



# Drainage and Wastewater Management Plan

Barton Stacey  
Wastewater System Plan



from  
**Southern  
Water** 

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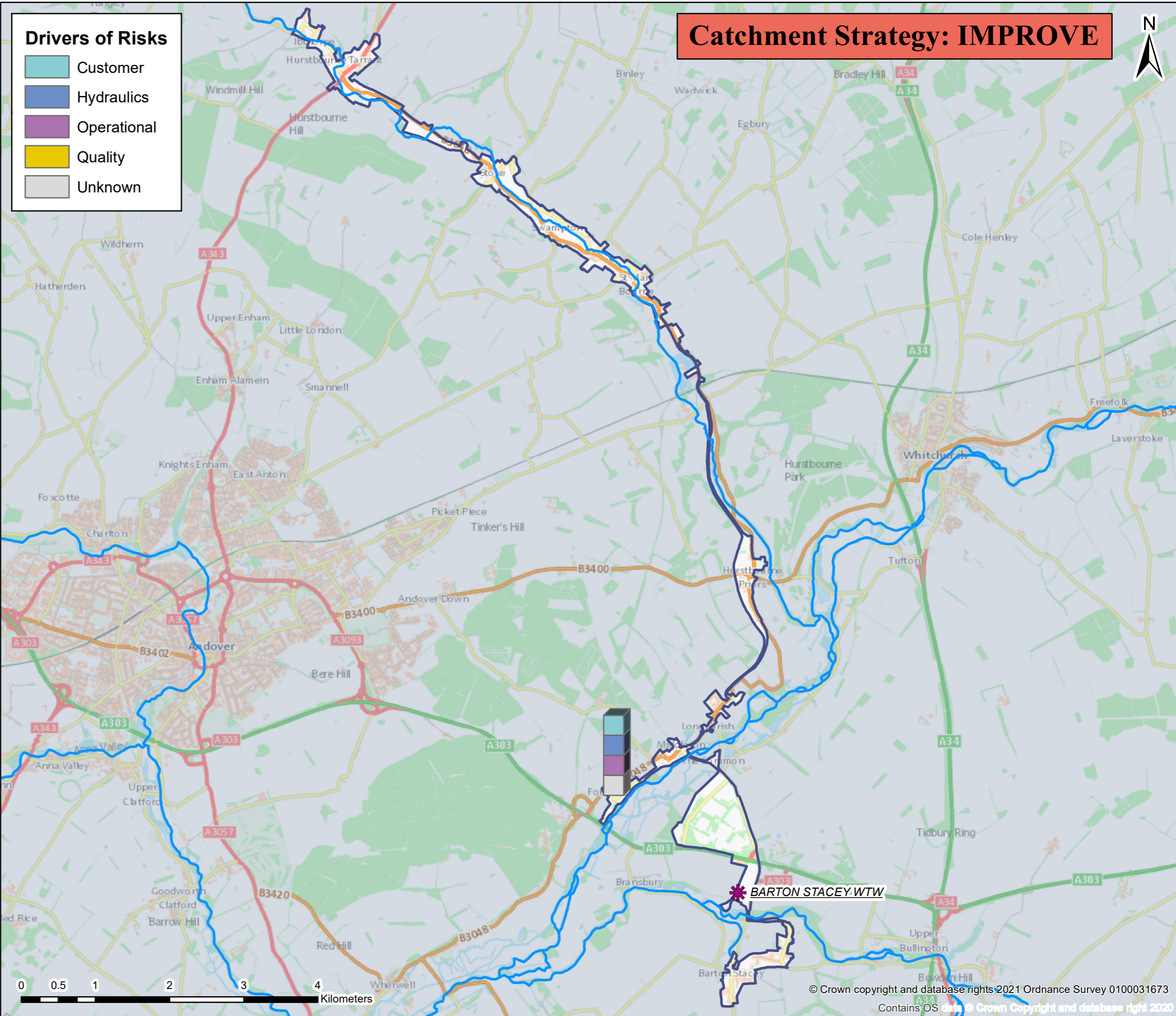
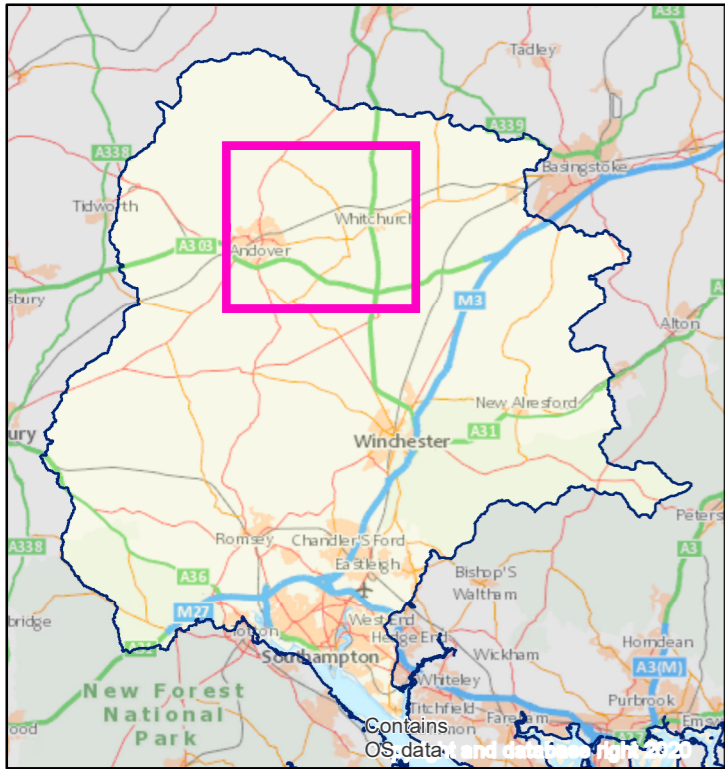
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# Barton Stacey wastewater system: map and key facts



Population Equivalent (PE)	3,437
Discharge Waterbody	Dever
Number of Pumping Stations	12
Number of Overflows	0
Length of Sewer (km)	56.9
Catchment Reference	BAST

BRAVA Results Table (BAST)		
Planning Objective	2020	2050
1 Internal Sewer Flooding Risk	2	
2 Pollution Risk	2	
3 Sewer Collapse Risk	0	
4 Risk of Sewer Flooding in a 1 in 50 year storm	2	2
5 Storm Overflow performance	NA	NA
6 Risk of WTW Compliance Failure	0	1
7 Risk of flooding due to Hydraulic Overload	2	2
8 Dry Weather Flow Compliance	0	1
9 Good Ecological Status / Potential	0	
10 Surface Water Management	0	
11 Nutrient Neutrality	1	1
12 Groundwater Pollution	2	
13 Bathing Waters	NA	
14 Shellfish Waters	NA	



# Problem Characterisation

## Barton Stacey (BAST)

This document describes the causes of the risks identified by the Baseline Risk and Vulnerability Assessment (BRAVA). The BRAVA results for this wastewater system are summarised in Table 1. The results indicate that flooding, pollution and water quality are the main concerns in this wastewater system. We have completed risk assessments for 2050 where we have the data and tools available to do so. For the other planning objectives, we will explore how we can predict future risks for the next cycle of DWMPs. All the risk assessment methods need to be reviewed after the first DWMPs have been produced with a view to improve the methods and data for future planning cycles.

**Table 1: Results of the BRAVA for Barton Stacey wastewater system**

Planning Objectives		2020	Driver	2050
1	Internal Sewer Flooding Risk	2	Customer	
2	Pollution Risk	2	Operational	
3	Sewer Collapse Risk	0	-	
4	Sewer Flooding in a 1 in 50-year storm	2	Hydraulic	2
5	Storm Overflow Performance	NA	-	NA
6	WTW Water Quality Compliance	0	Quality	1
7	Flooding due to Hydraulic Overload	2	Hydraulic	2
8	WTW Dry Weather Flow Compliance	0	-	1
9	Good Ecological Status / Good Ecological Potential	0	-	
10	Surface Water Management	0	-	
11	Nutrient Neutrality	1	Unknown	1
12	Groundwater Pollution	2	Operational	
13	Bathing Waters	NA	-	
14	Shellfish Waters	NA	-	

### Key

BRAVA Risk Band	
NA	Not Applicable*
0	Not Significant
1	Moderately Significant
2	Very Significant

\*No issues relevant to planning objective within Wastewater System

### Investment Strategy

The risks identified in this wastewater system mean that we have assigned the following investment strategy:

**Improve**

This means that we consider that the current performance of the drainage and wastewater system needs to be improved to reduce the impacts on our customers and/or the environment. We will plan investment to reduce the current risks by actively looking to invest capital funding in the short term to address current performance issues (and consider future risks when implementing improvements).

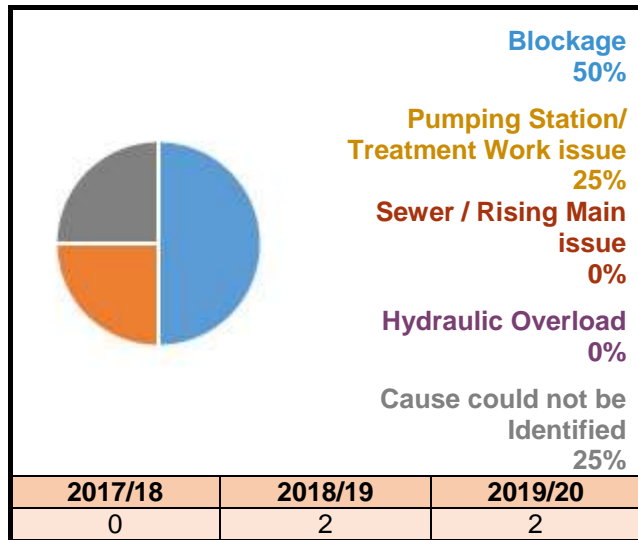


### Planning Objective 1: Internal Sewer Flooding Risk

The number of internal sewer flooding incidents reported during the three years considered by the risk assessment are shown in Figure 1. The total number of connections in this wastewater system means there have been more than 3.35 incidents per 10,000 connections per year (a threshold set by Ofwat) so the risk is in the 'very significant' band.

The primary driver for internal sewer flooding in this wastewater system is 'Customer'. Blockages caused 50% of all incidents recorded in this wastewater system. Blockages are often caused by fats, oils, grease, nappies, wet wipes and sanitary products within the system. These items are non-flushable and should not be disposed of into wastewater systems.

Figure 1: Number of internal flooding incidents per annum and causes

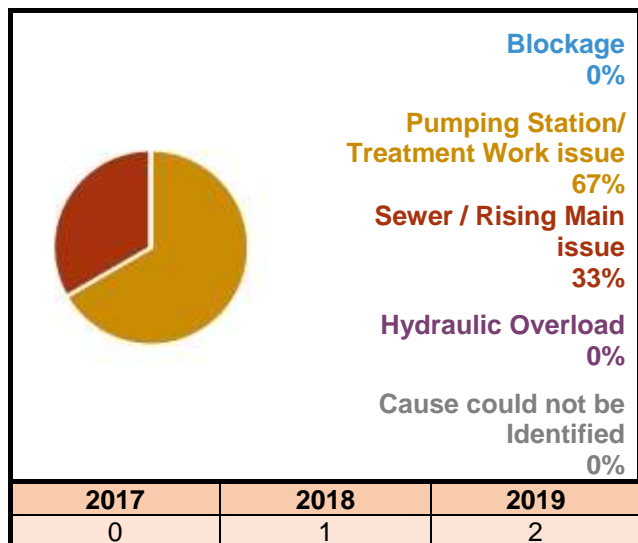


### Planning Objective 2: Pollution Risk

The number of pollution incidents reported during the three years considered by the risk assessment are shown in Figure 2. The length of sewer in this wastewater system means there have been more than 49.01 incidents per 10,000km per year (a threshold set by Ofwat) so the risk is in the 'very significant' band.

The primary driver for pollution is 'Operational' due to asset operational issues. Asset operational issues at our pumping stations and treatments works are the main cause of incidents, contributing to 67% of all incidents recorded in this wastewater system.

Figure 2: Number of pollution incidents per annum and causes



### Planning Objective 3: Sewer Collapse Risk

The number of sewer collapses reported during the three years considered by the risk assessment are shown in Table 2. The length of sewer in this wastewater system means there have been less than 5.72 incidents per 1,000km per year (a threshold set by Ofwat) so the risk is in the 'not significant' band.

Table 2: Sewer collapses and rising main bursts

Sewer Collapse	2017/18	0
	2018/19	0
	2019/20	0
Rising Main Bursts	2017/18	1
	2018/19	0
	2019/20	2

#### Planning Objective 4: Sewer Flooding in a 1 in 50 Year Storm

The risk of flooding in a 1 in 50 year storm is very significant in 2020 and 2050. This is because our computer model of the sewer network indicate for 2020 that approximately 100 - 200 properties within this wastewater system are in areas that could flood by water escaping from sewers. The model prediction for 2050 does not identify a notable increase.

Our wastewater networks are generally designed with capacity for up to a 1 in 30 year storm, hence flooding is expected to occur during more severe storms such as a 1 in 50 year event. Flooding will occur due to insufficient capacity of the drainage system either on the surface before it enters the drainage system, and/or from manholes, in people’s homes or at a low point elsewhere in the system.

#### Planning Objective 5: Storm Overflow Performance

This planning objective is not applicable for this wastewater system as there are no overflows.

#### Planning Objective 6: Wastewater Treatment Works Water Quality Compliance

The risk of non-compliance with our wastewater quality permit has been assessed as not significant for 2020 but is predicted to increase to moderately significant by 2050. This is because the wastewater treatment works has no record of compliance failure during the last three years (2018-2020). However it was assessed to not have adequate capacity to cope with future growth in the wastewater system.

#### Planning Objective 7: Flooding due to Hydraulic Overload

This is an assessment of the risk of flooding from sewers during a 1 in 30 year storm, and more frequent rainfall, to understand where flooding could occur. The risk of sewer flooding due to hydraulic overload is very significant in 2020 and 2050. The annualised number of properties in areas at risk of flooding is shown in Table 3.

**Table 3: Annualised number of properties at risk per 10,000 connections.**

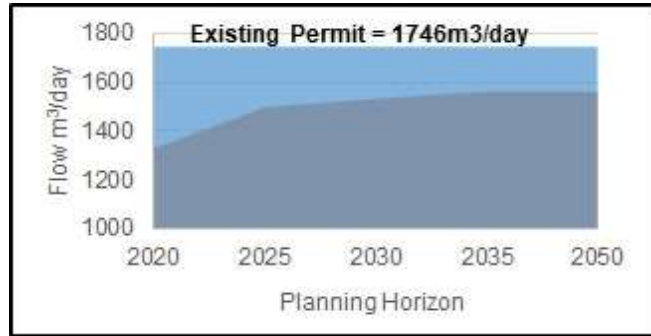
Rainfall Return Period (yr)	Number of Properties at Risk		Annualised per 10,000 connections	
	2020	2050	2020	2050
1 in 1	66	70	42	44
1 in 2	72	74	28	29
1 in 5	82	83	15	15
1 in 10	89	94	8	9
1 in 20	95	98	5	5
1 in 30	95	115	3	4
<b>Total Annualised</b>			<b>101</b>	<b>106</b>

This indicates that the existing capacity of the wastewater network can already be exceeded during 1 in 30 year storms (or more frequent events).

**Planning Objective 8: Wastewater Treatment Works Dry Weather Flow Compliance**

The risk of Wastewater Treatment Works Dry Weather Flow Compliance is not significant for 2020 but is predicted to increase to moderately significant in 2050, shown in Figure 3. This is because the predicted DWF in 2050 is expected to be between 80% and 100% of the current permit.

**Figure 3: Recorded and predicted dry weather flow with existing permit**



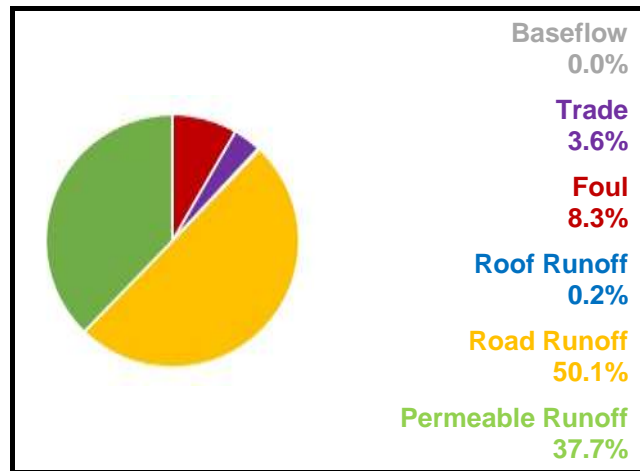
**Planning Objective 9: Good Ecological Status / Good Ecological Potential**

This wastewater system is not hydraulically linked to a waterbody where wastewater operations are contributing to not achieving GES/GEP, therefore the risk is not significant.

**Planning Objective 10: Surface Water Management**

Figure 4 illustrates the sources of water flowing in the wastewater system during a 1 in 20 year storm. It shows that surface water runoff from roofs, road and permeable surfaces constitutes more than 88. % of the flow in the sewers. The total contribution of foul water from homes is 8.3% with business contributing 3.6%.

**Figure 4: Sources of water flowing in sewers during a 1 in 20 year storm**



**Planning Objective 11: Nutrient Neutrality**

The risk to internationally designated habitat sites from this wastewater system is moderately significant in 2020 and 2050. This is because Natural England have advised that there is a risk to condition for the habitat sites that are hydraulically linked to our wastewater system, listed in Table 4.

**Table 4: Habitat Sites hydraulically linked to wastewater system**

Habitat Sites	
Solent Maritime	Nitrate permit review required
Solent & Southampton Water	No Threat/Remedy Identified or Anticipated
Solent and Dorset Coast	Nitrate permit review required



### Planning Objective 12: Groundwater Pollution

The risk of Groundwater Pollution is moderately significant. The wastewater system network of sewers extends across geographical areas that are designated as a Source Protection Zone (SPZ) for water supply. An estimated 26% of the sewer network crosses SPZ 1 or SPZ 2 and infiltration in the wastewater system is estimated to be of concern, based on infiltration equation used in the Wastewater Treatment Works Dry Weather Flow Compliance planning objective.

The primary driver is 'Operational' due to condition of our assets.

### Planning Objective 13: Bathing Waters

This wastewater system does not discharge into a designated bathing water.

### Planning Objective 14: Shellfish Waters

The discharges from this wastewater system do not impact on any designated shellfish waters.

**Southern Water**

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Version 1



# Generic Options Assessment for: Barton Stacey (BAST)



Planning Objectives		2020	Driver	2050	Type of Measures	Generic Option Categories	Icon	Take Forward?	Reasons	Examples of Generic Options
PO1	Internal Flooding	2	Customer	-	Source (Demand) Measures (to reduce likelihood)	Control / Reduce surface water run-off		Y	-	Natural Flood Management; rural land management and catchment management; SuDS including blue and green infrastructure; storm management
PO2	Pollution Risk	2	Operational	-		Reduce groundwater levels		N	Reducing groundwater levels would reduce the risks from infiltration into the network. However, in practice, reducing groundwater levels will be detrimental to the environment, ground conditions and is prohibitively too costly to implement. For these reasons, this generic option has been discounted.	Reduce leakage from water supply pipes; pump away schemes to locally lower groundwater near sewer network
PO3	Sewer Collapse	0	-	-		Improve <b>quality</b> of wastewater		Y	-	Domestic and business customer education; incentives and behaviour change (reduce Fats, Oils & Grease, wet wipes etc.); monitoring trade waste at source; on-site black water and/or greywater pre-treatment
PO4	Risk of Sewer Flooding in 1 in 50 yr	2	Hydraulic	2		Reduce the <b>quantity</b> / demand		Y	-	Water efficient appliances; water efficient measures; blackwater and/or greywater re-use; treatment at source
PO5	Storm Overflow Performance	NA	-	NA	Pathway (Supply) Measures (to reduce likelihood)	Network Improvements		Y	-	Asset optimisation; additional network capacity; storage; separate flows; structural repairs; re-line sewer pipe and manholes; smart networks.
PO6	Risk of WTW Compliance Failure	0	Quality	1		Improve Treatment Quality		Y	-	Increase treatment capacity; rationalisation of treatment works (centralisation / de-centralisation); install tertiary plant; UV plant or disinfection facilities; innovation; improve Technical Achievable Limits; new WTWs
PO7	Annualised Flood Risk/Hydraulic Overload	2	Hydraulic	2		Wastewater Transfer to treatment elsewhere		N	The causes of risk are not due to where our systems discharge to the environment or our ability to increase the capacity to connect more homes. Transferring wastewater for treatment elsewhere will not reduce any of the significant risks in this catchment.	Transfer flow to other network or treatment sites; transport sewage by tanker to other sites
PO8	DWF Compliance	0	-	1	Receptor Measures (to reduce consequences)	Mitigate impacts on Air Quality		N/A	Not included in first round of DWMPs	Carbon offsetting; noise suppression /filtering; odour control and treatments
PO9	Achieve Good Ecological Status	0	-	-		Improve Land and Soils		N/A	Not included in first round of DWMPs	Sludge soil enhancement
PO10	Improve Surface Water Management	0	-	-		Mitigate impacts on receiving waters		Y	-	River enhancement, aeration
PO11	Secure Nutrient Neutrality	1	Unknown	1		Reduce impact on properties		Y	-	Property flood resilience; non-return valves; flood guards / doors; air brick covers
PO12	Reduce Groundwater Pollution	2	Operational	-	Other	Study / Investigation		N	No further studies are required at this stage	Additional data required; hydraulic model development; WQ monitoring and modelling
PO13	Improve Bathing Water Quality	NA	-	-						
PO14	Improve Shellfish Water Quality	NA	-	-						

# Barton Stacey Wastewater System - Outline Options Appraisal

Generic Option	Location of Risk	Planning Objective and Description of Risk	Option Reference	Description	Further Description	Unconstrained Option?	Constrained Option?	Feasible Option?	Net Benefits	Estimated Cost	Preferred Option	Best value / Least cost or Reasons for Rejection
Control/ Reduce surface water entering the sewers	Catchment Wide	PO4, PO7, PO10	BAST.SC01.1	Surface water separation	Supplemented with SuDS and natural flood management schemes.	Yes	No					Engineering and Cost
Control/ Reduce surface water entering the sewers	Catchment Wide	PO4, PO7, PO10	BAST.SC01.2	SuDS	SuDS.	Yes	No					Engineering and Cost
Control/ Reduce surface water entering the sewers	Catchment Wide	PO4, PO7, PO10	BAST.SC01.3	Natural Flood Management	Natural Flood Management.	Yes	No					Feasibility and Risk
Control / Reduce groundwater infiltration												
Improve quality of wastewater entering sewers (inc reducing FOG, RAG, pre-treatment, trade waste)	Catchment Wide, Gangbridge Lane	PO1	BAST.SC03.1	Customer Education Programme	Enhanced Customer Education Programme to prevent blockages.	Yes	Yes	Yes	Minor Positive +	£115K	Yes	Best Value
Improve quality of wastewater entering sewers (inc reducing FOG, RAG, pre-treatment, trade waste)	Catchment Wide	PO11 - Nutrient Neutrality	BAST.SC03.2	Business Education	Targeted business / agriculture education programme.	Yes	No					Operational
Control / Reduce the quantity / flow of wastewater entering sewer system	BARTON STACEY WTW	PO8 (2050)- Dry Weather Flow4	BAST.SC04.1	Water Efficient Appliance / Measures	Southern Water aims to reduce water consumption to 100 l/h/d by 2040.	No						Technically feasible Cost Effective Deliver the required outcome Environmental risk mitigatable Do customer support it Risk and uncertainty - future resilience
Network Improvements (eg increase capacity, storage, conveyance)	Catchment Wide	PO8 (2050) - Dry Weather Flow	BAST.PW01.1	Pipe Rehabilitation Programme	Relining/improving structural grades of sewers across the catchment.	Yes	No					Environmental - Strategic Environmental Assessment
Network Improvements (eg increase capacity, storage, conveyance)	Catchment Wide	PO3	BAST.PW01.2	Equipment upgrade	Chlorine Alarms – Electro scanning of lengths of sewer.	Yes	No					Operational
Network Improvements (eg increase capacity, storage, conveyance)	St Mary Bourne SPS	PO12 - Groudwater Pollution	BAST.PW01.3	Sewer diversion	Diverting the sewer away from the SPZ1 (Inner Groundwater Source Protection Zone (RED)) area.	Yes	No					Environmental - Strategic Environmental Assessment
Network Improvements (eg increase capacity, storage, conveyance)	Andover- Outer Zone TCZ Barton Stacey- Outer Zone TCZ	PO12- Ground Water Pollution	BAST.PW01.4	Pipe Rehabilitation Programme	Targeted CCTV / electroscan surveys and proactive sewer rehabilitation to reduce risk of sewer collapse.	Yes	No					Environmental - Strategic Environmental Assessment
Network Improvements (eg increase capacity, storage, conveyance)	Gangbridge Lane	PO1- Internal Flooding	BAST.PW01.5	Jetting Programme	Enhanced Maintenance: Review and enhance jetting programme of the pipe network in this location to maximise the capacity of the network for rainfall.	Yes	Yes	Yes	Minor Positive +	£25K	Yes	Best Value
Network Improvements (eg increase capacity, storage, conveyance)	St Mary Bourne WPS	PO2- Pollution Risk	BAST.PW01.6	Maintenance Programme WPS	Improve resilience: Review operation and maintenance of St Mary Bourne pumping station to improve resilience.	Yes	Yes	Yes	Minor Positive +	£235K	Yes	Best Value
Network Improvements (eg increase capacity, storage, conveyance)	ST MARY BOURNE WPS	PO1- Internal Flooding	BAST.PW01.7	Maintenance Programme	Improve resilience: Review operation and maintenance of St Mary Bourne pumping station to improve resilience.	Yes	Yes	Yes	Minor Positive +	£235K	Yes	Best Value
Network Improvements (eg increase capacity, storage, conveyance)	Hurstbourne Park Estate (On Bourne Rivulet)	PO2- Pollution Risk	BAST.PW01.8	Pipe Rehabilitation Programme	Targeted CCTV/Electroscan surveys and proactive sewer rehabilitation to reduce risk of pollution.	Yes	Yes	Yes	Minor Positive +	£65K	Yes	Best Value
Improve treatment (capacity and quality at existing works or develop new WTWs)	Treatment Works	PO11 - Neutrient Neutrality	BAST.PW02.1	Tertiary Treatment	Install plants that remove P and N (reed beds?).	Yes	No					Operational
Improve treatment (capacity and quality at existing works or develop new WTWs)	BARTON STACEY WTW	PO6 (2050)- WTW compliance	BAST.PW02.2	Increase Capacity	Increase Capacity.	Yes	Yes	Yes	Minor Positive +	£730K	Yes	Best Value
Improve treatment (capacity and quality at existing works or develop new WTWs)	BARTON STACEY WTW	PO8 (2050)- Dry Weather Flow	BAST.PW02.3	Permit Review	Permit Review.	Yes	Yes	Yes	Moderate Positive ++	£1,545K	Yes	Best Value
Wastewater Transfer												
Mitigate impacts on Air Quality (e.g. Carbon neutrality, noise, odour)												Not included in the first round of DWMPs
Improve Land and Soils												Not included in the first round of DWMPs
Mitigate impacts on Water Quality												
Reduce consequences Properties (e.g. Property Flood Resilience)												
Study/ investigation to gather more data	Church Street	PO1- Internal Flooding	BAST.OT01.1	Investigation into causes	Further investigation to identify the cause of the internal flooding incident.	Yes	No					Environmental - Strategic Environmental Assessment
Study/ investigation to gather more data	Catchment Wide	PO8 (2050)- Dry Weather Flow	BAST.OT01.2	Infiltration Reduction Plan	Relining/improving structural grades of sewers across the catchment.	Yes	No					Environmental - Strategic Environmental Assessment
Study/ investigation to gather more data	Solent Maritime Solent & Southampton Water Solent and Dorset Coast	PO11 - Nutrient Neutrality	BAST.OT01.3	Nutrient Budget	Catchment is Hydraulically linked to; Solent Maritime (Threat/Remedy Identified or Anticipated) Solent & Southampton Water (NO Threat/Remedy Identified or Anticipated) Solent and Dorset Coast (Threat/Remedy Identified or Anticipated).	Yes	Yes	Yes	Minor Positive +	£75K	Yes	Best Value
Study/ investigation to gather more data	Andover- Outer Zone TCZ Barton Stacey- Outer Zone TCZ	PO12- Ground Water Pollution	BAST.OT01.4	Study and Investigations	Total length of sewer within protection zones- 6.	Yes	Yes	Yes	Minor Positive +	£TBC - With Partners	No	Best Value
Study/ investigation to gather more data	Catchment Wide	PO4- 1 in 50 year PO5- Storm Overflow PO7- Hydraulic Overload	BAST.OT01.5	Improve Hydraulic Model	Study / Investigation: Build and verify the Barton Stacey Hydraulic Model to improve model confidence.	Yes	Yes	Yes	Minor Positive +	£225K	Yes	Best Value
Study/ investigation to gather more data	Catchment Wide	PO4 PO5 PO7 PO12	BAST.OT01.6	Study and Investigations - Private Laterals	Study / Investigation: Identify locations of private lateral connections across the catchment, to better understand whose maintenance responsibility they are.	Yes	Yes	Yes	Minor Positive +	£TBC - With Partners	Yes	Best Value
Study/ investigation to gather more data	Catchment Wide	PO2 PO12	BAST.OT01.7	Study and Investigations - H2S impact	Study / Investigation: Understand and investigate the impact of trade effluents/H2S on the sewer system.	Yes	Yes	Yes	Minor Positive +	£TBC - With Partners	Yes	Best Value

## Drainage and Wastewater Management Plan (DWMP)

# DWMP Investment Needs

1. The options listed in the DWMP Investment Needs below are the preferred options in our DWMP. They will need further refinement as we implement the DWMP to confirm the exact location and scope of action needed, and the cost.
2. The costs are indicative costs for planning purposes only. The basis for the cost estimates, including assumptions and uncertainties, are explained in our DWMP Investment Plans.
3. The table of Investment Need provides an indicative cost so we know what level of funding is needed to reduce the risks. It is not a commitment to fund or deliver any option.
4. The Indicative Timescale is when the investment is needed. Some options may take several investment periods to achieve the desired outcomes.
5. Potential Partners have been identified in the table of Investment Needs. This is to indicate where there may be opportunities for us to work with these partners when developing and delivering these options. It is not a commitment by any of the partners to work with us.
6. These options will inform our future business plans as part of the Ofwat periodic review process to secure the finance to implement these options.
7. The options listed are prioritised by the method stated in the [Programme Appraisal Technical Summary](#).

Date : May 2023

Version : 1.0

Reference	River Basin (L2)	Wastewater System (L3)	Location	Option	Indicative Cost	Indicative Timescales	Potential Partners	Applicable Planning Objectives
<b>Test and Itchen</b>								
<b>Barton Stacey</b>								
BAST.SC03.1	Test and Itchen	Barton Stacey	Gangbridge Lane	Customer Education Programme: Targeted campaign to reduce the amount of FOG (fats, oils and grease) and unflushables discharged into the sewer network	£115K	AMP8 onwards	Hampshire County Council Test Valley Borough Council	PO1
BAST.PW01.4	Test and Itchen	Barton Stacey	System Wide	Sewer Rehabilitation: Targeted CCTV or electroscan surveys to check the integrity of sewers and relines or renew them to reduce the risk of groundwater pollution	£975K	AMP9	-	PO12
BAST.PW01.5	Test and Itchen	Barton Stacey	Gangbridge Lane	Enhanced Sewer Maintenance: Increase targeted sewer jetting to reduce the number of blockages in the network	£25K	AMP8 onwards	-	PO1
BAST.PW01.6	Test and Itchen	Barton Stacey	St Mary Bourne WPS	Improve the operational resilience of wastewater pumping station (WPS) to reduce pollution incidents	£235K	AMP8 onwards	-	PO2
BAST.PW01.7	Test and Itchen	Barton Stacey	St Mary Bourne WPS	Improve the operational resilience of wastewater pumping station (WPS) to reduce flooding incidents	£235K	AMP8 onwards	-	PO1
BAST.PW01.8	Test and Itchen	Barton Stacey	Hurstbourne Park Estate (On Bourne Rivulet)	Sewer Rehabilitation: Targeted CCTV or electroscan surveys and sewer rehabilitation to reduce the risk of sewer bursts and collapses	£65K	AMP8 onwards	-	PO2
BAST.PW02.2	Test and Itchen	Barton Stacey	Barton Stacey WTW	Increase treatment capacity to allow for planned new development	£730K	AMP9	-	PO6
BAST.PW02.3	Test and Itchen	Barton Stacey	Barton Stacey WTW	Increase capacity to allow for planned new development	£720K	AMP9	Environment Agency	PO8
BAST.OT01.5	Test and Itchen	Barton Stacey	System Wide	Improve the Hydraulic Model: Surveys and reverification of model to improve confidence and accuracy	£225K	AMP8	-	PO4 PO5 PO7
BAST.OT01.6	Test and Itchen	Barton Stacey	System Wide	Study and Investigation: Investigation to identify the root cause of internal flooding and measures to reduce the number of incidents	£TBC	AMP10	Hampshire County Council Test Valley Borough Council	PO4 PO5 PO7 PO12
BAST.OT01.7	Test and Itchen	Barton Stacey	System Wide	Study and Investigation: Investigate the risk of groundwater pollution from trade effluent conveyed within the sewer system	£TBC	AMP10	Hampshire County Council Test Valley Borough Council Environment Agency	PO2 PO12
BAST.WINEP.PO2.1	Test and Itchen	Barton Stacey	Barton Stacey WTW	Conversion to denitrification and provision of additional tertiary treatment capacity to achieve 10mg/l Total Nitrogen permit (WINEP action 08SO104002)	£8,789K	AMP8	-	PO11
BAST.WINEP.PO2.2	Test and Itchen	Barton Stacey	Barton Stacey WTW	Expansion of the existing Ferric Dosing system and provision of alkalinity dosing - conventional treatment (ferric dosing, potentially including alkalinity dosing and/or deep bed sandfilters) (WINEP OAR 08SO102634)	£2,664K	AMP8	-	PO9

