



Drainage and Wastewater Management Plan

Chickenhall Eastleigh
Wastewater System Plan



from
**Southern
Water** 

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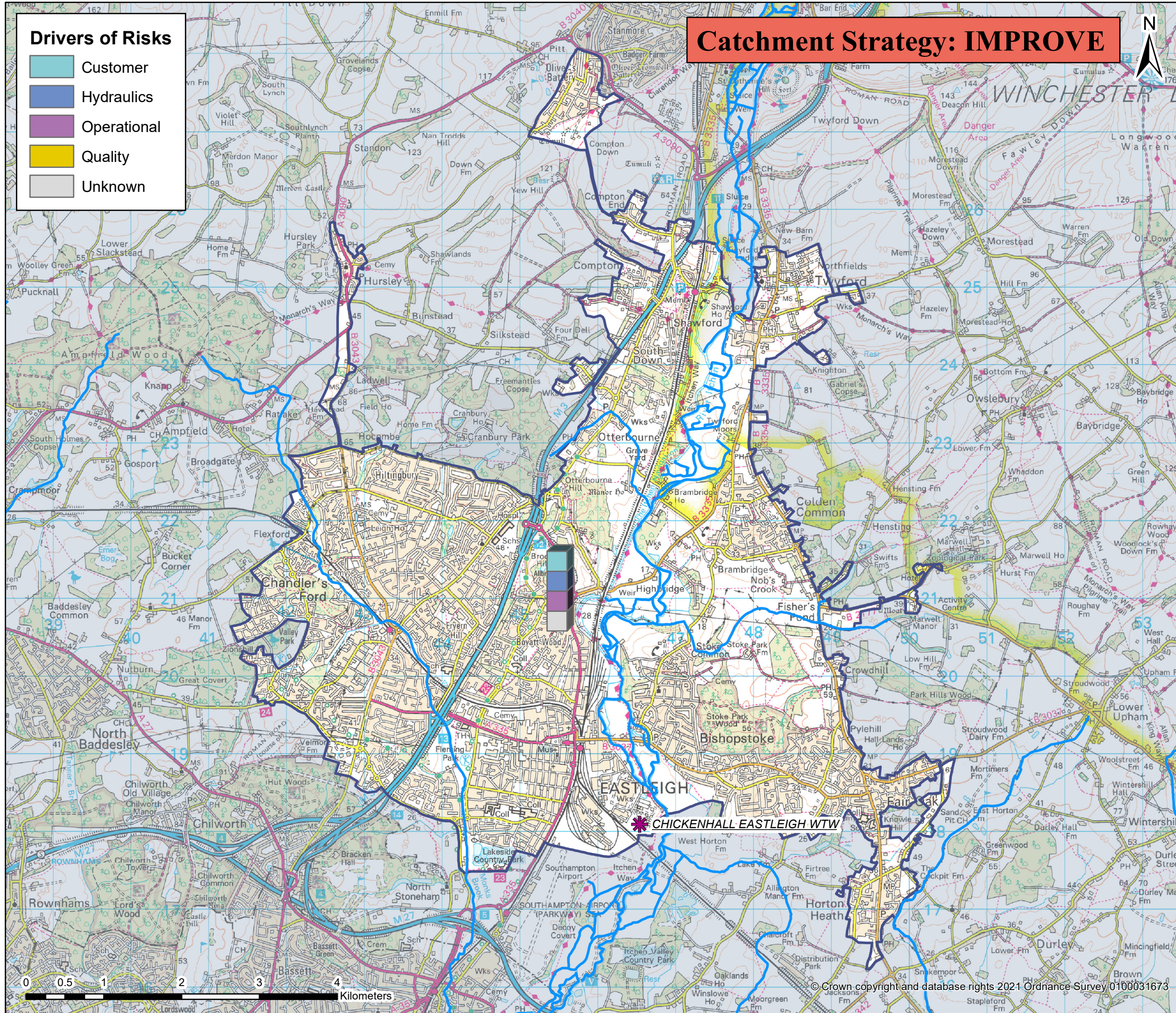
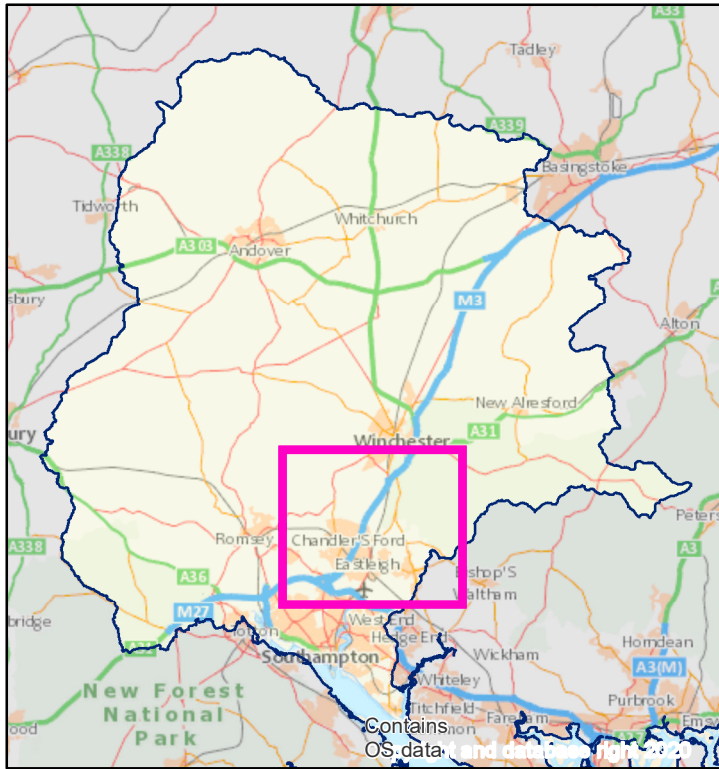
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Chickenhall Eastleigh wastewater system: map and key facts



Catchment Strategy: IMPROVE

Drivers of Risks

- Customer
- Hydraulics
- Operational
- Quality
- Unknown

Population Equivalent (PE)	97,014
Discharge Waterbody	Itchen
Number of Pumping Stations	49
Number of Overflows	9
Length of Sewer (km)	922.0
Catchment Reference	CHEA

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



Problem Characterisation

Chickenhall Eastleigh (CHEA)

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 Chickenhall Eastleigh wastewater system

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

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).

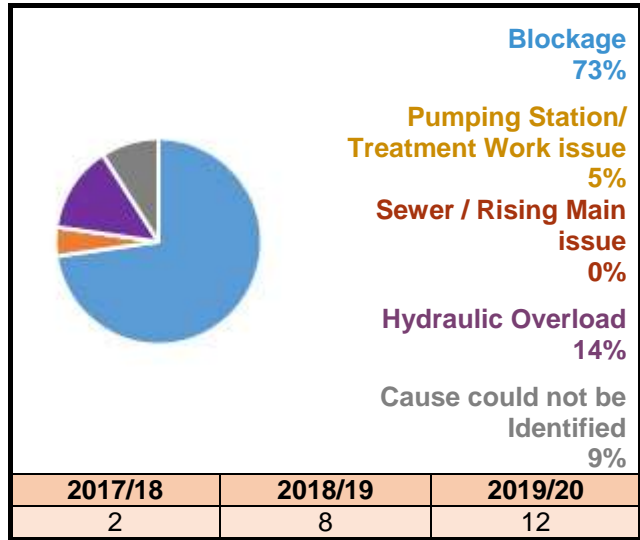


Planning Objective 1: Internal Sewer Flooding Risk

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 between 1.68 and 3.35 incidents per 10,000 connections per year (a threshold set by Ofwat) so the risk is in the 'moderately significant' band.

The primary driver for internal sewer flooding in this wastewater system is 'Customer'. Blockages caused 73% 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

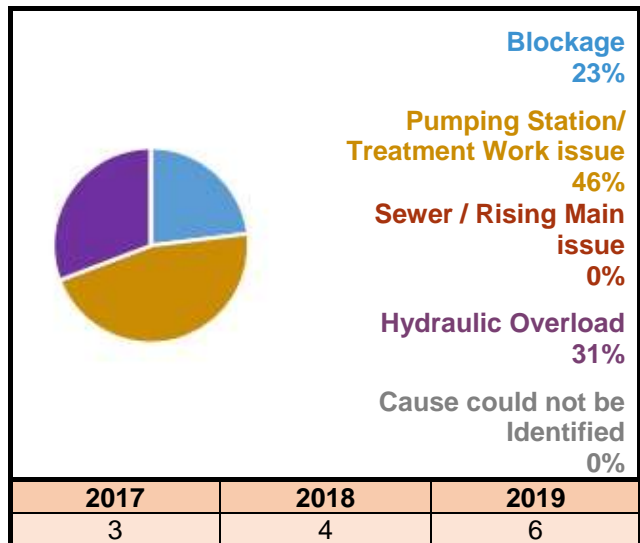


Planning Objective 2: Pollution Risk

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 between 24.51 and 49.01 incidents per 10,000km per year (a threshold set by Ofwat) so the risk is in the 'moderately 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 46% 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	2
	2018/19	1
	2019/20	2
Rising Main Bursts	2017/18	0
	2018/19	0
	2019/20	0

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

The risk of flooding in a 1 in 50 year storm is moderately significant in 2020 and 2050. This is because our computer model of the sewer network indicate for 2020 that approximately 900 - 1000 properties within this wastewater system are in areas that could flood by water escaping from sewers. This model prediction increases the number of properties in areas at risk from flooding to approximately 1800 - 1900 by 2050.

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

The storm overflow performance risk has been assessed as moderately significant in 2020 and 2050. Table 3 shows the overflows that discharge above the low threshold set for storm overflow discharges to Shellfish Water, Bathing Water and inland rivers.

The primary driver for the Storm Overflow Performance is 'Hydraulic.'

Table 3: Overflows exceeding discharge frequency threshold per annum

	Number of overflows		Threshold for number of discharges per annum		
	2020	2050	Low	Medium	High
Shellfish Waters	0 Medium	0 Medium	Less than 8	Between 8-10	10 or more
Bathing Waters	0 Medium	0 Medium	Less than 3	Between 3-10	10 or more
Freshwater	1 Medium	1 Medium	Less than 20	Between 20-40	40 or more

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 both 2020 and 2050. This is because the wastewater treatment works has no record of compliance failure during the last three years (2018-2020).

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 moderately significant in 2020 and 2050. The annualised number of properties in areas at risk of flooding is shown in Table 4.

Table 4: Annualised number of properties at risk per 10,000 connections.

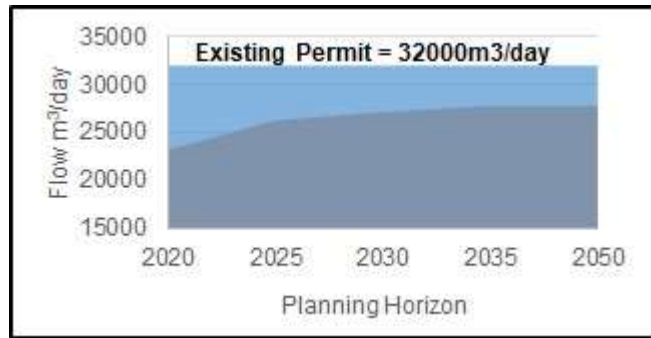
Rainfall Return Period (yr)	Number of Properties at Risk		Annualised per 10,000 connections	
	2020	2050	2020	2050
1 in 1	32	57	20	36
1 in 2	36	110	14	43
1 in 5	143	467	26	85
1 in 10	358	767	34	73
1 in 20	587	1109	29	54
1 in 30	817	1505	27	49
Total Annualised			150	340

This indicates that the capacity of the wastewater network can be exceeded during 1 in 30 year storms (or more frequent events). Future growth, creep and/or climate change are not anticipated to significantly increase the risk by 2050.

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

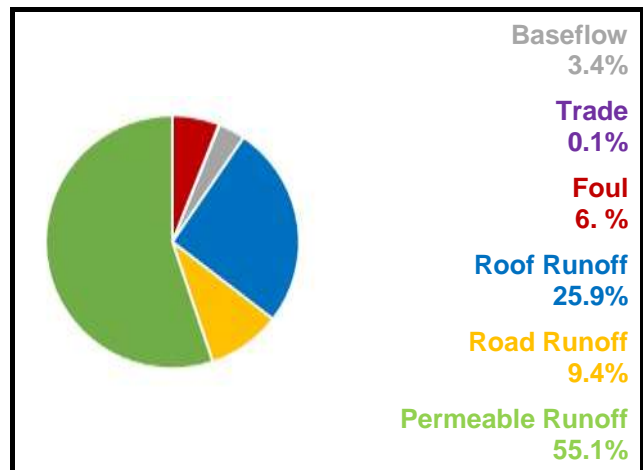
This wastewater system is not hydraulically linked to a waterbody where wastewater operations are contributing to not achieving GES/GEP, therefore the risk is not significant.

Planning Objective 10: Surface Water Management

Our initial high level assessment indicated that there is moderately significant interaction between surface water flooding and flooding from sewers in this wastewater system. The cause of this localised flooding is the capacity of the drainage network in these areas to convey both wastewater and surface water run-off.

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 90.4% of the flow in the sewers. The total contribution of foul water from homes is 6.0% with business contributing 0.1%. The baseflow is infiltration from water in the ground and makes up 3.4% of the flow in the system.

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 very 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 5.

Table 5: Habitat Sites hydraulically linked to wastewater system

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

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 12% 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 can affect the designated shellfish waters shown in Table 6. The risk of not achieving the faecal standards for shellfish in these designated waters from this wastewater system is not significant. This is because any microbes or bacteria from the wastewater will either die or their impact will be dissipated before they reach the shellfish water where the discharges are over 5 km away.

Table 6: Shellfish Waters linked to wastewater system

Shellfish Waters
Southampton Water Sw

Generic Options Assessment for: Chickenhall Eastleigh (CHEA)



Planning Objectives		2020	Driver	2050	Type of Measures	Generic Option Categories	Icon	Take Forward?	Reasons	Examples of Generic Options
PO1	Internal Flooding	1	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	1	Operational	-		Reduce groundwater levels		N	None of the significant risks in this catchment are caused by high groundwater levels. Hence reducing groundwater levels will not impact any of the risks in this catchment.	Reduce leakage from water supply pipes; pump away schemes to locally lower groundwater near sewer network
PO3	Sewer Collapse	0	-	-		Improve quality 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	1	Hydraulic	1		Reduce the quantity / demand		Y	-	Water efficient appliances; water efficient measures; blackwater and/or greywater re-use; treatment at source
PO5	Storm Overflow Performance	1	Hydraulic	1	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	-	0		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	1	Hydraulic	1		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	1	Hydraulic	-		Mitigate impacts on receiving waters		Y	-	River enhancement, aeration
PO11	Secure Nutrient Neutrality	2	Unknown	2		Reduce impact on properties		Y	-	Property flood resilience; non-return valves; flood guards / doors; air brick covers
PO12	Reduce Groundwater Pollution	1	Operational	-	Other	Study / Investigation		Y	-	Additional data required; hydraulic model development; WQ monitoring and modelling
PO13	Improve Bathing Water Quality	NA	-	-						
PO14	Improve Shellfish Water Quality	0	-	-						

Chickenhall Eastleigh 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	Fair Oak Road	PO4, PO7, PO10 - Flooding	CHEA.SC01.1	SUDs scheme	Install storm attenuation pond to manage surface water.	Yes	Yes	Yes	Moderate Positive ++	£TBC - With Partners	No	Best Value
Control/ Reduce surface water entering the sewers	Winchester Road and B3037	PO4, PO7, PO10 - Flooding	CHEA.SC01.2	SUDs scheme	Upstream attenuation of floods to prevent flooding at crossroads of Winchester Road and B3037.	No						Cost Effective and Do customer support it
Control / Reduce groundwater infiltration												
Improve quality of wastewater entering sewers (inc reducing FOG, RAG, pre-treatment, trade waste)	Hotspot 1 - Eastleigh Hotspot 2 - Colden Common	PO1- Internal Flooding	CHEA.SC03.1	Customer Education Programme	Customer education programme to reduce the risk.	Yes	Yes	Yes	Minor Positive +	£115K	Yes	Best Value
Improve quality of wastewater entering sewers (inc reducing FOG, RAG, pre-treatment, trade waste)	Hotspot 3 - Chandler's Ford Hotspot 4 - Fair Oak Hotspot 5 - Twford	PO2- Pollution Risk	CHEA.SC03.2	Customer Education Programme	Customer education programme XXXX Road / Street to reduce the risk.	Yes	Yes	Yes	Minor Positive +	£115K	Yes	Best Value
Control / Reduce the quantity / flow of wastewater entering sewer system	CHICKENHALL EASTLEIGH WTW	PO8 (2050)- Dry Weather Flow	CHEA.SC04.1	Water Efficient Appliance / Measures	Southern Water aims to reduce water consumption to 100 l/h/d by 2040.	No						Cost Effective
Network Improvements (eg increase capacity, storage, conveyance)	BOTLEY ROAD HORTON HEATH WPS	PO1- Internal Flooding	CHEA.PW01.1	Maintenance Programme	Improve resilience: An efficient maintenance programme for pumping stations and/Treatment works to eliminate the risk of a pollution incident due to an operational failure.	No						Do customer support it and Risk and uncertainty - future resilience
Network Improvements (eg increase capacity, storage, conveyance)	Chandler's Ford	PO1- Internal Flooding	CHEA.PW01.2	Additional Storage	Additional Storage.	No						Risk and uncertainty - future resilience
Network Improvements (eg increase capacity, storage, conveyance)	Botley Road Horton Heath Wps, Chickenhall Eastleigh Wtw, Kiln Lane Brambridge Wps, Kiln Lane Brambridge Wps, Chestnut Avenue Eastleigh Wps.	PO2- Pollution Risk	CHEA.PW01.3	Maintenance Programme WPS	Improve resilience: An efficient maintenance programme for pumping stations to eliminate the risk of a pollution incident due to an operational failure.	Yes	Yes	Yes	Minor Positive +	£930K	Yes	Best Value
Network Improvements (eg increase capacity, storage, conveyance)	Catchment Wide	PO2- Pollution Risk	CHEA.PW01.4	Additional Storage	Additional Storage.	No						Risk and uncertainty - future resilience
Network Improvements (eg increase capacity, storage, conveyance)	Catchment Wide	PO3- Sewer Collapse	CHEA.PW01.5	Pipe Rehabilitation Programme	Targeted CCTV / electroscan surveys and proactive sewer rehabilitation to reduce risk of sewer collapse.	No						Risk and uncertainty - future resilience
Network Improvements (eg increase capacity, storage, conveyance)	Catchment Wide	PO8 (2050)- Dry Weather Flow	CHEA.PW01.6	Pipe Rehabilitation Programme	Relining/improving structural grades of sewers across the catchment.	No						Cost Effective and Risk and uncertainty - future resilience
Network Improvements (eg increase capacity, storage, conveyance)	Catchment Wide	PO2- Pollution Risk	CHEA.PW01.7	Pipe Rehabilitation Programme	Pipe Rehabilitation Programme.	No						Cost Effective and Risk and uncertainty - future resilience
Network Improvements (eg increase capacity, storage, conveyance)	Hotspot 1 - Eastleigh Hotspot 2 - Colden Common	PO1- Internal Flooding	CHEA.PW01.8	Jetting Programme	Jetting Programme.	No						Do customer support it
Network Improvements (eg increase capacity, storage, conveyance)	Chandler's Ford Eastleigh Fair Oak	PO2- Pollution Risk	CHEA.PW01.9	Jetting Programme	Jetting Programme.	Yes	Yes	Yes	Minor Positive +	£35K	Yes	Best Value
Network Improvements (eg increase capacity, storage, conveyance)	Otterbourne- Inner & Outer Zone TCZ Twyford- Inner & Outer Zone TCZ	PO12- Ground Water Pollution	CHEA.PW01.10	Pipe Rehabilitation Programme	Total length of sewer within protection zones- 91.	Yes	Yes	Yes	Minor Positive +	£2,840K	Yes	Best Value
Improve treatment (capacity and quality at existing works or develop new WTWs)	CHICKENHALL EASTLEIGH WTW	PO2- Pollution Risk	CHEA.PW02.1	Maintenance Programme WTW	Improve resilience: An efficient maintenance programme for the treatment works to eliminate the risk of a pollution incident due to an operational failure.	Yes	Yes	Yes	Minor Positive +	£6,970K	Yes	Best Value
Improve treatment (capacity and quality at existing works or develop new WTWs)	CHICKENHALL EASTLEIGH WTW	PO8 (2050)- Dry Weather Flow	CHEA.PW02.2	Permit Review	Proposed permit-36513m3.	Yes	Yes	Yes	Minor Positive +	£2,570K	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	Chandler's Ford	PO1- Internal Flooding	CHEA.RC03.1	Property Flood Mitigation / Resistance	Short-term property level protection ahead of flood alleviation scheme - Non-return valves and flood mitigation doors / gates.	No						Risk and uncertainty - future resilience
Reduce consequences Properties (e.g. Property Flood Resilience)												
Study/ investigation to gather more data	Chandler's Ford	PO1- Internal Flooding	CHEA.OT01.1	Investigation into causes	Further investigation to identify the cause of the internal flooding incident.	No						Cost Effective
Study/ investigation to gather more data	Catchment Wide	PO8 (2050)- Dry Weather Flow	CHEA.OT01.2	Infiltration Reduction Plan	Relining/improving structural grades of sewers across the catchment.	No						Do customer support it and Risk and uncertainty - future resilience
Study/ investigation to gather more data	Solent Maritime Solent & Southampton Water Solent and Dorset Coast	PO11 - Nutrient Neutrality	CHEA.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) Banding 2020 - 2; There is a Phosphate permit (1mg/l) but no Nitrate permit (Note there is an Ammonia permit (2.	Yes	Yes	Yes	Major Positive +++	£75K	Yes	Best Value
Study/ investigation to gather more data	Otterbourne- Inner & Outer Zone TCZ Twyford- Inner & Outer Zone TCZ	PO12- Ground Water Pollution	CHEA.OT01.4	Study and Investigations	Total length of sewer within protection zones- 88.	No						Do customer support it and Risk and uncertainty - future resilience
Study/ investigation to gather more data	Catchment Wide	PO4- 1 in 50 year PO5- Storm Overflow PO7- Hydraulic Overload PO10- Surface Water Management	CHEA.OT01.5	Improve Hydraulic Model	Improve Hydraulic Model.	Yes	Yes	Yes	Minor Positive +	£300K	Yes	Best Value
Study/ investigation to gather more data	CHICKENHALL EASTLEIGH WTW	PO5 Storm Overflow	CHEA.OT01.6	Storage	Surface water separation to reduce spills from Chickenhall Eastleigh WTW (average cost assumed to reduce CSO spills to Band 0).	Yes	Yes	Yes	Major Positive +++	£TBC - With Partners	Yes	Best Value

Chickenhall Eastleigh 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
Study/ investigation to gather more data	River Itchen	PO1 PO4 PO5 PO7 PO10	CHEA.OT01.7	Study and Investigations - NFM's	Study / Investigation: Identify suitable location/s for wetland construction along with River Itchen in partnership with the EA (update hydraulic model).	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

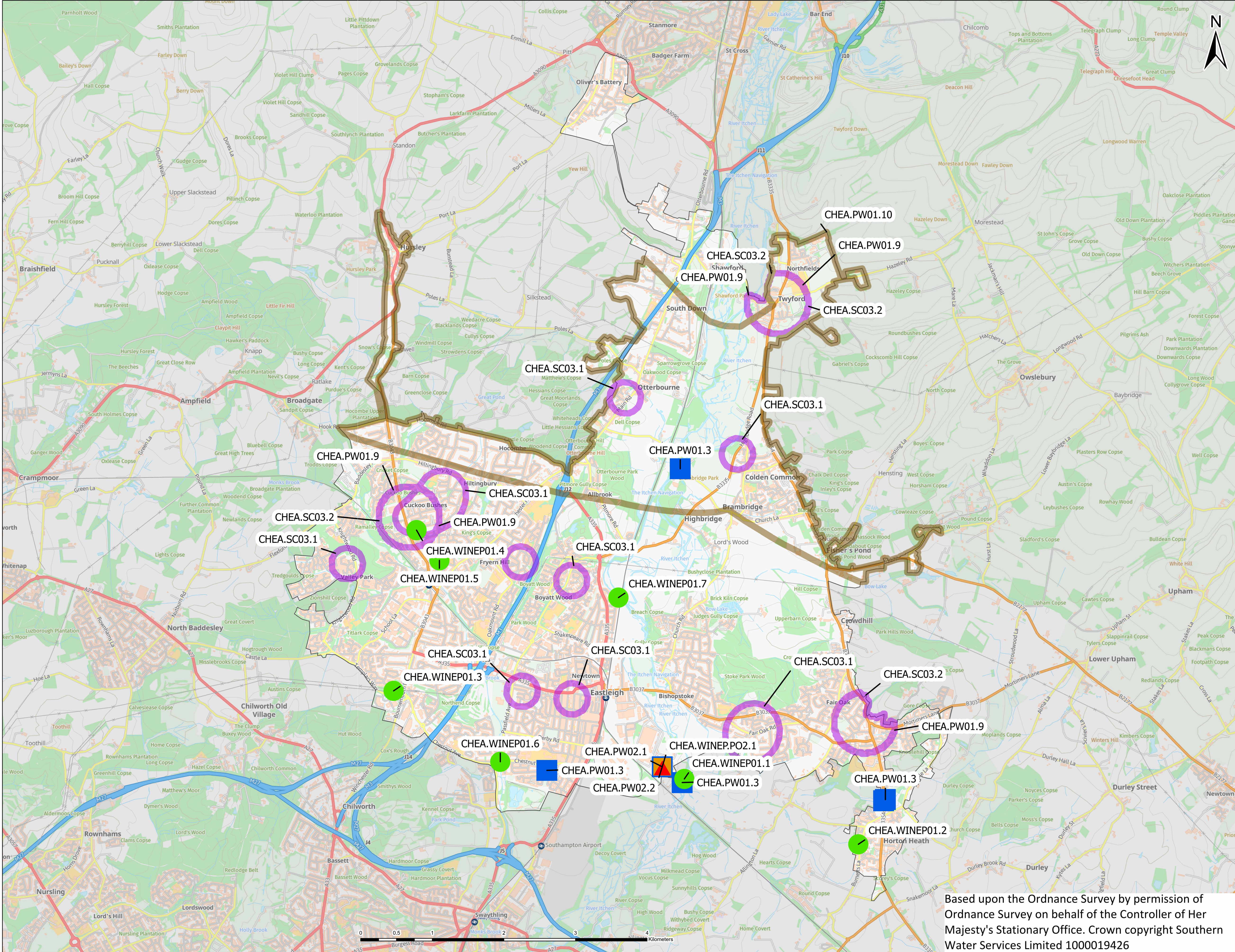
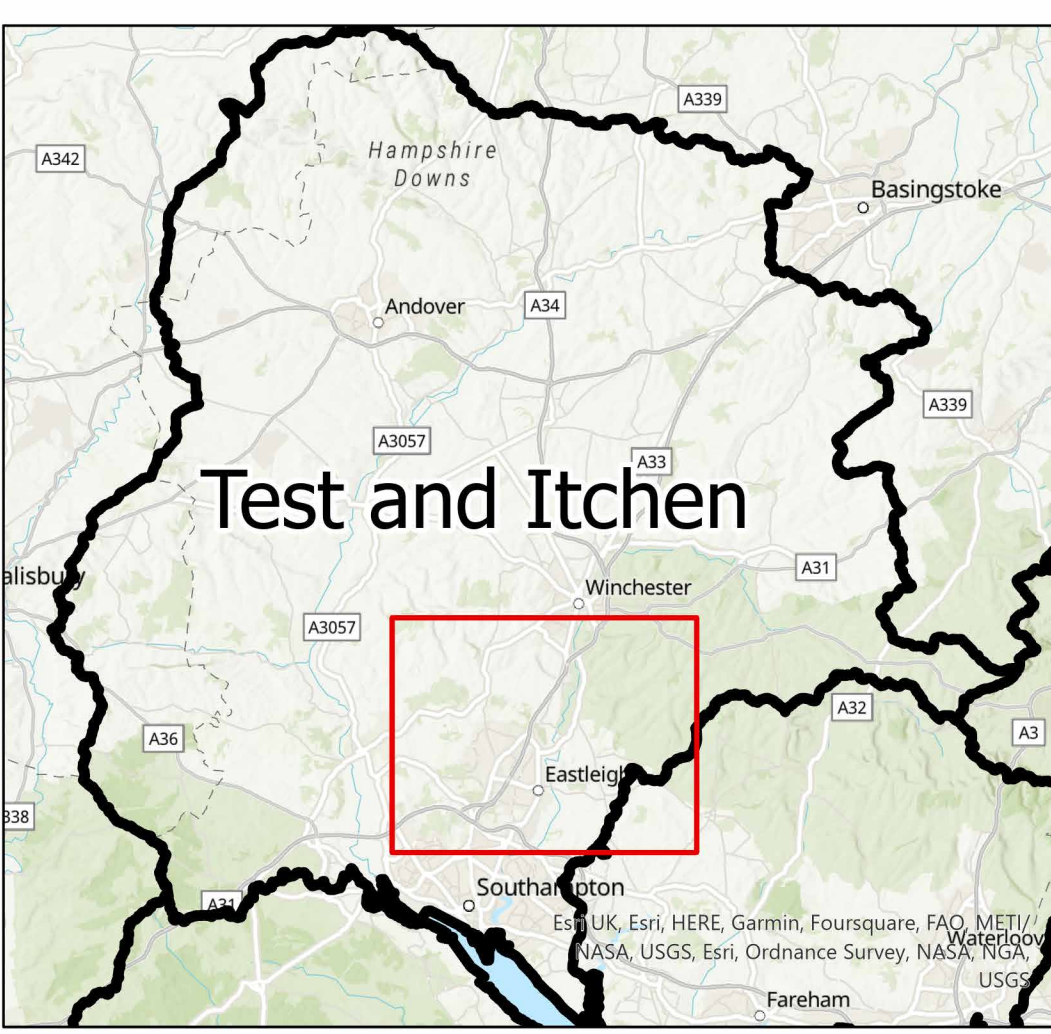
Reference	River Basin (L2)	Wastewater System (L3)	Location	Option	Indicative Cost	Indicative Timescales	Potential Partners	Applicable Planning Objectives
Test and Itchen								
Chickenhall Eastleigh								
CHEA.SC03.1	Test and Itchen	Chickenhall Eastleigh	Hotspot 1 - Hiltingbury / Chandler's Ford	Customer 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 Eastleigh Borough Council	PO1
CHEA.SC03.2	Test and Itchen	Chickenhall Eastleigh	Hotspot 1 - Hiltingbury	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 Eastleigh Borough Council	PO2
CHEA.PW01.3	Test and Itchen	Chickenhall Eastleigh	Botley Road Horton Heath WPS	Sewer Rehabilitation: Targeted CCTV or electroscan surveys and sewer rehabilitation to reduce the risk of sewer bursts and collapses	£930K	AMP8 onwards	-	PO2
CHEA.PW01.9	Test and Itchen	Chickenhall Eastleigh	Hotspot 1 - Hiltingbury / Chandler's Ford	Enhanced Sewer Maintenance: Increase targeted sewer jetting to reduce the number of blockages in the network	£35K	AMP8 onwards	-	PO2
CHEA.PW01.10	Test and Itchen	Chickenhall Eastleigh	Otterbourne- Inner & Outer Zone TCZ, Twyford- Inner & Outer Zone TCZ	Sewer Rehabilitation: Targeted CCTV or electroscan surveys to check the integrity of sewers and reline or renew them to reduce the risk of groundwater pollution	£2,840K	AMP9	-	PO12
CHEA.PW02.1	Test and Itchen	Chickenhall Eastleigh	Chickenhall Eastleigh WTW	Improve the operational resilience of wastewater treatment works (WTW) to reduce pollution incidents	£6,970K	AMP8 onwards	-	PO2
CHEA.PW02.2	Test and Itchen	Chickenhall Eastleigh	Chickenhall Eastleigh WTW	Increase capacity to allow for planned new development	£2,570K	AMP9	Environment Agency	PO8
CHEA.OT01.5	Test and Itchen	Chickenhall Eastleigh	System Wide	Improve the Hydraulic Model: Surveys and reverification of model to improve confidence and accuracy	£300K	AMP8	-	PO4 PO5 PO7 PO10
CHEA.WINEP01.1	Test and Itchen	Chickenhall Eastleigh	CHICKENHALL EASTLEIGH SSO	Reduce the number of storm discharges from CHICKENHALL EASTLEIGH SSO by a combination of SuDS and storage options	£13,780K	AMP10	-	PO4 PO5 PO7
CHEA.WINEP01.2	Test and Itchen	Chickenhall Eastleigh	BURNETTS LANE HORTON HEATH CEO	Reduce the number of storm discharges from BURNETTS LANE HORTON HEATH CEO by a combination of SuDS and storage options	£1,435K	AMP12	-	PO4 PO5 PO7
CHEA.WINEP01.3	Test and Itchen	Chickenhall Eastleigh	TEMPLARS WAY CHANDLERS FORD CEO	New or improved screen to reduce aesthetics impacts from storm discharges at TEMPLARS WAY CHANDLERS FORD CEO	£130K	AMP12	-	PO5
CHEA.WINEP01.4	Test and Itchen	Chickenhall Eastleigh	VALLEY ROAD CHANDLERS FORD CSO	New or improved screen to reduce aesthetics impacts from storm discharges at VALLEY ROAD CHANDLERS FORD CSO	£130K	AMP12	-	PO5
CHEA.WINEP01.5	Test and Itchen	Chickenhall Eastleigh	PARK ROAD CHANDLERS FORD CSO	New or improved screen to reduce aesthetics impacts from storm discharges at PARK ROAD CHANDLERS FORD CSO	£130K	AMP12	-	PO5
CHEA.WINEP01.6	Test and Itchen	Chickenhall Eastleigh	CHESTNUT AVENUE EASTLEIGH CEO	New or improved screen to reduce aesthetics impacts from storm discharges at CHESTNUT AVENUE EASTLEIGH CEO	£130K	AMP12	-	PO5
CHEA.WINEP01.7	Test and Itchen	Chickenhall Eastleigh	CONSORT ROAD EASTLEIGH CSO	Reduce the number of storm discharges from CONSORT ROAD EASTLEIGH CSO by a combination of SuDS and storage options	£2,100K	AMP10	-	PO4 PO5 PO7
CHEA.WINEP.PO2.1	Test and Itchen	Chickenhall Eastleigh	Chickenhall Eastleigh WTW	Expansion of the existing tertiary treatment and conversion to denitrification to achieve 10mg/l Total Nitrogen permit (WINEP action 08SO104125)	£10,079K	AMP8	-	PO11

Drainage and Wastewater Management Plan: Location of Potential Options CHICKENHALL EASTLEIGH

Wastewater system in Test and Itchen River Basin Catchment



(i) This map should be read in conjunction with the list of Investment Needs for this wastewater system
 (ii) The areas shown on this map are the potential locations for the options. The location of the risk may be elsewhere in the system.
 (iii) Labels for each location are the option references in the list of Investment Needs
 (iv) Drainage Area Plan (DAP) options on flooding and growth are not shown.



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