Drainage and Wastewater Management Plan

Water Framework Directive Regulations Compliance Assessment

Report for United Utilities

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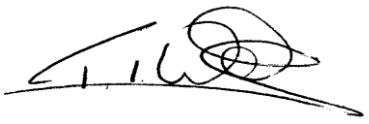

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1 Introduction

Section 1.1 sets out the background and purpose of this report. Section 1.2 explains the Water Framework Directive (WFD); and Section 1.3 explains its context in Drainage and Wastewater Management Plans (DWMP).

1.1 Background and purpose of report

United Utilities Water (UU) as one of the thirteen UK's water and sewerage companies (WaSCs) is currently preparing its first Drainage and Wastewater Management Plan (DWMP). The DWMP is new, and whilst not currently a statutory obligation[1], UU has committed to produce a DWMP in accordance with the Water UK DWMP Framework[2] (the Framework).

The DWMP sets out how UUW intends to extend, improve and maintain a robust and resilient drainage and wastewater system. The plan takes a long-term view, setting out responses to challenges over a planning period of at least 25 years. The draft DWMP has been published for consultation and will be finalised to support business plans for the 2024 Price Review. DWMPs are not currently a statutory requirement, and so this issue of the plan is being treated as a 'dry-run' to refine the approaches used for the DWMP development and the associated environmental assessments.

This report documents the WFD regulations compliance of the UU DWMP.

1.2 The Water Framework Directive

The Water Framework Directive[3] is an EU Directive establishing a framework for Community action in the field of water policy which aims to protect and improve the water environment. The Directive was brought into UK law in 2003 and subsequently revoked by the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 in England and Wales. From this point forward "WFD" refers to the legislation applicable to England and Wales, not the EU Directive.

1.3 WFD requirements for DWMP

The framework for the production of DWMPs outlines that, in producing the DWMP, water companies must take into account the WFD along with other environmental legislation. There must also be regard to other Risk Management Authority's plans, including River Basin Management Plans (RBMPs) in order to demonstrate consistencies with national and regional strategies.

Whilst DWMPs do not formally require a Strategic Environmental Assessment (SEA)[4], there is an expectation that an SEA will be produced in order to understand the most preferable interventions from an environmental perspective. As such, the WFD assessment is also required to support the SEA. SEA, HRA (Habitats Regulations Assessment) and WFD assessments have therefore been applied on a voluntary basis by UU.

[1] Section 78 (1) of the Environment Bill states that "Each sewerage undertaker must prepare, publish and maintain a drainage and sewerage management plan". The Bill is at report stage, with the third reading and royal assent awaited.
[2] Water UK in collaboration with Defra, Welsh Government, Ofwat, Environment Agency, Natural Resources Wales, Consumer Council for Water, ADEPT and Blueprint for Water (2019) A framework for the production of Drainage and Wastewater Management Plans
[3] European Union (2000) Directive 2000/60/EC of the European Parliament and of the Council
[4] A framework for the production of Drainage and Wastewater Management Plans (2018) Atkins

2 WFD Compliance Assessment Methodology

The purpose of this section is to set out the approach used when assessing the WFD compliance of the UU DWMP. Section 2.1 identifies the WFD Assessment Objectives used to assess the DWMP and options within. Section 2.2 describes the proportionate level of detail for the assessments.

The assessment approach presented here has been implemented at the L3 scale to assess WFD compliance of the strategic and complex options and transfer options within the programme of works. This has then been used to assess the WFD compliance at the whole DWMP level. It is worth noting that the WFD compliance assessment has not been used as a comparative tool to compare options in the context of selecting the DWMP, instead it is used just to assess the WFD compliance of the proposed programme of measures.

All assessments have been undertaken for the reporting unit of a WFD water body. The appropriate baseline information for water bodies status and targets is as published in the third cycle of RBMPs (RBMP3) – listed as the 2019 WFD status (RBMP3 metrics).

2.1 WFD Assessment Objectives for testing compliance

This section provides the WFD Assessment Objectives used to test each of the strategic and complex options and transfer options within the DWMP (Section 2.1.1). This section also provides the additional, progressive WFD Assessment Objectives that the DWMP has been tested against at a whole plan-level (Section 2.1.2).

2.1.1 Option-level WFD Assessment Objectives

Principally, the WFD acts as an indicator of constraint and determines where the DWMP or options within do not meet WFD Objectives set out in Regulation 13 of the WFD Regulations. The principle WFD Assessment Objectives that the DWMP (both options and programmes) has been tested against are:

1. To prevent deterioration[5] of any WFD element of any water body - in line with Regulation 13(2)a and 13(5)a[6].
2. To prevent the introduction of impediments to the attainment of 'Good' WFD status or potential for any water body in line with Regulation 13(2)b and 13(5)c[7].
3. To ensure that the planned programme of water body measures in RBMP3 to protect and enhance the status of water bodies are not compromised[8].

The 2015 European Court of Justice (ECJ) ruling[9] clarified that 'no deterioration' means a deterioration **between** a whole 'status class' (e.g. 'good', 'moderate', etc.) of one or more of the relevant 'quality

[5] As defined in Section 1.3

[6] The no deterioration baseline for each water body and element is the status reported in the RBMP. At present this is RBMP 2.
Discussion with EA and through review of EA internal guidance[#1] identified that the EA consider 'When making management decisions, any 'interim' classification results are also relevant [in addition to the published RBMP stratus] to making sure any deterioration in status is taken into account and to meet the objective of aiming to achieve good status in water bodies.'

[#1] EA (2021) Supporting implementation of river basin management plans position. LIT 14339. 01/202

[7] WRPG (2021) states that this a test to identify any options that 'prevent the achievement of the water body status objectives in the river basin management plan'. At present this is RBMP3. Discussion with EA and through review of EA internal guidance[#1] identified that the EA consider 'less stringent objectives are not permanent and the assessment of any new activity or project must take into account the need to continue to aim for good status. The new activity or project must not jeopardise the achievement of good status in the future, irrespective of whether a less stringent objective was set in RBMP3'.

[#1] EA (2021) Supporting implementation of river basin management plans position. LIT 14339. 01/2021

[8] To date, measures to be delivered in RBMP3, at a water body scale, have not been published and cannot be included in the assessment.

[9] ECJ Case C‑461/13: Bund für Umwelt und Naturschutz Deutschland v Bundesrepublik Deutschlandhttp://curia.europa.eu/juris/document/document.jsf?docid=178918&mode=req&pageIndex=1&dir=&occ=first&part=1&text=&doclang=EN&cid=175124 [accessed 30.6.16]

elements' (e.g. biological, physico-chemical, etc.). This definition applies equally to Artificial Water Bodies and Heavily Modified Water Bodies in respect of the relevant quality elements that relate to the defined uses of these water bodies. The ECJ ruling further states that if the quality element concerned is already in the lowest class, any deterioration of that element constitutes a deterioration of the status. References to 'no deterioration' in this WFD methodology align to this ECJ ruling.

2.1.2 Plan-level WFD Assessment Objectives

The WFD Assessment Objectives in **Section 2.1.1** are the fundamental WFD Assessment Objectives that have been tested against at **both** the option-level and plan-level.

There are a number of further WFD Assessment Objectives which have been tested against at a plan-level. These further tests have only been applied on the whole DWMP scale. These are considered as progressive WFD Assessment Objectives rather than tests of constraint and do not lead to WFD non-compliance where they are not achieved. These are as follows:

4. To assist the attainment of the WFD Objectives for the water body – in line with Regulation 13(2)b and 13(2)c
5. To assist the attainment of the objectives for associated WFD protected areas – in line with Regulation 13(6)
6. To reduce the treatment needed to produce drinking water and look to work in partnership with others; promoting the requirements of Article 7 of the WFD[10].

A negative answer to the WFD Assessment Objectives 4, 5, or 6 above does not determine that the plan has WFD constraints; however, they can be used in decision making by the water company.

2.2 Proportionate level of detail for assessments

The approach taken to test WFD compliance for the DWMP is as follows:

i. Option-level Assessment – As set out in Section 2.2.1, this is an assessment of the complex and strategic options and transfer options within the DWMP.
ii. Cumulative assessment – As set out in Section 2.2.2, the cumulative effects of the complex and strategic options and transfer options within the DWMP.
iii. DWMP assessment – As set out in Section 2.2.3, supported by the option-level and cumulative assessment, the DWMP as a whole has been against the WFD Assessment Objectives.

In order to ensure the WFD assessment is proportionate for each stage an outline of the assessment for each stage is provided in this section.

2.2.1 Stage 1 Option-level assessment

Stage 1 is where there is scope for the most detailed assessments. Each complex and strategic option and transfer option within the DWMP has gone through a process to determine if it is compliant with the three principle WFD Assessment Objectives (as set out in Section 2.1). For proportionality of option assessment there are 4 steps with each step becoming increasingly detailed. Where there is sufficient confidence in an assessment's conclusions the option has not progress onto the next step. The four steps are as follows:

- Step 1 Screening based on activities - to either exclude options from further assessment where it could be reasonably expected that the option would not have an influence on any WFD status elements or supporting elements, or identify which activities require progressing to Steps 2 or 3 assessment and in which water bodies (Section 2.2.1.1).
- Step 2 Screening based on magnitude of hydrogeological/hydrological impact and water body context- to either exclude options from assessment where they are negligible or low impact, or identify which activities require progressing to Step 3 assessment and in which water bodies (Section 2.2.1.2).

[10] Specifically set out in WRPG 2021 (updated 17 March 2021) at Section 9.4.5

- Step 3 Impact assessment – either using existing assessments or an expert judgement approach based on source-pathway-receptor to establish likelihood of compliance with the agreed WFD Assessment Objectives in all relevant water bodies. A confidence rating has been given to all assessments to reflect the amount of uncertainty in the design, environmental baseline and magnitude of impact (Section 2.2.1.3).
- Step 4 Detailed impact assessment - specific to the option using measured baseline data, including additional bespoke collected evidence, and detail on design and operating pattern. It is worth noting that none of the options in this DWMP have been subject to this level assessment and no methodology is included here.

Further detail on how steps 1, 2 and 3 have been assessed is set out below for the option-level assessment.

2.2.1.1 Step 1: Screening based on activities

All complex and strategic options and transfer options within the DWMP have been subject to this step. Where an option is screened as WFD compliant at this stage it has been accompanied by a robust explanation as to why this assessment can be made without the need to progress the option to Step 2. Some examples of instances where there is considered no risk to WFD compliance are identified as:

- Domestic and business customer education – behavioural (e.g. ”what not to flush”);
- Monitoring plans, studies, or investigations (root cause analysis);
- Intelligent network operation (i.e. interconnecting drainage area transfers to manage capacity) only where there is no WFD impact anticipated e.g., change in discharge volume or quality. If factors such as these are determined to be “sufficiently substantial” (i.e., adequate explanation or mitigation cannot be provided to negate the requirement for further assessment), then options should progress to Step 2.

Where an option is concluded as not compliant with the WFD Assessment Objectives after Step 1 screening, the option has been progressed to Step 2 screening.

It is also important at this stage to consider if any risk to WFD compliance is anticipated to manifest at the construction stage as well as/ instead of the operational phase. Construction activities, although temporal by nature, have the potential for negative WFD impact and must be considered in the same way on longer-term operational impacts (mitigation options for construction may be adequate to provide the robust explanation required at this stage to avoid the need to progress an option to stage two).

2.2.1.2 Step 2: Screening based on magnitude of hydrogeological/hydrological impact and waterbody context

Step 2 screening identifies the water body name, ID and type of any water bodies that could potentially be impacted. The potential impacts have been determined by the type of option.

At this stage the context of the water body has been considered to identify any additional constraints i.e., any protected areas.

Impacts are not confined to the water body where the option is located as the impacts of an option can transverse multiple water bodies. In these instances, assessments have been conducted against each water body in the flow pathway until no WFD compliance risk is identified.

In order to make WFD assessment more targeted for the DWMP options appraisal process, there is a focus on water quality in addition to hydrological assessment. At Step 2 the assessment considers the extent of influence of wastewater discharge on status elements including biological status elements, physico-chemical status elements, hydro-morphology and groundwater quantitative status.

Where it is considered possible that activity may lead to a deterioration in water quality, but that change can be reasonably accommodated within the current permitted discharge conditions (including DWF and any numeric limits), this option may have been screened out providing adequate reasoning and necessary mitigation for construction activities.

Where the Step 2 appraisal identifies operational activities that are considered with confidence to be low impact these have been concluded as WFD compliant, subject to review of local WFD protected areas.

2.2.1.3 Step 3: Impact assessment

Where a WFD assessment has not identified an option as WFD compliant through the screening processes of Step 1 and Step 2 the option has been subject to impact assessment.

For each option the construction and operational activities which have been screened in to Step 3 impact assessment are identified. A source-pathway-receptor approach to identifying effects on WFD Assessment Objectives has been undertaken. Using that approach, the source of change is the construction or operational activity. The pathway includes physical environment changes such as water level change, flow velocity change, morphological change. The receptor is the WFD status element.

For a proportionate assessment, WFD status elements have been screened for those at risk of change from DWMP options. These have been used as the basis of the assessment for deterioration and target impediment WFD Assessment Objectives, with other elements included on a case-by-case basis. Where the pathway of option impact is physical environment changes only (e.g. not to water quality), the sensitive biological status elements (to flow and morphology) are as follows:

- River water bodies: macrophytes, invertebrates, fish
- Lake water bodies: macrophytes
- Transitional water bodies: fish, benthic invertebrate (extent), sea grass (extent)
- Coastal water bodies: benthic invertebrate (extent), sea grass (extent).

Further pathways are dependent on local conditions and local environmental quality pressures such as changes in dilution of point or diffuse pollution pressures, changes in fish passability at structures. Under these circumstances the assessment also considers WFD compliance impacts to physico-chemical water quality, particularly sanitary and nutrient quality which are the main supporting water quality elements to ecological quality, as well as the associated biological status elements to nutrient and water quality pressures. In exceptional circumstances, where there are known discharges of specific pollutants or substances regulated through WFD chemical status, the dilution change of these has been included in the assessment.

Water quality changes are often associated with river flow reductions/additions as a result of the change of dilution of water quality pressures. Existing known pressures are listed by the Environment Agency's Reasons for Not Achieving Good (RNAG) datasets and these are reviewed for their level of influence.

The impact assessments have been undertaken using expert judgement by a hydroecologist, working with any other appropriate disciplines required, which is considered to be the most appropriate Step 3 impact assessment, utilising a level of confidence indicator.

The confidence level categories used are presented in **Table 2.1**.

Table 2.1 WFD compliance assessment confidence level categories

Confidence category	Description
Low	Known WFD compliance risks/ failures and potential pathways from option's activities - where assessment based on expert judgement alone
Medium	Reasonable levels of evidence for at risk activities. Some assumptions and expert opinion required around risk areas.
High	Good level of evidence with minimal assumptions or low risk activity

2.2.2 Stage 2: Cumulative assessment

The potential for cumulative effects of the strategic and complex options and transfer options within the DWMP have been highlighted. Informed through the option-level assessment which already have been set out per water body, a list of all WFD water bodies assessed for the individual options was assimilated. Where more than one option was assessed for the same water body a cumulative assessment has been undertaken of the multiple options, against the agreed set of WFD Assessment Objectives using the methodologies for the option-level assessment. This required the revision of the high level hydrological and/or hydrogeological assessment which underpins the testing of the WFD Assessment Objectives. It is noted that the cumulative assessments include any additional linked water bodies which are impacted by the cumulative effect of options (in addition to those that are identified in the option-level assessment) – either downstream surface water bodies, or additional surface water bodies linked to groundwater bodies.

The results from this level of WFD assessment have been used to inform the assessment of the DWMP as a whole.

2.2.3 Stage 3: Assessment of the DWMP

The option-level and cumulative assessment of the strategic and complex options and transfer options within the DWMP have been used to provide a WFD assessment of the entire DWMP. A compliance statement of the DWMP has been presented. This sets out compliance with each of the agreed WFD Assessment Objectives and the level of confidence in the assessment.

3 Option-level (Stage 1) WFD Assessment Outcomes

Following the method set out in Section 2.2.1, this section presents the WFD compliance assessment for the strategic and complex options and transfer options within the DWMP. This section outlines the:

- Step 1 screening outcomes (Section 3.1)
- Step 2 screening outcomes (Section 3.2)
- Step 3 impact assessment outcomes (Section 3.3).

The option-level assessments have been used to both the cumulative assessment (Section 4) and WFD compliance of the DWMP as a whole (Section 5).

3.1 Step 1 screening outcomes

This section provides and overview of the Step 1 screening outcomes for the strategic and complex options and transfer options within the DWMP.

UU have produced a list of strategic and complex options within their DWMP for WFD compliance assessment. This list is aggregated into L3 areas and option types with the option types informing the Step 1 screening based on activities. The option types identified are as follows:

- Catchment management initiatives
- Domestic and business customer education
- Increase the capacity of existing foul / combined networks
- Increase treatment capacity
- Intelligent network operation
- Sewer maintenance
- Surface water source control measures.

The option types listed above have been reviewed to identify those that have pathways to impacting any WFD receptors in any WFD water bodies. At this stage, any construction activities have been screened as WFD complaint without further assessment. It is assumed that any impacts from construction activities would be short term in duration and suitable best practice construction techniques would be used to mitigate any adverse impacts on any WFD elements.

From this review, it was determined that only the increase treatment works capacity strategic and complex options should be screened into Step 2 of the WFD compliance assessment process as each of these has potential hydrological and water quality pathways to impacting WFD receptors. It has been assumed that the options of the remaining option types are WFD compliant with there being no pathway to impact any WFD receptors. A summary of the Step 1 screening outcomes for the strategic and complex options is displayed in Table 3-1.

The Step 1 screening also identified that the two transfer options should be screened into Step 2 screening with the transfer of effluent between WwTWs potential leading to a change in discharge volume from each the donor and receiving WwTW. This would lead to both hydrological and water quality pathways to impacting WFD receptors. The two transfer options are listed below:

- Askham to Sockbridge
- Mowpen Brow to High Leigh

As a summary, following Step 1 screening, 25 options were passed forward to Step 2 screening, 23 increase treatment capacity options and two transfer options. These options are presented in Table 3-2.

Table 3-1 Summary of Step 1 screening of the strategic and complex options. Those that have been screened out of further assessment based on activities have been highlighted yellow. Those options that have been passed froward to Step 2 screening are highlighted blue.

	Strategic and complex option type						
	Catchment management initiatives	Domestic and business customer education	Increase the capacity of existing foul / combined networks	Increase treatment capacity	Intelligent network operation	Sewer maintenance	Surface water source control measures
Alsager	0	2	1	1	1	0	2
Altrincham	0	2	6	1	1	0	2
Blackburn	4	2	12	1	1	1	4
Bromborough	0	1	13	1	1	1	3
Burscough	0	2	4	1	1	0	4
Carlisle	0	1	15	1	1	1	5
Carnforth	0	2	2	1	1	0	2
Davyhulme	8	1	11	1	1	1	3
Ellesmere Port	0	1	0	1	1	1	2
Fleetwood	0	1	17	1	1	1	4
Hillhouse	0	1	1	1	1	1	1
Kendal	0	2	5	1	1	0	4
Knutsford	0	2	0	1	1	0	4
Lancaster	0	2	4	1	1	1	3
Macclesfield	1	2	23	1	1	1	2
Partington	0	1	2	1	1	0	3
Penrith	0	2	3	1	1	0	4
Preston	2	2	8	1	1	1	6
Sale	0	1	26	1	1	1	2
Salford	0	1	3	1	1	1	3
Stockport	2	2	22	1	1	1	8
Stretford	0	2	2	1	1	0	4
Urmston	0	2	2	1	1	0	3
Whitehaven	0	2	4	1	1	0	7
Wigan	5	2	52	1	1	1	8
Wilmslow	0	2	12	1	2	0	1
Workington	0	1	3	1	1	0	5

Table 3-2 List of options passed forward to Step 2 screening

Option reference	Option name	Option type
ALTRI-ALTRI_001_Std-W2.n	Altrincham	Increase treatment capacity
ALSGE-ALSGE_001_Std-W2.n	Alsager	Increase treatment capacity
BLACK-BLACK_001_Std-W2.n	Blackburn	Increase treatment capacity
BROMB-BROMB_001_Std-W2.n	Bromborough	Increase treatment capacity
BURSC-BURSC_001_Std-W2.n	Burscough	Increase treatment capacity
CARLI-CARLI_001_Std-W2.n	Carlisle	Increase treatment capacity
CRNFT-CRNFT_001_Std-W2.n	Carnforth	Increase treatment capacity
DAVYH-DAVYH_001_Std-W2.n	Davyhulme	Increase treatment capacity
ELLES-ELLES_001_Std-W2.n	Ellesmere Port	Increase treatment capacity
FLEET-FLEET_001_Std-W2.n	Fleetwood	Increase treatment capacity
HILLH-HILLH_001_Std-W2.n	Hillhouse	Increase treatment capacity
KENDA-KENDA_001_Std-W6.6	Kendal	Increase treatment capacity
KNUTF-KNUTF_001_Std-W2.n	Knutsford	Increase treatment capacity
LANCA-LANCA_001_Std-W2.n	Lancaster	Increase treatment capacity
MACCL-MACCL_001_Std-W2.n	Macclesfield	Increase treatment capacity
PARTI-PARTI_001_Std-W2.n	Partington	Increase treatment capacity
PENRT-PENRT_002_Std-W2.n	Penrith	Increase treatment capacity
PREST-PREST_001_Std-W2.n	Preston	Increase treatment capacity
SALEZ-SALEZ_002_Std-W2.n	Sale	Increase treatment capacity
SALFO-SALFO_002_Std-W2.n	Salford	Increase treatment capacity
STOCK-STOCK_001_Std-W2.n	Stockport	Increase treatment capacity
STRET-STRET_001_Std-W2.n	Stretford	Increase treatment capacity
URMST-URMST_001_Std-W6.6	Urmston	Increase treatment capacity
WHTHA-WHTHA_001_Std-W2.n	Whitehaven	Increase treatment capacity
WIGAN-WIGAN_001_Std-W2.n	Wigan	Increase treatment capacity
WILML-WILML_001_Std-W2.n	Wilmslow	Increase treatment capacity
WORKI-WORKI_001_Std-W2.n	Workington	Increase treatment capacity
ASKHM-WW1- SOCKB-WWTRNSF1	Askham to Sockbridge	Transfer
MOWPE-WW1- HGHLE-WWTRNSF1	Mowpen Brow to High Leigh	Transfer

3.2 Step 2 screening outcomes

This section provides an overview of the Step 2 screening outcomes for the strategic and complex options and transfer options within the DWMP.

The Step 1 screening identified 25 options (see Table 3-2) to be passed forward to Step 2 screening in order to identify those options that can be screened as WFD compliant based on hydrological impact and water body context. Those options with only a negligible/minor hydrological assessment have been screened as compliant at this stage. Due to these options being in early stages of development, there is currently insufficient information to conduct a robust hydrological assessment to identify the potential hydrological impact associated with each of the options. As a precautionary approach, all 25 options were taken forward to Step 3 impact assessment. Table 3-3 outlines the outcomes of the Step 2 screening and identifies the options and water bodies that require a Step 3 impact assessment.

Table 3-3 outcomes from the Step 2 screening and identified water bodies for Step 3 impact assessment

Option reference	Option name	Step 2 screening outcome	WFD water bodies considered for Step 3 assessment
ALTRI-ALTRI_001_Std-W2.n	Altrincham	Step 3 required	GB112069060980 – Sinderland Brook
ALSGE-ALSGE_001_Std-W2.n	Alsager	Step 3 required	GB112068055390 - Kidsgrove Stream (including Day Green Stream)
BLACK-BLACK_001_Std-W2.n	Blackburn	Step 3 required	GB112071065300 - Darwen - conf Roddlesworth to tidal
BROMB-BROMB_001_Std-W2.n	Bromborough	Step 3 required	GB112070064880 – Black Drain and Sluice
BURSC-BURSC_001_Std-W2.n	Burscough	Step 3 required	GB531206908100 - Mersey
CARLI-CARLI_001_Std-W2.n	Carlisle	Step 3 required	GB102076073940 – Eden – Eamont to tidal
CRNFT-CRNFT_001_Std-W2.n	Carnforth	Step 3 required	GB531207312000 - Kent
DAVYH-DAVYH_001_Std-W2.n	Davyhulme	Step 3 required	GB112069061452 - Irwell / Manchester Ship Canal (Irk to confluence with Upper Mersey)
ELLES-ELLES_001_Std-W2.n	Ellesmere Port	Step 3 required	GB531206908100 - Mersey
FLEET-FLEET_001_Std-W2.n	Fleetwood	Step 3 required	GB641211630002 - Cumbria
HILLH-HILLH_001_Std-W2.n	Hillhouse	Step 3 required	GB112069061442 – Alt DS Bull Bridge
KENDA-KENDA_001_Std-W6.6	Kendal	Step 3 required	GB112073071460 - Kent - conf Sprint to tidal
KNUTF-KNUTF_001_Std-W2.n	Knutsford	Step 3 required	GB112069061340 – Birkin Brook – Source to Mobberley Brook
LANCA-LANCA_001_Std-W2.n	Lancaster	Step 3 required	GB531207212100 - Lune
MACCL-MACCL_001_Std-W2.n	Macclesfield	Step 3 required	GB112069061320 – Bollin (Source to Dean)
PARTI-PARTI_001_Std-W2.n	Partington	Step 3 required	GB112069060980 – Sinderland Brook
PENRT-PENRT_002_Std-W2.n	Penrith	Step 3 required	GB102076070990 – Eamont (Lower)
PREST-PREST_001_Std-W2.n	Preston	Step 3 required	GB531207112400 - Ribble
SALEZ-SALEZ_002_Std-W2.n	Sale	Step 3 required	GB112069061030 - Mersey (upstream of Manchester Ship Canal)
SALFO-SALFO_002_Std-W2.n	Salford	Step 3 required	GB112069061452 - Irwell / Manchester Ship Canal (Irk to confluence with Upper Mersey)
STOCK-STOCK_001_Std-W2.n	Stockport	Step 3 required	GB112069061030 - Mersey (upstream of Manchester Ship Canal)
STRET-STRET_001_Std-W2.n	Stretford	Step 3 required	GB112069061030 - Mersey (upstream of Manchester Ship Canal)
URMST-URMST_001_Std-W6.6	Urmston	Step 3 required	GB112069061452 - Irwell / Manchester Ship Canal (Irk to confluence with Upper Mers
WHTHA-WHTHA_001_Std-W2.n	Whitehaven	Step 3 required	GB112074070040 – Lowca Beck
WIGAN-WIGAN_001_Std-W2.n	Wigan	Step 3 required	GB112070064820 – Douglas (Lower)
WILML-WILML_001_Std-W2.n	Wilmslow	Step 3 required	GB112069061360 - Dean (Bollington to Bollin)
WORKI-WORKI_001_Std-W2.n	Workington	Step 3 required	GB102076071010 – Lowther (Lower)
ASKHM-WW1- SOCKB-WWTRNSF1	Askham to Sockbridge	Step 3 required	GB102076071020 – Eamont (Upper) GB641211630003 – Solway Outer South
MOWPE-WW1- HGHLE-WWTRNSF1	Mowpen Brow to High Leigh	Step 3 required	GB112069061382 - Bollin (Ashley Mill to Manchester Ship Canal)

3.3 Step 3 impact assessment outcomes

This section provides an overview of the Step 3 impact assessment outcomes for the strategic and complex options and transfer options within the DWMP.

Based on the Step 2 screening, 25 options were passed forward for Step 3 impact assessment. The overview of the assessment outcomes are presented in Table 3-4 and the full WFD impact assessments are presented in Appendix A.

Table 3-4 Option-level impact assessment summary. Where an assessment has identified the option to be potentially non-compliant further information on the outcome is provided.

Option reference	Option name	Option type	Impact assessment outcome	Further information
ALTRI-ALTRI_001_Std-W2.n	Altrincham	Increase treatment capacity	Compliant (low conf.)	
ALSGE-ALSGE_001_Std-W2.n	Alsager	Increase treatment capacity	Compliant (low conf.)	
BLACK-BLACK_001_Std-W2.n	Blackburn	Increase treatment capacity	Compliant (low conf.)	
BROMB-BROMB_001_Std-W2.n	Bromborough	Increase treatment capacity	Compliant (low conf.)	
BURSC-BURSC_001_Std-W2.n	Burscough	Increase treatment capacity	Compliant (low conf.)	
CARLI-CARLI_001_Std-W2.n	Carlisle	Increase treatment capacity	Compliant (low conf.)	
CRNFT-CRNFT_001_Std-W2.n	Carnforth	Increase treatment capacity	Compliant (low conf.)	
DAVYH-DAVYH_001_Std-W2.n	Davyhulme	Increase treatment capacity	Compliant (low conf.)	
ELLES-ELLES_001_Std-W2.n	Ellesmere Port	Increase treatment capacity	Compliant (low conf.)	
FLEET-FLEET_001_Std-W2.n	Fleetwood	Increase treatment capacity	Compliant (low conf.)	
HILLH-HILLH_001_Std-W2.n	Hillhouse	Increase treatment capacity	Compliant (low conf.)	
KENDA-KENDA_001_Std-W6.6	Kendal	Increase treatment capacity	Compliant (low conf.)	
KNUTF-KNUTF_001_Std-W2.n	Knutsford	Increase treatment capacity	Compliant (low conf.)	
LANCA-LANCA_001_Std-W2.n	Lancaster	Increase treatment capacity	Compliant (low conf.)	
MACCL-MACCL_001_Std-W2.n	Macclesfield	Increase treatment capacity	Compliant (low conf.)	
PARTI-PARTI_001_Std-W2.n	Partington	Increase treatment capacity	Compliant (low conf.)	
PENRT-PENRT_002_Std-W2.n	Penrith	Increase treatment capacity	Compliant (low conf.)	
PREST-PREST_001_Std-W2.n	Preston	Increase treatment capacity	Compliant (low conf.)	
SALEZ-SALEZ_002_Std-W2.n	Sale	Increase treatment capacity	Compliant (low conf.)	
SALFO-SALFO_002_Std-W2.n	Salford	Increase treatment capacity	Compliant (low conf.)	

Table 3-5 cont.

Option reference	Option name	Option type	Impact assessment outcome	Further information
STOCK-STOCK_001_Std-W2.n	Stockport	Increase treatment capacity	Compliant (low conf.)	
STRET-STRET_001_Std-W2.n	Stretford	Increase treatment capacity	Compliant (low conf.)	
URMST-URMST_001_Std-W6.6	Urmston	Increase treatment capacity	Compliant (low conf.)	
WHTHA-WHTHA_001_Std-W2.n	Whitehaven	Increase treatment capacity	Compliant (low conf.)	
WILML-WILML_001_Std-W2.n	Wilmslow	Increase treatment capacity	Compliant (low conf.)	
WIGAN-WIGAN_001_Std-W2.n	Wigan	Increase treatment capacity	Compliant (low conf.)	
WORKI-WORKI_001_Std-W2.n	Workington	Increase treatment capacity	Compliant (low conf.)	
ASKHM-WW1- SOCKB-WWTRNSF1	Askham to Sockbridge	Transfer	Non-compliant (low conf.)	The CAMS (Catchment Abstraction Management Strategy) suggests that water is available for abstraction from the Lowther (Lower) water body (GB102076071010) under Q95 flow conditions but no water is available for abstraction under Q70, Q50 and Q30 flow conditions. This indicates a flow pressure that could be increased by the reduction in flow from Askham WwTW into this water body, potentially leading to significant impacts on in-channel habitats. As such, this option is assessed as non-compliant in the surface water body Lowther (Lower) (GB102076071010) for the potential for deterioration in the fish, invertebrate, macrophytes and phytobenthos status elements.
MOWPE-WW1- HGHLE-WWTRNSF1	Mowpen Brow to High Leigh	Transfer	Compliant (low conf.)	

Of the 29 options, all 27 increase treatment capacity options have each been assessed to be compliant (low confidence) against the WFD Assessment Objectives set out in Section 2.1. It has been assumed that any increase in WwTW discharge would be consented (either as within the headroom of an existing consent, or, if there was an increase in consented volume, that the EA would accept the changes in consent conditions) and therefore would be WFD regulations compliant. Due to the limited option information, these assessments have only been given a low confidence rating. In order to improve confidence in the assessments, scheme specific investigations are advocated into the impact of the option on the WFD receptors. Each impact assessment has highlighted the receptors in each water body that may be particularly sensitive to an increase in discharge volume associated with the increase in treatment capacity.

Of the transfer options, the Askham to Sockbridge transfer (ASKHM-WW1- SOCKB-WWTRNSF1) option has been flagged as potentially non-compliant (low confidence) due to the potential for deterioration in the biological status elements in the Lowther (Lower) (GB102076071010) water body. The Mowpen Brow to High Leigh transfer (MOWPE-WW1- HGHLE-WWTRNSF1) has been assessed as compliant (low confidence). As with the increase capacity options, each of these assessments have a low confidence rating and further, option specific, investigations are advocated in order to improve confidence in each assessment.

4 Cumulative Assessment

In order to understand the WFD compliance of the DWMP a cumulative assessment has been undertaken of the complex options and transfer options within the plan. The option-level assessments (Section 3) have been used to inform the cumulative assessment of the DWMP. For each WFD water body that is impacted by multiple options within the plan, an impact assessment has been undertaken to understand the cumulative impact on the receptors within that water body as a result of all of the options being in operation.

Table 4-1 displays the water bodies that have been assessed at the option-level and identifies those water bodies that are impacted by more than one option. In total there are four water bodies identified for cumulative assessment:

- Cumulative 1: GB112069060980 – Sinderland Brook (associated with ALTRI-ALTRI_001_Std-W2.n and PARTI-PARTI_001_Std-W2.n increase treatment capacity options)
- Cumulative 2: GB112069061452 - Irwell / Manchester Ship Canal (Irk to confluence with Upper Mersey) (associated with DAVYH-DAVYH_001_Std-W2.n, SALFO-SALFO_002_Std-W2.n and URMST-URMST_001_Std-W6.6 increase treatment capacity options)
- Cumulative 3: GB112069061030 - Mersey (upstream of Manchester Ship Canal) (associated with SALEZ-SALEZ_002_Std-W2.n, STOCK-STOCK_001_Std-W2.n and STRET-STRET_001_Std-W2.n increase treatment capacity options)
- Cumulative 4: GB531206908100 – Mersey (associated with BURSC-BURSC_001_Std-W2.n and ELLES-ELLES_001_Std-W2.n increase treatment capacity options).

The cumulative impact assessment for each of these water bodies is available in Appendix B. Each of the cumulative impact assessments found the impact to be compliant (low confidence). Similar to the assessments at an option-level, it has been assumed that that any increase in WwTW discharge would be consented (either as within the headroom of an existing consent, or, if there was an increase in consented volume, that the EA would accept the changes in consent conditions) and therefore would be WFD regulations compliant. Due to the limited option information, these assessments have only been given a low confidence rating. In order to improve confidence in the assessments, scheme specific investigations are advocated into the cumulative impact of the options on the WFD receptors.

Table 4-1 Identification of cumulative impacts on water bodies associated with the strategic and complex options and transfer options in the DWMP

WFD water body		Option ID																													
Type	ID and Name	ALTRI-ALTRI_001_Std-W2.n	ALSGE-ALSGE_001_Std-W2.n	BLACK-BLACK_001_Std-W2.n	BROMB-BROMB_001_Std-W2.n	BURSC-BURSC_001_Std-W2.n	CARLI-CARLI_001_Std-W2.n	CRNFT-CRNFT_001_Std-W2.n	DAVYH-DAVYH_001_Std-W2.n	ELLES-ELLES_001_Std-W2.n	FLEET-FLEET_001_Std-W2.n	HILLH-HILLH_001_Std-W2.n	KENDA-KENDA_001_Std-W6.6	KNUTF-KNUTF_001_Std-W2.n	LANCA-LANCA_001_Std-W2.n	MACCL-MACCL_001_Std-W2.n	PARTI-PARTI_001_Std-W2.n	PENRT-PENRT_002_Std-W2.n	PREST-PREST_001_Std-W2.n	SALEZ-SALEZ_002_Std-W2.n	SALFO-SALFO_002_Std-W2.n	STOCK-STOCK_001_Std-W2.n	STRET-STRET_001_Std-W2.n	URMST-URMST_001_Std-W6.6	WHTHA-WHTHA_001_Std-W2.n	WILML-WILML_001_Std-W2.n	WIGAN-WIGAN_001_Std-W2.n	WORKI-WORKI_001_Std-W2.n	ASKHM-WW1- SOCKB-WWTRNSF1	MOWPE-WW1- HGHLE-WWTRNSF1
River	GB112069060980 – Sinderland Brook	✓															✓														
	GB112068055390 - Kidsgrove Stream (including Day Green Stream)		✓																												
	GB112071065300 - Darwen - conf Roddlesworth to tidal			✓																											
	GB112070064880 – Black Drain and Sluice				✓																										
	GB102076073940 – Eden – Eamont to tidal						✓																								
	GB112069061452 - Irwell / Manchester Ship Canal (Irk to confluence with Upper Mersey)								✓												✓			✓							
	GB641211630002 - Cumbria																														
	GB112069061442 – Alt DS Bull Bridge											✓																			
	GB112073071460 - Kent - conf Sprint to tidal												✓																		
	GB112069061340 – Birkin Brook – Source to Mobberley Brook													✓																	
	GB112069061320 – Bollin (Source to Dean)															✓															
	GB102076070990 – Eamont (Lower)																	✓													
	GB112069061030 - Mersey (upstream of Manchester Ship Canal)																			✓		✓	✓								
	GB112074070040 – Lowca Beck																								✓						
	GB112069061360 - Dean (Bollington to Bollin)																									✓					
	GB112070064820 – Douglas (Lower)																										✓				
	GB102076071010 – Lowther (Lower)																											✓			
	GB102076071020 – Eamont (Upper)																												✓		
	GB112069061382 - Bollin (Ashley Mill to Manchester Ship Canal)																														✓
Transitional water	GB531206908100 - Mersey					✓				✓																					
	GB531207312000 - Kent							✓																							
	GB531207212100 - Lune														✓																
	GB531207112400 - Ribble																		✓												
Coastal	GB641211630002 - Cumbria										✓																				
	GB641211630003 – Solway Outer South																												✓		

✓ Cumulative 1 ✓ Cumulative 2 ✓ Cumulative 3 ✓ Cumulative 4

5 Summary of WFD Compliance of the UU DWMP

This report presents the WFD compliance assessment of the DWMP.

Each of the strategic and complex and transfer options within the DWMP have been assessed in isolation and cumulatively against each of the principle WFD Assessment Objectives set out in Section 2.1.1. The majority of the options have been found to be compliant against the principle WFD Assessment Objectives, however, these assessments are low confidence and further, bespoke, investigations into the hydroecological and water quality impacts are likely to be required to improve this confidence.

It was found that the Askham to Sockbridge transfer option (ASKHM-WW1- SOCKB-WWTRNSF1) may potentially not comply with WFD Assessment Objective 1 as there is the potential for the option to cause deterioration to the biological status elements in the Lowther (Lower) water body (GB102076071010). Again, this is low confidence and further investigations are advocated to improve the confidence in this assessment.

Through its very purpose, the DWMP intends to identify and lead to environmental water quality improvements. As such the progressive WFD Assessment Objectives for both water bodies (WFD Assessment Objective 4) and protected areas (WFD Assessment Objective 5) are likely to be assisted by the DWMP. It is worth highlighting that these progressive WFD Assessment Objectives help to inform decision making and do not contribute to the overall WFD compliance.

A summary of the assessment against each of the WFD Assessment Objectives is reported in Table 5-1 below.

Table 5-1 Summary of plan level WFD compliance for the UU DWMP

WFD Assessment Objective	Summary of WFD compliance	Explanation
1) To prevent deterioration of any WFD element of any water body - in line with Regulation 13(2)a and 13(5)a	Potentially non-compliant with WFD Assessment Objective	All options in the DWMP have been assessed in isolation and cumulatively against this WFD Assessment Objective 1.The Askham to Sockbridge transfer option (ASKHM-WW1- SOCKB-WWTRNSF1) has been found to potentially not comply with WFD Assessment Objective 1 as there is the potential for the option to cause deterioration to the biological status elements in the Lowther (Lower) water body (GB102076071010). All other increase treatment capacity and transfer options in the plan have been found to be complaint (low confidence) against this WFD Assessment Objective. It is worth noting that all of these assessments are high level and have low confidence ratings associated with them. Further, option bespoke, assessments are likely required in order to improve confidence in these assessments.
2) To prevent the introduction of impediments to the attainment of 'Good' WFD status or potential for any water body -in line with Regulation 13(2)b and 13(5)c.	Compliant with WFD Assessment Objective	All options in the DWMP have been assessed in isolation and cumulatively and all have been assessed as being WFD compliant against WFD Assessment Objective 2. It is worth noting that all of these assessments are high level and have low confidence ratings associated with them. Further, option bespoke, assessments are likely required in order to improve confidence in these assessments.
3) To ensure that the planned programme of water body measures in RBMP3 to protect and enhance the status of water bodies are not compromised.	Compliant with WFD Assessment Objective	As water body scale measures for RBMP3 are yet to be published, no assessment against WFD Objective Assessment 3 has been achievable.
4) To assist the attainment of the WFD objectives for the water body – in line with Regulation 13(2)b and 13(2)c	Likely to assist WFD Assessment Objective	Key issues for the DWMP include looking at areas that may be prone to environmental effects that can be benefited by changes to drainage and wastewater management; and looking at providing resilience to future pressures.
5) To assist the attainment of the WFD objectives for associated WFD protected areas – in line with Regulation 13(6)	Likely to assist WFD Assessment Objective	At a water body level, the WFD compliance assessment of the increased treatment capacity and transfer options has not specifically reviewed improvements to physico-chemical water quality or biological status elements. Water quality improvements associated with the DWMP – from current continuous and intermittent discharges are assessed elsewhere in the DWMP.
6) To progressively reduce or phase out the release of individual pollutants or groups of pollutants that present a significant threat to the aquatic environment	Does not assist WFD Assessment Objective	None of the options within the DWMP make steps to phase out the pollutants that present a significant threat to the aquatic environment.

Appendices

Appendix A: Option-level impact assessments

Option	ALTRI-ALTRI_001_Std-W2.n Altrincham
Water body type	River
Hydromorph designation	Not designated
Water body ID	GB112069060980
Water body name	Sinderland Brook

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Altrincham Wastewater Treatment Works into the Sinderland Brook water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish			Probable	Probable			There are existing water quality pressures in this water body that could be exaggerated through the discharge of additional effluent from this treatment works. This could lead to deterioration and impede the target of good status in the phys-chem status elements (particularly Phosphate) and biological elements (particularly macrophytes and phytobenthos). It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	Compliant (low conf.)
Invertebrates				Suspected				Compliant (low conf.)	Compliant (low conf.)
Macrophytes/ phytobenthos					Confirmed			Compliant (low conf.)	Compliant (low conf.)
Phys-chem water quality (in support of ecological status)		Mod.for DO (unknown) and poor for phosphate (urbanisations - conf.; continuous sewage discharge - conf; misconnections - prob.)						Compliant (low conf.)	Compliant (low conf.)
Chemicals		Failed for mercury, PFOS and PBDE						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	ALSGE-ALSGE_001_Std-W2.n Alsager
Water body type	River
Hydromorph designation	Not designated
Water body ID	GB112068055390
Water body name	Kidsgrove Stream (including Day Green Stream)

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Alsager Wastewater Treatment Works into the Kidsgrove Stream water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish	Not assessed						There are existing water quality pressures in this water body that could be exaggerated through the discharge of additional effluent from this treatment works. This could lead to deterioration and impede the target of good status in the phys-chem status elements (particularly ammonia and phosphate) and biological elements (the invertebrate and macrophytes/phytobenthos elements of the biological elements indicate wastewater treatment works discharge as a RNAG). There are also chemical elements that indicate wastewater treatment works as an reason for failure that could be increased as a result of the increased discharge. It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Invertebrates					Confirmed			Compliant (low conf.)	Compliant (low conf.)
Macrophytes/ phytobenthos				Confirmed	Confirmed			Compliant (low conf.)	Compliant (low conf.)
Phys-chem water quality (in support of ecological status)		Moderate for ammonia (continuous sewage discharge - conf); poor for phosphate (urban development - susp; continuous sewage discharge - conf; poor livestock management - susp)						Compliant (low conf.)	Compliant (low conf.)
Chemicals		Fail for mercury and PBDE						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	BLACK-BLACK_001_Std-W2.n Blackburn
Water body type	River
Hydromorph designation	Not designated
Water body ID	GB112071065300
Water body name	Darwen - conf Roddlesworth to tidal

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Blackburn Wastewater Treatment Works into the Darwen - conf Roddlesworth to tidal water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish			Confirmed	Confirmed			There are existing water quality pressures in this water body that could be exaggerated through the discharge of additional effluent from this treatment works. This could lead to deterioration and impede the target of good status in the phys-chem status elements (particularly Phosphate) and biological elements (all of the biological elements indicate wastewater treatment works discharge as a RNAG). There are also chemical elements that indicate wastewater treatment works as an reason for failure that could be increased as a result of the increased discharge. It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	Compliant (low conf.)
Invertebrates					Confirmed			Compliant (low conf.)	Compliant (low conf.)
Macrophytes/ phytobenthos				Confirmed				Compliant (low conf.)	Compliant (low conf.)
Phys-chem water quality (in support of ecological status)		Poor for phosphate (misconnections - suspected; poor nutrient management - probable; continuous sewage discharge - confirmed).						Compliant (low conf.)	Compliant (low conf.)
Chemicals		Failed for Benzo(b)fluoranthene, Benzo(g-h-i)perylene, Mercury, PBDE and Tributyltin Compounds						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures		**Not available**					RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	BURSC-BURSC_001_Std-W2.n Burscough
Water body type	River
Hydromorph designation	Heavily modified
Water body ID	GB112070064880
Water body name	Back Drain and Sluice

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Burscough Wastewater Treatment Works into the Back Drain and Sluice water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish	Not assessed						There are existing water quality pressures in this water body that could be exaggerated through the discharge of additional effluent from this treatment works. This could lead to deterioration in the phys-chem status elements (particularly Phosphate) and biological elements (particularly invertebrates). It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Invertebrates				Confirmed	Confirmed			Compliant (low conf.)	n/a
Macrophytes/ phytobenthos	High							Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)		Bad for DO (continuous sewage discharge - confirmed; landfill leaching - confirmed); Poor for phosphate (continuous sewage discharge - confirmed)						Compliant (low conf.)	Compliant (low conf.)
Chemicals		Failed for mercury and PBDE						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	BROMB-BROMB_001_Std-W2.n Bromborough	Sources & pathways of potential effect: This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Bromborough Wastewater Treatment Works into the Mersey water body. This could lead to in-channel habitat changes, changes in water quality and geomorphological features.
Water body type	Transitional Water	
Hydromorph designation	Heavily modified	
Water body ID	GB531206908100	
Water body name	Mersey	

	Baseline Status		**Assessment of component**		
Status element	RBMP3 status	**Reasons for not achieving good status**	Assessment	Potential for deterioration	Potential for introduction of impediments
Phytoplankton		Unknown	It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Angiosperms	Not assessed			Compliant (low conf.)	n/a
Macroalgae	High			Compliant (low conf.)	n/a
Invertebrates				Compliant (low conf.)	n/a
Fish	Not assessed			Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)		Mod. for DIN (unknown)		Compliant (low conf.)	Compliant (low conf.)
Chemicals		Failed for: Benzo(b)fluoroethane, Benzo(g-h-i)perylene, Heptachlor and cis-Heptachlor epoxide, mercury, PBDE, Dichlorvos (Priority)		Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures		**Not available**	RBMP3 water body measures not currently published	n/a	n/a
			Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	CARLI-CARLI_001_Std-W2.n Carlisle
Water body type	River
Hydromorph designation	Not designated
Water body ID	GB102076073940
Water body name	Eden - Eamont to tidal

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Carlisle Wastewater Treatment Works into the Eden - Eamont to tidal water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish	High						It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Invertebrates	High							Compliant (low conf.)	n/a
Macrophytes/ phytobenthos								Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)								Compliant (low conf.)	n/a
Chemicals		Fail for mercury and PBDE						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	CRNFT-CRNFT_001_Std-W2.n Carnforth	Sources & pathways of potential effect: This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Canrforth Wastewater Treatment Works into the Kent water body. This could lead to in-channel habitat changes, changes in water quality and geomorphological features.
Water body type	Transitional Water	
Hydromorph designation	Heavily modified	
Water body ID	GB531207312000	
Water body name	Kent	

	Baseline Status		**Assessment of component**		
Status element	RBMP3 status	**Reasons for not achieving good status**	Assessment	Potential for deterioration	Potential for introduction of impediments
Phytoplankton		Associated with suspect data	It is assumed that any increase in wastewater wreatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Angiosperms	Not assessed			Compliant (low conf.)	n/a
Macroalgae	Not assessed			Compliant (low conf.)	n/a
Invertebrates				Compliant (low conf.)	n/a
Fish	Not assessed			Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)				Compliant (low conf.)	Compliant (low conf.)
Chemicals		Fail for mercury and PBDE		Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**		RBMP3 water body measures not currently published	n/a	n/a
			Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	DAVYH-DAVYH_001_Std-W2.n Davyhulme
Water body type	River
Hydromorph designation	Heavily modified
Water body ID	GB112069061452
Water body name	Irwell / Manchester Ship Canal (Irk to confluence with Upper Mersey)

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Davyhulme Wastewater Treatment Works into the Irwell / Manchester Ship Canal (Irk to confluence with Upper Mersey) water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish	Not assessed						There are existing water quality pressures in this water body that could be exaggerated through the discharge of additional effluent from this treatment works. This could lead to deterioration in the phys-chem status elements (particularly phosphate, ammonia and DO) and biological elements. It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Invertebrates	Not assessed							Compliant (low conf.)	n/a
Macrophytes/ phytobenthos	Not assessed							Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)		Mod. for ammonia, poor for phosphate, bad for DO all associated with a range of pressures including continuous sewage discharge (confirmed). Also mod. for BOD- no RNAG						Compliant (low conf.)	Compliant (low conf.)
Chemicals		Fail for mercury, PFOS, PBDE, tributyltin and cypermethrin.						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	ELLES-ELLES_001_Std-W2.n Ellesmere Port	Sources & pathways of potential effect: This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Ellesmere Port Wastewater Treatment Works into the Mersey water body. This could lead to in-channel habitat changes, changes in water quality and geomorphological features.
Water body type	Transitional Water	
Hydromorph designation	Heavily modified	
Water body ID	GB531206908100	
Water body name	Mersey	

	Baseline Status		**Assessment of component**		
Status element	RBMP3 status	**Reasons for not achieving good status**	Assessment	Potential for deterioration	Potential for introduction of impediments
Phytoplankton		Unknown	It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Angiosperms	Not assessed			Compliant (low conf.)	n/a
Macroalgae	High			Compliant (low conf.)	n/a
Invertebrates				Compliant (low conf.)	n/a
Fish	Not assessed			Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)		Mod. for DIN (unknown)		Compliant (low conf.)	Compliant (low conf.)
Chemicals		Failed for: Benzo(b)fluoroethane, Benzo(g-h-i)perylene, Heptachlor and cis-Heptachlor epoxide, mercury, PBDE, Dichlorvos (Priority)		Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures		**Not available**	RBMP3 water body measures not currently published	n/a	n/a
			Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	FLEET-FLEET_001_Std-W2.n Fleetwood	Sources & pathways of potential effect: This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Fleetwood Wastewater Treatment Works into the Cumbria water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.
Water body type	Coastal water	
Hydromorph designation	Not designated	
Water body ID	GB641211630002	
Water body name	Cumbria	

	Baseline Status		**Assessment of component**		
Status element	RBMP3 status	**Reasons for not achieving good status**	Assessment	Potential for deterioration	Potential for introduction of impediments
Phytoplankton			It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Angiosperms	Not assessed			Compliant (low conf.)	n/a
Macroalgae	Not assessed			Compliant (low conf.)	n/a
Invertebrates				Compliant (low conf.)	n/a
Fish	Not assessed			Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)				Compliant (low conf.)	Compliant (low conf.)
Chemicals		Fail for mercury and PBDE		Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**		RBMP3 water body measures not currently published	n/a	n/a
			Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	KENDA-KENDA_001_Std-W6.6 Kendal
Water body type	River
Hydromorph designation	Not designated
Water body ID	GB112073071460
Water body name	Kent - conf Sprint to tidal

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Kendal Treatment Works into the Kent (conf Sprint to tidal) water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish	Not assessed						It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Invertebrates								Compliant (low conf.)	n/a
Macrophytes/ phytobenthos								Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)	High							Compliant (low conf.)	Compliant (low conf.)
Chemicals		Fail for mercury, PFOS and PBDE						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	KNUTF-KNUTF_001_Std-W2.n Knutsford
Water body type	River
Hydromorph designation	Not designated
Water body ID	GB112069061340
Water body name	Birkin Brook - Source to Mobberley Brook

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Knutsford Wastewater Treatment Works into the Birkin Brook - Source to Mobberley Brook water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish				Suspected			There are existing water quality pressures in this water body that could be exaggerated through the discharge of additional effluent from this treatment works. This could lead to deterioration and impediments to good status in the phys-chem status elements (particularly phosphate) and biological elements (particularly macrophytes and phytobenthos). It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	Compliant (low conf.)
Invertebrates								Compliant (low conf.)	n/a
Macrophytes/ phytobenthos					Confirmed	Sediment- prob.		Compliant (low conf.)	Compliant (low conf.)
Phys-chem water quality (in support of ecological status)		Mod. for phosphate (cont. sewage discharge- conf.; poor livestock - prob, nutrient and soil management - susp.; in-river activities - suspected.; misconnections - susp.)						Compliant (low conf.)	Compliant (low conf.)
Chemicals		Fail for Benzo(b)fluoranthene, Benzo(g-h-i)perylene, Benzo(k)fluoranthene, mercury and PBDE						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a

Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)

Option	HILLH-HILLH_001_Std-W2.n Hillhouse
Water body type	River
Hydromorph designation	Heavily modified
Water body ID	GB112069061442
Water body name	Alt DS Bull Bridge

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Hillhouse Wastewater Treatment Works into the Alt DS Bull Bridge water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish							There are existing water quality pressures in this water body that could be exaggerated through the discharge of additional effluent from this treatment works. This could lead to deterioration in the phys-chem status elements (particularly phosphate) and biological elements. It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Invertebrates				Confirmed				Compliant (low conf.)	n/a
Macrophytes/ phytobenthos								Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)		Mod. for ammonia (misconnections -susp.); Mod for DO (no RNAG); Poor for phosphate (cont. sewage discharge - prob., misconnections - susp. and poor nutrient management - susp.)						Compliant (low conf.)	Compliant (low conf.)
Chemicals		Fail for mercury, PFOS, PBDE and tributyltin						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	LANCA-LANCA_001_Std-W2.n Lancaster	Sources & pathways of potential effect: This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Lancaster Wastewater Treatment Works into the Lune water body. This could lead to in-channel habitat changes, changes in water quality and geomorphological features.
Water body type	Transitional water	
Hydromorph designation	Not designated	
Water body ID	GB531207212100	
Water body name	Lune	

	Baseline Status		**Assessment of component**		
Status element	RBMP3 status	**Reasons for not achieving good status**	Assessment	Potential for deterioration	Potential for introduction of impediments
Phytoplankton			There are existing water quality pressures in this water body that could be exaggerated through the discharge of additional effluent from this treatment works. This could lead to deterioration and impediments to good status in the phys-chem status elements (particularly DIN) and biological elements. It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Angiosperms		Suspect data- confirmed		Compliant (low conf.)	Compliant (low conf.)
Macroalgae				Compliant (low conf.)	n/a
Invertebrates				Compliant (low conf.)	n/a
Fish				Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)		Mod. for DIN (cont. sewage discharge - prob.)		Compliant (low conf.)	Compliant (low conf.)
Chemicals		Fail for benzo(g-h-i)perylene, mercury and PBDE		Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**		RBMP3 water body measures not currently published	n/a	n/a
			Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	MACCL-MACCL_001_Std-W2.n Macclesfield
Water body type	River
Hydromorph designation	Heavily modified
Water body ID	GB112069061320
Water body name	Bollin (Source to Dean)

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Macclesfield Wastewater Treatment Works into the Bolin (Source to Dean) water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish						Suspect data	There are existing water quality pressures in this water body that could be exaggerated through the discharge of additional effluent from this treatment works. This could lead to deterioration in the phys-chem status elements (particularly phosphate) and biological elements (particularly macrophytes and phytobenthos). It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Invertebrates								Compliant (low conf.)	n/a
Macrophytes/ phytobenthos				Probable				Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)		Bad for phosphate (cont. sewage discharge - conf.; poor livestock management - susp.; urbanisation - susp.)						Compliant (low conf.)	Compliant (low conf.)
Chemicals		Fail for benzo(g-h-i)perylene, mercury and PBDE						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	PARTI-PARTI_001_Std-W2.n Partington
Water body type	River
Hydromorph designation	Not designated
Water body ID	GB112069060980
Water body name	Sinderland Brook

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Partington Wastewater Treatment Works into the Sinderland Brook water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish			Probable	Probable			There are existing water quality pressures in this water body that could be exaggerated through the discharge of additional effluent from this treatment works. This could lead to deterioration and impede the target of good status in the phys-chem status elements (particularly Phosphate) and biological elements (particularly macrophytes and phytobenthos). It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	Compliant (low conf.)
Invertebrates				Suspected				Compliant (low conf.)	Compliant (low conf.)
Macrophytes/ phytobenthos					Confirmed			Compliant (low conf.)	Compliant (low conf.)
Phys-chem water quality (in support of ecological status)		Mod.for DO (unknown) and poor for phosphate (urbanisations - conf.; continuous sewage discharge - conf; misconnections - prob.)						Compliant (low conf.)	Compliant (low conf.)
Chemicals		Failed for mercury, PFOS and PBDE						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	PENRT-PENRT_002_Std-W2.n Penrith
Water body type	River
Hydromorph designation	Not designated
Water body ID	GB102076070990
Water body name	Eamont (Lower)

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Penrith Wastewater Treatment Works into the Eamont (Lower) water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish	High						It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	Compliant (low conf.)
Invertebrates								Compliant (low conf.)	Compliant (low conf.)
Macrophytes/ phytobenthos								Compliant (low conf.)	Compliant (low conf.)
Phys-chem water quality (in support of ecological status)	High							Compliant (low conf.)	Compliant (low conf.)
Chemicals		Fail for mercury and PBDE						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	PREST-PREST_001_Std-W2.n Preston	Sources & pathways of potential effect: This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Preston Wastewater Treatment Works into the Ribble water body. This could lead to in-channel habitat changes, changes in water quality and geomorphological features.
Water body type	Transitional water	
Hydromorph designation	Heavily modified	
Water body ID	GB531207112400	
Water body name	Ribble	

	Baseline Status		**Assessment of component**		
Status element	RBMP3 status	**Reasons for not achieving good status**	Assessment	Potential for deterioration	Potential for introduction of impediments
Phytoplankton		Nutrients pressure from continuous sewage discharge (confirmed)	There are existing water quality pressures in this water body that could be exaggerated through the discharge of additional effluent from this treatment works. This could lead to deterioration in the phys-chem status elements (particularly DIN) and biological elements (particularly phytoplankton). It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Angiosperms				Compliant (low conf.)	n/a
Macroalgae				Compliant (low conf.)	n/a
Invertebrates				Compliant (low conf.)	n/a
Fish				Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)		Mod. for DIN (cont. sewage discharge - prob.)		Compliant (low conf.)	Compliant (low conf.)
Chemicals		Fail for benzo(g-h-i)perylene, mercury and PBDE		Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**		RBMP3 water body measures not currently published	n/a	n/a
			Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	SALEZ-SALEZ_002_Std-W2.n Sale
Water body type	River
Hydromorph designation	Heavily modified
Water body ID	GB112069061030
Water body name	Mersey (upstream of Manchester Ship Canal)

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Sale Wastewater Treatment Works into the Mersey (upstream of Manchester Ship Canal) water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish	Not assessed						There are existing water quality pressures in this water body that could be exaggerated through the discharge of additional effluent from this treatment works. This could lead to deterioration in the phys-chem status elements (particularly phosphate) and biological elements. It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Invertebrates	Not assessed							Compliant (low conf.)	n/a
Macrophytes/ phytobenthos	Not assessed							Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)		Poor for Phosphate (continuous sewage discharge - confirmed; Poor nutrient, pesticide, soil and livestock management - suspect; urbanisation - suspected; riparian/ in-river activities - suspect)						Compliant (low conf.)	Compliant (low conf.)
Chemicals		Failed for benzo(b)fluoranthene, benzo(g-h-i)perylene, benzo(k)fluoranthene, mercury, PFOS, PBDE, cypermethrin						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures		**Not available**					RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	SALFO-SALFO_002_Std-W2.n Salford
Water body type	River
Hydromorph designation	Heavily modified
Water body ID	GB112069061452
Water body name	Irwell / Manchester Ship Canal (Irk to confluence with Upper Mersey)

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Salford Wastewater Treatment Works into the Irwell / Manchester Ship Canal (Irk to confluence with Upper Mersey) water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish	Not assessed						There are existing water quality pressures in this water body that could be exaggerated through the discharge of additional effluent from this treatment works. This could lead to deterioration in the phys-chem status elements (particularly phosphate, ammonia and DO) and biological elements. It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Invertebrates	Not assessed							Compliant (low conf.)	n/a
Macrophytes/ phytobenthos	Not assessed							Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)		Mod. for ammonia, poor for phosphate, bad for DO all associated with a range of pressures including continuous sewage discharge (confirmed). Also mod. for BOD- no RNAG						Compliant (low conf.)	Compliant (low conf.)
Chemicals		Fail for mercury, PFOS, PBDE, tributyltin and cypermethrin.						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	STRET-STRET_001_Std-W2.n Stretford
Water body type	River
Hydromorph designation	Heavily modified
Water body ID	GB112069061030
Water body name	Mersey (upstream of Manchester Ship Canal)

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Stretford Wastewater Treatment Works into the Mersey (upstream of Manchester ship canal) water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish	Not assessed						There are existing water quality pressures in this water body that could be exaggerated through the discharge of additional effluent from this treatment works. This could lead to deterioration in the phys-chem status elements (particularly phosphate) and biological elements. It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Invertebrates	Not assessed							Compliant (low conf.)	n/a
Macrophytes/ phytobenthos	Not assessed							Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)		Poor for Phosphate (continuous sewage discharge - confirmed; Poor nutrient, pesticide, soil and livestock management - probable; urbanisation - suspected; riparian/ in-river activities - suspect)						Compliant (low conf.)	Compliant (low conf.)
Chemicals		Failed for benzo(b)fluoranthene, benzo(g-h-i)perylene, benzo(k)fluoranthene, mercury, PFOS, PBDE, cypermethrin						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures		**Not available**					RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	URMST-URMST_001_Std-W6.6 Urmston
Water body type	River
Hydromorph designation	Heavily Modified
Water body ID	GB112069061452
Water body name	Irwell / Manchester Ship Canal (Irk to confluence with Upper Mers)

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Urmston Wastewater Treatment Works into the Irwell / Manchester Ship Canal (Irk to confluence with Upper Mers) water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish	Not assessed						There are existing water quality pressures in this water body that could be exaggerated through the discharge of additional effluent from this treatment works. This could lead to deterioration in the phys-chem status elements (particularly ammonia, phosphate, BOD and DO) and biological elements. It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Invertebrates	Not assessed							Compliant (low conf.)	n/a
Macrophytes/ phytobenthos	Not assessed							Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)		Moderate for Ammonia (continuous sewage discharge - conf.; Contaminated land - conf.; Trade/industry discharge - conf); Moderate for BOD; Bad for DO (contaminated water body bed sediments - conf.; inland boating and structures - prob.; continuous and intermittent sewage discharge - conf); Poor for Phosphate (continuous sewage discharge - confirmed)						Compliant (low conf.)	Compliant (low conf.)
Chemicals		Fail for: Benzo(a)pyrene, mercury, PFOS, PBDE, Tributyltin, Cypermethrin						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	WHTHA-WHTHA_001_Std-W2.n Whitehaven
Water body type	River
Hydromorph designation	Not designated
Water body ID	GB112074070040
Water body name	Lowca Beck

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Whitehaven Wastewater Treatment Works into the Lowca Beck water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish	Not assessed						It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Invertebrates						Organic pollution-poor livestock management and misconnections (both probable)		Compliant (low conf.)	Compliant (low conf.)
Macrophytes/ phytobenthos	High							Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)								Compliant (low conf.)	n/a
Chemicals		Fail for mercury and PBDE						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	WILML-WILML_001_Std-W2.n Wilmslow
Water body type	River
Hydromorph designation	Not designated
Water body ID	GB112069061360
Water body name	Dean (Bollington to Bollin)

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Wilmslow Wastewater Treatment Works into the Dean (Bollington to Bollin) water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish							Though phosphate status in this water body is Good status, there are pressures on the macrophyte/phytobenthos status associated with phosphate concentration, particularly associated with continuous sewage discharge from the water industry. As a result of increasing the discharge from the Wilmslow Wastewater Treatment Works this pressure may be exacerbated. Therefore, there is a risk of deterioration and impediment to Good status in this water body, particularly associated with macrophyte and phytobenthos status and phosphate status. It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Invertebrates						INNS - North American Crayfish - Probable		Compliant (low conf.)	Compliant (low conf.)
Macrophytes/ phytobenthos				Suspected				Compliant (low conf.)	Compliant (low conf.)
Phys-chem water quality (in support of ecological status)								Compliant (low conf.)	n/a
Chemicals		Fail for Mercury and PBDE						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	WIGAN-WIGAN_001_Std-W2.n Wigan
Water body type	River
Hydromorph designation	Heavily modified
Water body ID	GB112070064820
Water body name	Douglas - Lower

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Wigan Wastewater Treatment Works into the Douglas (lower) water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish							There are existing water quality pressures in this water body that could be exaggerated through the discharge of additional effluent from this treatment works. This could lead to deterioration in the phys-chem status elements (particularly phosphate) and biological elements (particularly invertebrates). It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Invertebrates				Confirmed		Organic pollution-poor nutrient management and misconnections (conf.)		Compliant (low conf.)	n/a
Macrophytes/ phytobenthos								Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)		Poor for phosphate associated with intermittent and continuous sewage discharge and poor nutrient management (all confirmed)						Compliant (low conf.)	Compliant (low conf.)
Chemicals		Fail for benzo(g-h-i)perylene, mercury, PFOS, PBDE and cypermethrin						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	WORKI-WORKI_001_Std-W2.n Workington
Water body type	Coastal water
Hydromorph designation	Not designated
Water body ID	GB641211630003
Water body name	Solway Outer South

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Workington Wastewater Treatment Works into the Solway Outer South water body. This could lead to in-channel habitat changes, changes in water quality and geomorphological features.

	Baseline Status		**Assessment of component**		
Status element	RBMP3 status	**Reasons for not achieving good status**	Assessment	Potential for deterioration	Potential for introduction of impediments
Phytoplankton			It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Angiosperms	Not assessed			Compliant (low conf.)	n/a
Macroalgae				Compliant (low conf.)	n/a
Invertebrates		Associated with poor soil management (prob.) and intermittent sewage discharge (prob.)		Compliant (low conf.)	Compliant (low conf.)
Fish	Not assessed			Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)				Compliant (low conf.)	Compliant (low conf.)
Chemicals		Fail for mercury and PBDE		Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**		RBMP3 water body measures not currently published	n/a	n/a

Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)

Option	ASKHM-WW1- SOCKB-WWTRNSF1 Askham to Sockbridge
Water body type	River
Hydromorph designation	Heavily modified
Water body ID	GB102076071010
Water body name	Lowther (Lower)

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option would lead to a transfer of effluent away from Askham Wastewater Treatment Works which would usually be discharged into this water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish	Not assessed						The CAMS (Catchment Abstraction Management Strategy) suggests that there is water available for abstraction under Q95 flow conditions and no water available for abstraction under Q70, Q50, Q30 flow conditions. This suggests that there is a flow pressure in this water body. Given the fact that currently the Askham Wastewater Treatment Works discharges into the Lowther (Lower) water body it can be assumed that the discharge being transferred from Askham Wastewater Treatment Works to Sockbridge Wastewater Treatment Works (and ultimately the Eamont water body) will result in a decrease in flow in the Lowther thus exaggerating the flow pressure. This could lead to significant in-channel habitat changes ultimately leading to potential deterioration in the biological status elements. In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Non-compliant (low conf.)	n/a
Invertebrates	Not assessed							Non-compliant (low conf.)	n/a
Macrophytes/ phytobenthos	Not assessed							Non-compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)	High							Compliant (low conf.)	n/a
Chemicals		Fail for mercury and PBDE						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Non-compliant (low conf.)	

Option	ASKHM-WW1- SOCKB-WWTRNSF1 Askham to Sockbridge
Water body type	River
Hydromorph designation	Not designated
Water body ID	GB102076071020
Water body name	Eamont (Upper)

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option would lead to a transfer of effluent away from Askham Wastewater Treatment Works and an increase of effluent from Sockbridge Wastewater Treatment Works into the Eamont (upper) water body. The Eamont is downstream of the Lowther (Lower) water body so there will be no net change in flows at the Sockbridge discharge. There may be water quality changes as a result of this option.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish							There will be no net change in flows downstream of the Sockbridge discharge in the Eamont (upper) as it is downstream of the Lowther (lower). It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Invertebrates	High							Compliant (low conf.)	n/a
Macrophytes/ phytobenthos								Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)								Compliant (low conf.)	n/a
Chemicals		Fail for mercury, PBDE, Benzo(b)fluoranthene, Benzo(g-h-i)perylene.						Compliant (low conf.)	n/a
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	MOWPE-WW1- HGHLE-WWTRNSF1 Mowpen Brow to High Leigh	Sources & pathways of potential effect: This water body has been screened for an impact assessment due to operational activities. This option would lead to a transfer of effluent away from Mowpen Brow Wastewater Treatment Works to High Leigh Wastewater Treatment Works potentially leading to a increase in effluent discharge from High Leigh Wastewater Treatment Works into this water body. This may lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features in this water body.
Water body type	River	
Hydromorph designation	Heavily modified	
Water body ID	GB112069061382	
Water body name	Bollin (Ashley Mill to Manchester Ship Canal)	

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish							There are existing water quality pressures in this water body that could be exaggerated through the discharge of additional effluent from this treatment works. This could lead to deterioration in the phys-chem status elements (particularly phosphate). It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Invertebrates								Compliant (low conf.)	n/a
Macrophytes/ phytobenthos	Not assessed							Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)		Poor for phosphate (poor livestock management - suspected, urbanisation - suspected and continuous sewage discharge - confirmed)						Compliant (low conf.)	Compliant (low conf.)
Chemicals		Fail for mercury and PBDE						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Appendix B: Cumulative impact assessment

Option	Cumulative 1 Altrincham and Partington
Water body type	River
Hydromorph designation	Not designated
Water body ID	GB112069060980
Water body name	Sinderland Brook

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Altrincham and Partington Wastewater Treatment Works into the Sinderland Brook water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish			Probable	Probable			There are existing water quality pressures in this water body that could be exaggerated through the discharge of additional effluent from this treatment works. This could lead to deterioration and impede the target of good status in the phys-chem status elements (particularly Phosphate) and biological elements (particularly macrophytes and phytobenthos). It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	Compliant (low conf.)
Invertebrates				Suspected				Compliant (low conf.)	Compliant (low conf.)
Macrophytes/ phytobenthos					Confirmed			Compliant (low conf.)	Compliant (low conf.)
Phys-chem water quality (in support of ecological status)		Mod.for DO (unknown) and poor for phosphate (urbanisations - conf.; continuous sewage discharge - conf; misconnections - prob.)						Compliant (low conf.)	Compliant (low conf.)
Chemicals		Failed for mercury, PFOS and PBDE						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	Cumulative 2 Salford, Davyhulme and Urmston
Water body type	River
Hydromorph designation	Heavily modified
Water body ID	GB112069061452
Water body name	Irwell / Manchester Ship Canal (Irk to confluence with Upper Mersey)

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Salford, Davyhulme and Urmston Wastewater Treatment Works into the Irwell / Manchester Ship Canal (Irk to confluence with Upper Mersey) water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish	Not assessed						There are existing water quality pressures in this water body that could be exaggerated through the discharge of additional effluent from these treatment works. This could lead to deterioration in the phys-chem status elements (particularly phosphate, ammonia and DO) and biological elements. It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Invertebrates	Not assessed							Compliant (low conf.)	n/a
Macrophytes/ phytobenthos	Not assessed							Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)		Mod. for ammonia, poor for phosphate, bad for DO all associated with a range of pressures including continuous sewage discharge (confirmed). Also mod. for BOD- no RNAG						Compliant (low conf.)	Compliant (low conf.)
Chemicals		Fail for mercury, PFOS, PBDE, tributyltin and cypermethrin.						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures	**Not available**						RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	Cumulative 3 Sale and Stretford
Water body type	River
Hydromorph designation	Heavily modified
Water body ID	GB112069061030
Water body name	Mersey (upstream of Manchester Ship Canal)

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Sale and Stretford Wastewater Treatment Works into the Mersey (upstream of Manchester Ship Canal) water body. This could lead to in-channel habitat changes, changes in water quality, flow velocities and geomorphological features.

	Baseline Status	**Reasons for not achieving good status**					**Assessment of component**		
Status element	RBMP3 status	Flow	Morphology	Sanitary water quality	Nutrients	Other	Assessment	Potential for deterioration	Potential for introduction of impediments
Fish	Not assessed						There are existing water quality pressures in this water body that could be exaggerated through the discharge of additional effluent from these treatment works. This could lead to deterioration in the phys-chem status elements (particularly phosphate) and biological elements. It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Invertebrates	Not assessed							Compliant (low conf.)	n/a
Macrophytes/ phytobenthos	Not assessed							Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)		Poor for Phosphate (continuous sewage discharge - confirmed; Poor nutrient, pesticide, soil and livestock management - suspect; urbanisation - suspected; riparian/ in-river activities - suspect)						Compliant (low conf.)	Compliant (low conf.)
Chemicals		Failed for benzo(b)fluoranthene, benzo(g-h-i)perylene, benzo(k)fluoranthene, mercury, PFOS, PBDE, cypermethrin						Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures		**Not available**					RBMP3 water body measures not currently published	n/a	n/a
							Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

Option	Cumulative 4 Bromborough and Ellesmere
Water body type	Transitional Water
Hydromorph designation	Heavily modified
Water body ID	GB531206908100
Water body name	Mersey

Sources & pathways of potential effect:
This water body has been screened for an impact assessment due to operational activities. This option could potentially lead to increased discharges from Bromborough and Ellesmere Wastewater Treatment Workss into the Mersey water body. This could lead to in-channel habitat changes, changes in water quality and geomorphological features.

	Baseline Status		**Assessment of component**		
Status element	RBMP3 status	**Reasons for not achieving good status**	Assessment	Potential for deterioration	Potential for introduction of impediments
Phytoplankton		Unknown	It is assumed that any increase in wastewater treatment works discharge would be consented (either as within the headroom of an existing consent, or that if an increase, that the Environment Agency would accept the changes in consent conditions). In order to improve confidence in the assessment, scheme specific investigations are required, potentially including hydrological and water quality modelling, to understand the impacts of this option on the ecological and chemical status elements.	Compliant (low conf.)	n/a
Angiosperms	Not assessed			Compliant (low conf.)	n/a
Macroalgae	High			Compliant (low conf.)	n/a
Invertebrates				Compliant (low conf.)	n/a
Fish	Not assessed			Compliant (low conf.)	n/a
Phys-chem water quality (in support of ecological status)		Mod. for DIN (unknown)		Compliant (low conf.)	Compliant (low conf.)
Chemicals		Failed for: Benzo(b)fluoroethane, Benzo(g-h-i)perylene, Heptachlor and cis-Heptachlor epoxide, mercury, PBDE, Dichlorvos (Priority)		Compliant (low conf.)	Compliant (low conf.)
RBMP3 water body measures		**Not available**	RBMP3 water body measures not currently published	n/a	n/a
			Overall assessment of WFD Regulations compliance of the component in this water body	Compliant (low conf.)	

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