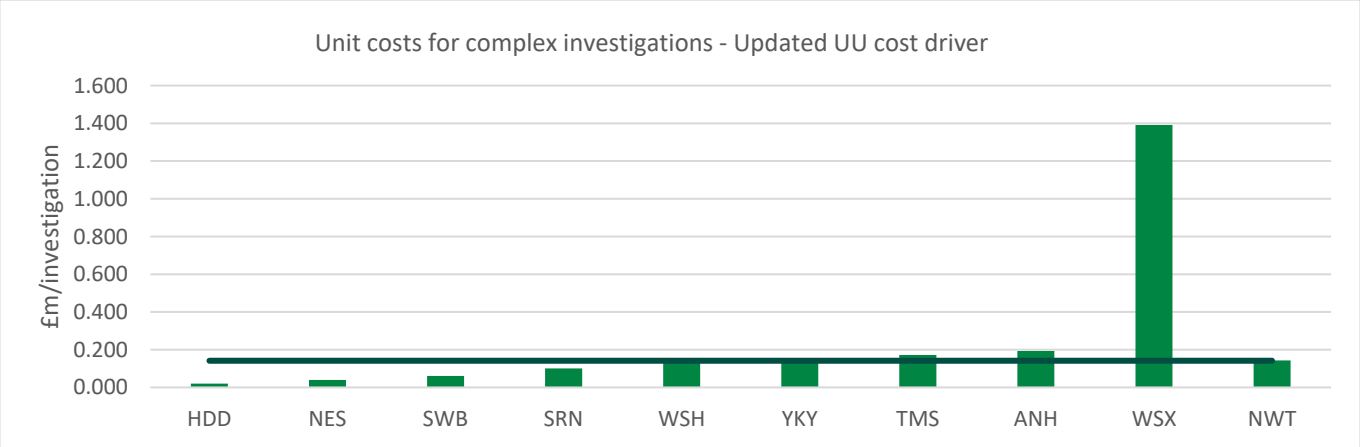
The below graph (see figure 6) demonstrates we are relatively efficient, when using our alternative cost driver method.

Using this updated dataset, we would expect a median modelled allowance of around £23.5m, compared to our submitted value of £23.8m, against the expected value of just £2.7m in the model above.

Based on this analysis and the associated impact on cost allowances, we consider it vitally important that Ofwat ensures companies have presented cost driver data on a consistent basis, to allow for effective cost assessment modelling to take place. Query OFW-REP-UU-003 should allow this to happen, so we are supportive of Ofwat's decision to gather more granular cost driver data in this area.

Our analysis indicates that Wessex may have reported cost driver data on a similar basis to us, based on their relatively high unit costs compared to other companies (see below graph).

Figure 6: Unit cost model – updated UUW cost driver data



Source: Ofwat DD Investigations model and UUW revised CWW20 table

4.4 Price control deliverable for Ww WINEP Investigations

While Ofwat agrees that wastewater WINEP investigations do not meet the materiality threshold, it does include a PCD for non-delivery of investigations within the Draft Determination for UUW. This is based on the number of investigations to be delivered in FY28 and includes two rates, one for desk based and simple and another for complex. On review of the investigations required in the WINEP we observe that Ofwat has included five investigations with a WINEP output date of FY30 within its DDPCD at FY28. This is two years ahead of the required regulatory date. It is not appropriate for Ofwat to include these five investigations ahead of the regulatory date as these require continued sampling for the five WwTW through the five years of the AMP under the emerging substances driver of the chemicals investigation programme. These five investigations require sampling across all five years of the AMP to develop and add to the substantial data set developed through the CIP programme from CIP2. This data is to inform the UK government of the response of chemical levels to bans and usage restrictions over time, it cannot therefore be accelerated.

If a PCD is required for this area of the programme we propose the PCD should be updated at Final Determination. A PCD should reflect the revised number and costs of wastewater WINEP investigations included in this case and the data tables, and to reflect the WINEP delivery years of these investigations. As our

recommendation is for a separate cost assessment for the very complex and large catchment investigations, these should be excluded from the investigations PCD.

5. Approach for final determination

Investigations are a WINEP requirement and underpin future development of efficient interventions where investment need is identified through the investigation.

5.1 Catchment Investigations

We have identified three catchments where there are many overflows that will interact, the potential for partnership intervention is high and interactions with the wider drainage system are likely to be a factor. These catchment investigations are beyond the scope of a standard investigation. Therefore, we recommend a deep dive assessment into the catchment costs to allow the full scope and allowance of these to ensure we are able to fully understand the best value, lowest overall cost for the long term solutions at these key locations.

5.2 Chemical Investigations and N-TAL

Ofwat should reconsider the approach to cost assessment for the chemical investigation programme and N-TAL investigations to ensure costs are allowed for these requirements and AMP8 outputs can be delivered.

5.3 Approach to the Ww WINEP PCD

If a PCD is required for this programme area we proposed that the PCD should be updated at Final Determination to reflect the revised number and costs of wastewater WINEP investigations included in this case and the data tables, and to reflect the WINEP delivery years of these investigations.

Appendix A Summary of Catchment investigation scope

Table 3 below presents a summary of the investigations by WwTW catchment and its assessment against scope item.

Table 3: List of scope items by WwTW catchments

	Wastewater Treatment works catchment								
	Merseyside					Irwell			Davyhulme
Scope	**Birkhead**	**Brombor ough**	**Liverpool (Sandon Dock)**	**Bolton**	**Bury**	**Oldham**	**Rochdale**	**Rossendal e**	**Davyhulme**
Assessment of potential opportunities to reduce flows into network (Surface water management and SuDS)	✓	✓	✓	✓	✓	✓	✓	✓	✓
WwTW operational envelope assessment	✓	✓	✓	✓	✓	✓	✓	✓	✓
Options for additional treatment capacity at existing WwTW	✓	✓	✓	✓	✓	✓	✓	✓	✓
Work with stakeholders using existing Integrated Water Management Plan framework				✓	✓	✓	✓	✓	✓
Work with Stakeholder to produce a water management plan for the city region and develop plans in adherence to this framework	✓	✓	✓						
Innovation - horizon scan technology for stormwater treatment - assess appetite for a trial and potential permitting									✓
Flow and asset surveys	✓	✓	✓	✓	✓	✓	✓	✓	✓
Land ownership and access requirement at sites for development or investigation	✓	✓	✓	✓	✓	✓	✓	✓	✓
Detailed population growth review	✓	✓	✓	✓	✓	✓	✓	✓	

	Wastewater Treatment works catchment								
	Merseyside					Irwell			Davyhulme
Scope	**Birkhead**	**Brombor ough**	**Liverpool (Sandon Dock)**	**Bolton**	**Bury**	**Oldham**	**Rochdale**	**Rossendal e**	**Davyhulme**
Network Modelling - update network models where required (and not delivered under EnvAct INV4 test impacts on network of options and optimise	✓	✓	✓	✓	✓	✓	✓	✓	✓
Options suite development - catchment wide	✓	✓	✓	✓	✓	✓	✓	✓	✓
Connectivity surveys, infiltration and data inputs	✓	✓	✓	✓	✓	✓	✓	✓	✓
Surface water separation assessments	✓	✓	✓	✓	✓	✓	✓	✓	✓
Targeted large diameter sewer condition surveys - for options where directions to be changed	✓	✓	✓						
Water Quality model sensitivity - potential additional modelling				✓	✓	✓	✓	✓	✓
Process modelling to establish operation flow limit for WwTW	✓	✓	✓						✓
Stakeholder 25 year development plan, UU and Mersey Barrage, Peel dockside development etc	✓	✓	✓	✓	✓	✓	✓	✓	✓
Integrated urban drainage model				✓	✓	✓	✓	✓	
Reporting & wider environment benefits impacts	✓	✓	✓	✓	✓	✓	✓	✓	✓
Innovation - trial storm water treatment									✓
Innovation - opportunities for managing the network to reduce spills and build requirements	✓	✓	✓	✓	✓	✓	✓	✓	✓
WwTW modelling to assess potential impacts of additional stormwater	✓	✓	✓	✓	✓	✓	✓	✓	✓
Biodiversity Net Gain and Capital Assessments	✓	✓	✓	✓	✓	✓	✓	✓	✓

Wastewater Treatment works catchment									
	Merseyside					Irwell			Davyhulme
Scope	**Birkhead**	**Brombor ough**	**Liverpool (Sandon Dock)**	**Bolton**	**Bury**	**Oldham**	**Rochdale**	**Rossendal e**	**Davyhulme**
Adaptive plan for delivery of catchment improvements	✓	✓	✓	✓	✓	✓	✓	✓	✓

Source: UUW assessment

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The aim of the investigations is to optimise our investment at a catchment rather than overflow scale to achieve best value for money for customers while delivering the required spill reduction through the next AMPs.

They were put in as EnvAct INV4 drivers with a secondary driver of 25YEP. Since these project plans were developed in PR24 the methodology of the EnvAct INV4 investigations has been developed. These do not deliver that scope and so the driver should change to a primary driver of 25YEP.

The investigations are not replicating the EnvAct INV4 investigations or SOAF investigations in the list, it will use the output of these investigations (As it is available) and incorporate AMP8 delivery and decisions into the adaptive plan for the whole WwTW catchment or system in the case of Merseyside.

It will not be possible to deliver the spill reductions in these catchments without fully planning for the catchment improvement and customer money will be wasted if each overflow is assessed and delivered in isolation.

The anticipated outcome from these investigations is an adaptive plan that follows the city regions planning in the large catchments in Manchester and Merseyside. Significant changes to the major wastewater networks through the centre of these major cities in congested areas potentially against land belonging to other large organisations will be required. This will be going on along side development and regeneration. additional treatment capacity and this could lead to a Direct Procurement for customers.

In addition to the additional network capacity required to carry the stormwater from spill captures and difficulties around the built up nature of these cities the wastewater treatment works will not have capacity to treat the returned storm flows and significant additional capacity will be required. This could be storage and treatment (potential for instances of sidestream or off site storm water treatment if this were proven and supported by the EA) and new treatment works are also expected to be required.

This is expected to be delivered by Direct Procurement for Customers for the large city regions in future AMPs