

Drainage and Wastewater Management Plans (DWMPs)

Investment Needs Workshop for the East Hampshire
River Basin Catchment

Wednesday 23 March 2022



from
**Southern
Water** 

The logo graphic for Southern Water, featuring three stylized blue waves of varying lengths, positioned to the right of the text.

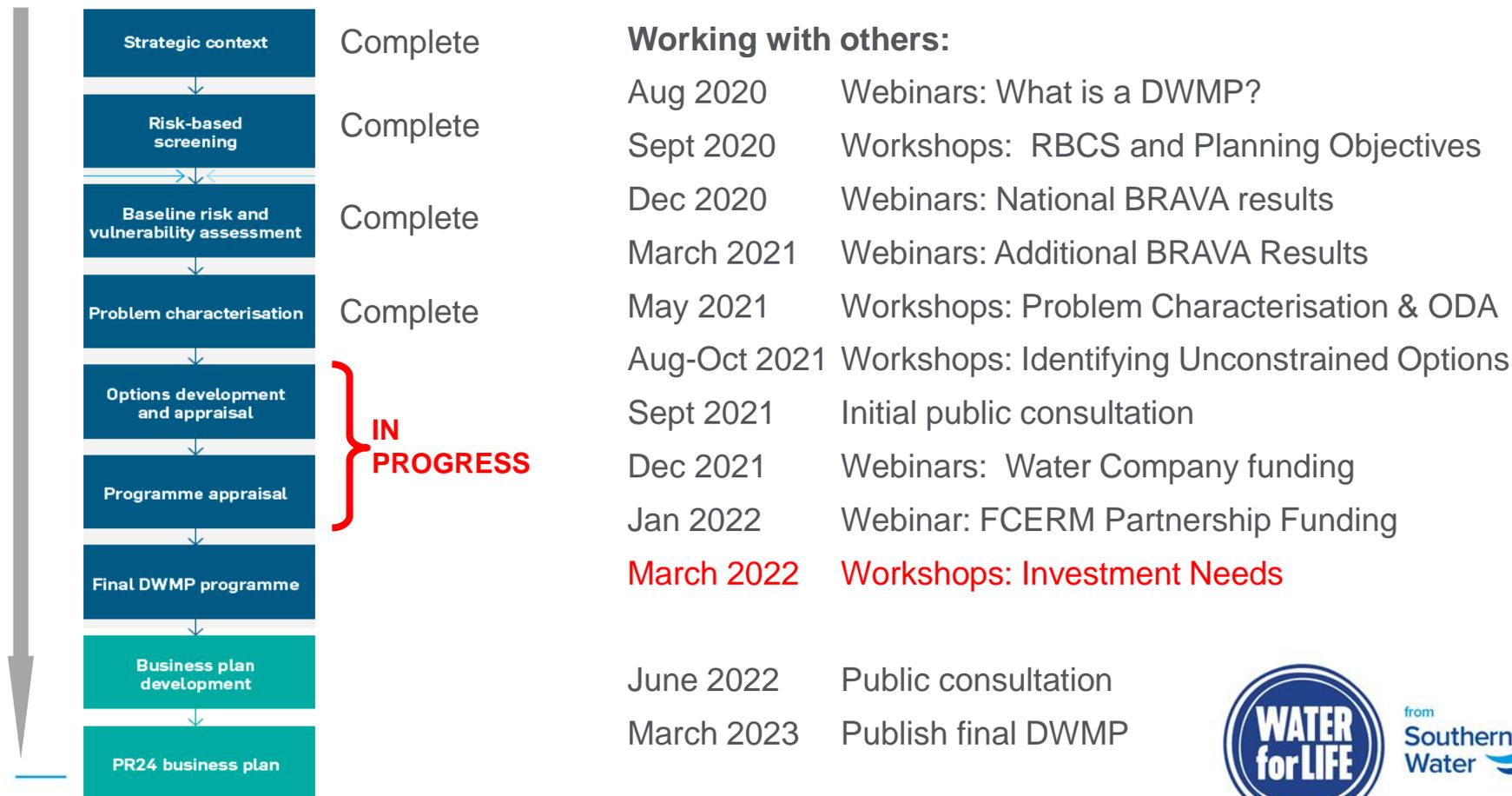
Agenda

1. Welcome and Purpose
2. Presentation: Investment Planning Process
3. Review of Investment Needs
4. Programme Appraisal
5. Delivering the DWMP Investment Needs
6. Next steps

Welcome and Purpose



Our Journey So Far ...



Purpose of Today's Workshop

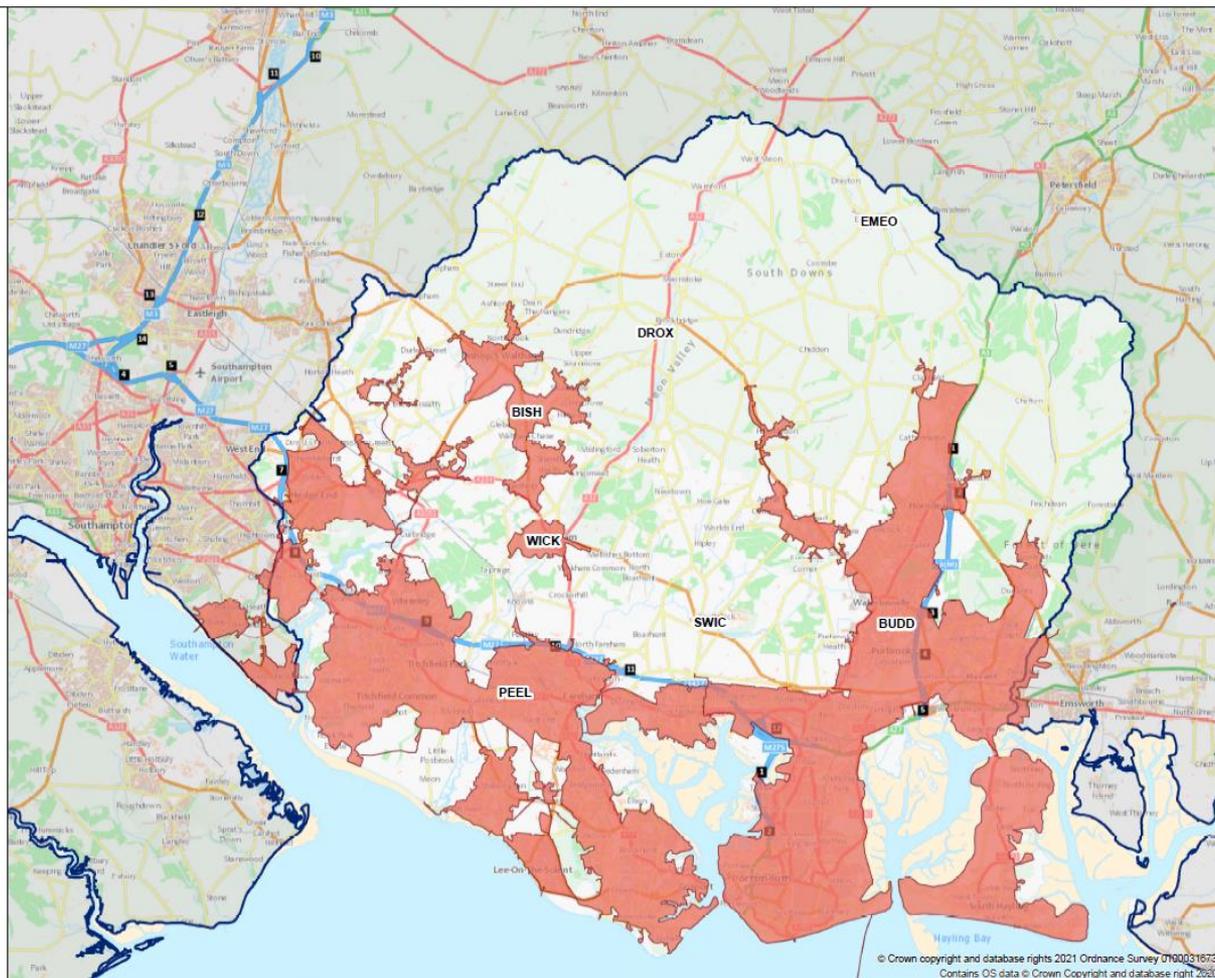
Our aim today is to:

- Discuss and refine the investment needs identified in the draft DWMP
- Flag any missing investment needs
- Discuss prioritisation and timing for investment needs
- Review opportunities to co-create and co-deliver solutions
- Look at total investment needs across the river basin

Presentation: Investment Planning

Wastewater Catchments in East Hampshire

Investment Strategy



- 7 sewer catchments
- 7 WTWs
- 280 WPS
- 5,826km sewers
- 31% area
- 98% homes connected
- 640,000 customers



BRAVA Results: East Hampshire River Basin Catchment

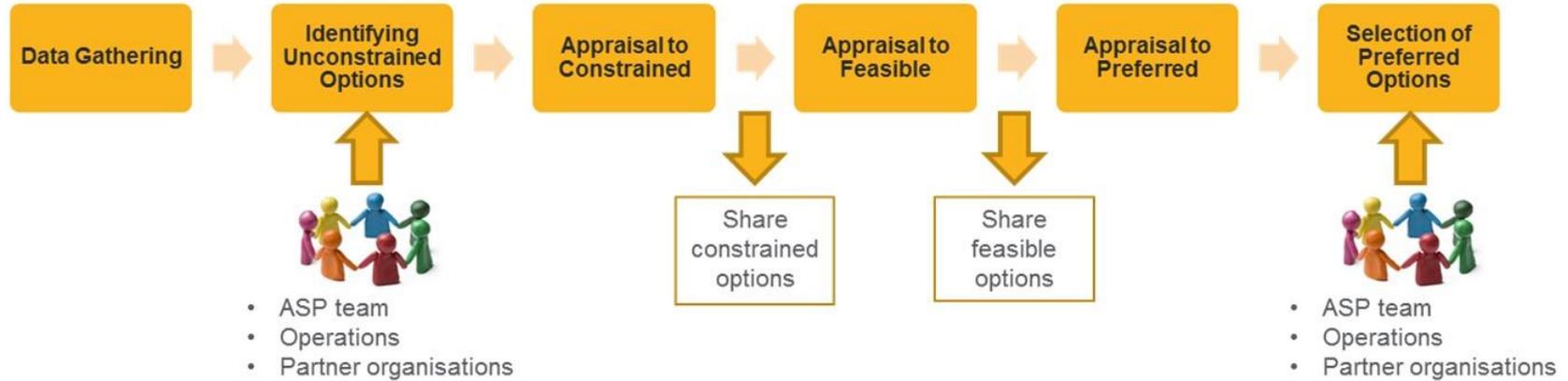
Wastewater Catchment Reference	Wastewater Catchment Reference	Population Equivalent	Sewer Length (KM)	Planning Objective														
				Internal Sewer Flooding Risk	Pollution Risk	Sewer Collapse Risk	Risk of Sewer Flooding in a 1 in 50 year storm	Storm Overflow performance	Risk of WTW Compliance Failure	Risk of flooding due to Hydraulic Overload	Dry Weather Flow Compliance	Good Ecological Status / Potential	Surface Water Management	Nutrient Neutrality	Groundwater Pollution	Bathing Waters	Shellfish Waters	
BUDD	BUDDS FARM HAVANT	365,496	2,984.3	1	1	0	2	2	0	2	1	0	2	2	2	2	1	1
EMEO	EAST MEON	742	6.7	0	0	0	0	0	0	0	0	0	0	1	0	NA	NA	
PEEL	PEEL COMMON	256,119	2,664.6	1	2	0	1	2	2	0	1	1	1	2	0	1	2	
SWIC	SOUTHWICK	450	3.4	0	0	0	0	2	0	0	0	0	0	1	0	NA	NA	
WICK	WICKHAM	2,537	25.2	0	0	0	1	2	0	1	0	0	0	2	0	1	1	

Key	
NF	Not Flagged *
NA	Not Applicable **
0	Not Significant
1	Moderately Significant
2	Very Significant

Results shown for 2020 only



Options Development and Appraisal



East Hampshire River Basin :

Unconstrained Option Development meetings held on:

- Budds Farm Havant 31 August 2021
- Peel Common 11 August 2021

Options Development Process

Unconstrained Options

Source
Pathway
Receptor

Location of Risk	Description of Risk	Unconstrained Option	Option Description	Option Referral	GO Out	L4 Area	Source of the UO
Source Demand Measures							
Control/Reduce surface water entering the sewers							
CHICHESTER WTW Overflow	PO5 - Sewer Overflows Bathing Water 2020 Spilling CSD (also above in-land river spilling threshold) Spill Volume - Xm3	Surface Water Separation	Surface Water Removal (40%) will reduce the total predicted flood volume by 77%.	CHIC.SC01 1	Yes	Chichester WTW and Catchment Wide	EDM data via BRAVA POS Hydraulic Model Data
Pathway (Supply) Measures							
Network Improvements							
CHIC FC01 Summersdale Road	PO4 and PO5 - Growth Projected population for CHIC catchment by 2040: 35550 Development population for CHIC catchment by 2040: 2402 Number of houses to be completed by 2040 at CHIC catchment: 100	Upsizing	Growth solutions developed for the DAP have not been assessed for suitability. Potential erroneous data includes, but is not limited to, developments completed since DAP, change of connection location and development size. The DAP model has a confidence score of 2 and was last verified in 2014 The key risks between DAP and DvMMP models are: model network used, rainfall, ground infiltration and levels files applied Option solution: Upsize pipes	CHIC.Pw01 4	Yes		DAP Option Position statement: CHICGR001 Option 1 Plan 11
Receptor Measures							
Mitigate impacts on Water Quality							
CHICHESTER WTW	PO11 - Nutrient Neutrality Chichester and Langstone Harbours, Solent and Dorest Coast, Solent Maritime	River enhancement and mitigation	Reduce consented permit levels for nutrients and solids in the final effluent from treatment works. This would have to be undertaken in agreement with the Environment Agency.	CHIC.RC03 1	Yes	CHICHESTER WTW	
Other							
Study/ investigation to gather more data							
Chichester and Langstone Harbours, Solent and Dorest Coast, Solent Maritime	PO11 - Nutrient Neutrality Chichester and Langstone Harbours, Solent and Dorest Coast, Solent Maritime (Include reason for Banding)	Nutrient Budget for investigations.	Study/ investigation required to understand the impact of wastewater discharges and achieve or prevent deterioration from Natural England's revised Common Standards Monitoring Guidance (CSMG) targets Total Phosphorus (TP) and Total Nitrogen (TN) on the Chichester and Langstone Harbours, Solent and Dorest Coast and Solent Maritime.	CHIC.OT01 2	Yes	Catchment Wide	Natural England supplied 'Water Dependent Habitat Sites' Table via BRAVA PO11

Options identified by:

Technical Team

Previous plans and modelling (e.g. Drainage Area Plans)

Our staff and partners

All options identify the BRAVA
Planning Objective risk they address

(this is an extract of the table)

Options Development Process

Feasible Options to Preferred Options

DWMP Data Tables

FEASIBLE OPTION 1	
Drainage Area/Catchment	CHIC - Chichester
Strategic Need	PO5 - Storm Overflow Performance, PO13 - Improve Bathing Water Quality, PO14 - Improve Shellfish Water Quality
DWMP Option Reference	Option Title
CHIC PW01.3	CHIC FC09 - CHICHESTER WTW - Storage
DAP Option Reference	
Scheme Builder Reference	
OPTION DESCRIPTION (include location and main operational features)	
The option is located upstream of CHICHESTER WTW	
The main operational features are: Offline storage of 6539m3 required to achieve a 3 spill 2020 solution Offline storage of 2290m3 required to achieve a 3 spill 2050 solution Offline storage of 13836m3 required to achieve a 10 spill 2020 solution Offline storage of 10736m3 required to achieve a 10 spill 2050 solution Offline storage of 7873m3 required to achieve a 20 spill 2020 solution Offline storage of 4284m3 required to achieve a 20 spill 2050 solution	
SCHEMATIC	
OS map, sewer records (asset miner), general location of storage (Sophie)	
LINKS/ DEPENDENCIES TO OTHER OPTIONS	
No	
SOLUTION RISKS	
The model has a Low risk DAP confidence score of 2 and was last verified in 2014. For the DAP vs DWMP assessment there have been 4 modelling elements deemed to be of a higher risk. The key risks between the DAP and DWMP models are Models Used, FEH Rainfall Used, GI File Used, Levels Applied mAD.	
There is an acceptable confidence between spill frequency measured by EDM sensor and model data. Therefore, further investigation into data quality is recommended.	
SOLUTION BENEFITS	
The solution addresses all the planning objectives mentioned in the strategic need.	

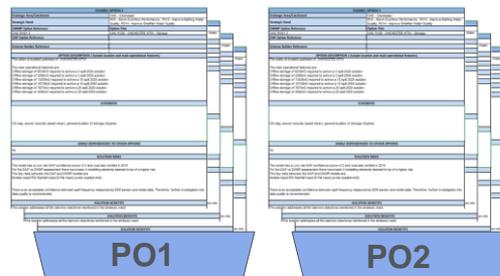
Each Wastewater System may have multiple feasible options.

Some Options may:

- address multiple BRAVA risks
- need to be combined to fully mitigate a BRAVA risk

“Preferred Options” are best value options

“Baskets of Measures” are created for the preferred option where more than one feasible option is required to reduce the risk for a planning objective to band 0



Outputs from Options Development Stage

- Table of Investment Needs for the Wastewater Catchment
- Each Investment Need assessed in terms of risk band reduction

Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners

Definitions:

- Location: Specific known location of the risk e.g. hotspot, high spilling CSO
- Issues: Description of the issue the option is tackling e.g. flooding
- Indicative Cost: Our initial estimate of the investment needed to deliver the option
- Indicative Timescale: Based upon when the risk occurs (now or in the future)
- Potential Partners: Opportunities to work with others



Investment Needs – Budds Farm Havant (BUDD)

Storm Overflows

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		Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners
28	BUDD.PW01.10	Court Lane Cosham CEO	Storm Overflow, Shellfish Waters	Surface water separation to reduce spills from Pier Road Southsea WPS (costs provided for 1356m3 of storage tank but sustainable drainage solutions preferred)	£2,302k	Short to Medium	
29	BUDD.PW01.11	Pier Road Southsea WPSs	Storm Overflow, Bathing Waters, Shellfish Waters	Surface water separation to reduce spills from Budds Farm Havant emergency overflow (average cost assumed to reduce CSO spills to Band 0)	£1,913k	Short to Medium	
30	BUDD.OT01.7	Budds Farm Havant CEO	Storm Overflow, Bathing Waters	Surface water separation to reduce spills from St Andrews Road Portsmouth storm overflow (average cost assumed to reduce CSO spills to Band 0)	~£1000k	Short to Medium	
31	BUDD.OT01.8	St Andrews Road Portsmouth CSO	Storm Overflow, Shellfish Waters	Surface water separation to reduce spills from Mile End Road Portsmouth no 2 storm overflow (average cost assumed to reduce CSO spills to Band 0)	~£1000k	Short to Medium	
32	BUDD.OT01.9	Mile End Road Portsmouth no 2 CSO	Storm Overflow, Shellfish Waters	Surface water separation to reduce spills from Widley Road Portsmouth storm overflow (average cost assumed to reduce CSO spills to Band 0)	~£1000k	Short to Medium	
33	BUDD.OT01.10	Widley Road Portsmouth CSO	Storm Overflow, Shellfish Waters	Surface water separation to reduce spills from Hambledon Road, Denmead emergency overflow (average cost assumed to reduce CSO spills to Band 0)	~£1000k	Short to Medium	
34	BUDD.OT01.15	Hambledon Road, Denmead EMO	Storm Overflow	Surface water separation to reduce spills from Pier Road Southsea WPS (costs provided for 1356m3 of storage tank but sustainable drainage solutions preferred)	~£1000k	Short to Medium	

Investment Needs – Budds Farm Havant (BUDD)

Flooding, Storm Overflows and Pollution

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		Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners
76	BUDD.S C01.1	Southwick Estate	Flooding, Storm Overflow, Pollution Risk	Study / Investigation: Identify suitable location/s for NFM's on the Southwick estate in the Budds Farm Havant catchment (update hydraulic model)	£TBC	Medium	CP, FBC, HCC, HBC, PCC, Southwick Estate
77	BUDD.S C01.5	Catchment Wide	Flooding, Storm Overflow, Pollution Risk	Study / Investigation: Identify suitable location/s for separating Highways Drainage/use of SuDS from the foul water system in the Budds Farm Havant catchment (update hydraulic model)	£TBC	Medium	CP, FBC, HCC, HBC, PCC, HH
78	BUDD.S C01.2	Havant	Flooding, Storm Overflow, Pollution Risk	Study / Investigation: Identify suitable location/s for wetland construction/reed beds, in partnership with the EA, in the Havant Area in the Budds Farm Havant catchment (update hydraulic model)	£TBC	Medium	EA
79	BUDD.S C01.3	Waterlooville / Purbrook	Flooding, Storm Overflow	Study / Investigation: Identify suitable location/s for surface water separation, specifically SuDS, on the new development in the Purbrook area of the Budds Farm Havant catchment (update hydraulic model)	£TBC	Medium	CP, FBC, HCC, HBC, PCC
80	BUDD.O T01.11	Eastney	Flooding, Storm Overflow	Study / Investigation: Identify potential to connect surface water runoff directly into the long sea outfall at Eastney, without first taking it to Budds Farm WTW	£TBC	Medium to Long	CP, FBC, HCC, HBC, PCC, HH, EA
81	BUDD.P W01.7	Cosham	Pollution Risk	Study / Investigation: Identify suitable location/s in Cosham for sewer relining to prevent saline intrusion (update hydraulic model)	£2,000k	Short to Medium	
82	BUDD.O T01.14	Catchment Wide	Flooding, Storm Overflow	Study / Investigation: Develop final effluent recycling plan in the Budds Farm Havant catchment. Detailed in Water for Life - Hampshire project.	£TBC	Short to Medium	

Investment Needs – Budds Farm Havant (BUDD)

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Flooding		Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners
Southsea							
38	BUDD.S C01.7	Bernards Estate agents LRD, India Arms and Portsmouth Finance Corporation LTD	Flooding	Separation Solution 1 in 20 year, 60 minute storm 2050 20% Separation = 185 ha Road, 0 Number of roofs to separate & Residual Flood Volume = 7035 m3 (Worst Case) P07 Benefit = 342 Properties, P04 Benefit = 948 Properties	£TBC	Medium to Long	CP, FBC, HCC, HBC, PCC, EA
39	BUDD.P W01.15			Install 10,367m3 of storage	£7,791k	Short	
40	BUDD.S C01.10	Marine Walk, Sea View Road and Elm Grove	Flooding	Separation Solution 1 in 20 year, 60 minute storm 2050 20% Separation = 4.15 ha Road, 539 Number of roofs to separate & Residual Flood Volume = 3183 m3 (Worst Case) P07 Benefit = 137 Properties, P04 Benefit = 541 Properties	£TBC	Medium to Long	CP, FBC, HCC, HBC, PCC, EA
41	BUDD.P W01.18			Install 3539m3 of storage	£2,975k	Short	
42	BUDD.S C01.11	St. Georges Road	Flooding	Separation Solution 1 in 20 year, 60 minute storm 2050 20% Separation = 0.01 ha Road, 14 Number of roofs to separate & Residual Flood Volume = 284 m3 (Worst Case) P07 Benefit = 10 Properties, P04 Benefit = 22 Properties	£TBC	Medium to Long	CP, FBC, HCC, HBC, PCC, EA
43	BUDD.P W01.19			Install 303m3 of storage	£691k	Short	
44	BUDD.S C01.18	Raymond Road, Hamilton Road, Portsview Avenue	Flooding	Separation Solution 1 in 20 year, 60 minute storm 2050 20% Separation = 0.7 ha Road, 0 Number of roofs to separate & Residual Flood Volume = 16 m3 (Worst Case) P07 Benefit = 0 Properties, P04 Benefit = 3 Properties	£TBC	Medium to Long	CP, FBC, HCC, HBC, PCC, EA
45	BUDD.P W01.26			Install 32m3 of storage	£500k	Short	

Investment Needs – Budds Farm Havant (BUDD)

Flooding

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		Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners
North End							
46	BUDD.S C01.8	Twyford Avenue, Gruneisen Road, Penrose Close, Wilson Road, Winstanley Road, Wilson Road, London Road	Flooding	Separation Solution 1 in 20 year, 60 minute storm 2050 20% Separation = 184.8 ha Road, 0 Number of roofs to separate & Residual Flood Volume = 1446m3 (Worst Case) P07 Benefit = 161 Properties, P04 Benefit = 491 Properties	£TBC	Medium to Long	CP, FBC, HCC, HBC, PCC, EA
47	BUDD.P W01.16			Install 2,369m3 of storage	£2,150k	Short	
Tipner							
48	BUDD.S C01.9	Victory Green	Flooding	Separation Solution 1 in 20 year, 60 minute storm 2050 20% Separation = 0.20 ha Road, 0 Number of roofs to separate & Residual Flood Volume = 45 m3 (Worst Case) P07 Benefit = 8 Properties, P04 Benefit = 14 Properties	£TBC	Medium to Long	CP, FBC, HCC, HBC, PCC, EA
49	BUDD.P W01.17			Install 77m3 of storage	£532k	Short	

Investment Needs – Budds Farm Havant (BUDD)

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Flooding

		Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners
Hayling Island							
50	BUDD.S C01.13	Woodlands Lane, West Lane, Manor Road and Station Road	Flooding	Separation Solution 1 in 20 year, 60 minute storm 2050 20% Separation = 0.16 ha Road, 37 Number of roofs to separate & Residual Flood Volume = 375 m3 (Worst Case) P07 Benefit = 3 Properties, P04 Benefit = 11 Properties	£TBC	Medium to Long	CP, FBC, HCC, HBC, PCC, EA
51	BUDD.P W01.21			Install 404m3 of storage	762k	Short	
52	BUDD.S C01.14	Flat 8, Bayview Court, 85	Flooding	Separation Solution 1 in 20 year, 60 minute storm 2050 20% Separation = 0.85 ha Road, 49 Number of roofs to separate & Residual Flood Volume = 1493 m3 (Worst Case) P07 Benefit = 73 Properties, P04 Benefit = 176 Properties	£TBC	Medium to Long	CP, FBC, HCC, HBC, PCC, EA
53	BUDD.P W01.22			Install 1552m3 of storage	£1,573k	Short	
54	BUDD.S C01.15	Eastoke Avenue, Haven Road	Flooding	Separation Solution 1 in 20 year, 60 minute storm 2050 20% Separation = 0.63 ha Road, 90 Number of roofs to separate & Residual Flood Volume = 1816 m3 (Worst Case) P07 Benefit = 8 Properties, P04 Benefit = 18 Properties	£TBC	Medium to Long	CP, FBC, HCC, HBC, PCC, EA
55	BUDD.P W01.23			Install 1849m3 of storage	£1,783k	Short	

Investment Needs – Budds Farm Havant (BUDD)

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Flooding		Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners
Portsmouth							
56	BUDD.S C01.16	Church Road	Flooding	Separation Solution 1 in 20 year, 60 minute storm 2050 20% Separation = 0.002 ha Road, 17 Number of roofs to separate & Residual Flood Volume = 137 m3 (Worst Case) P07 Benefit = 2 Properties, P04 Benefit = 1 Properties	£TBC	Medium to Long	CP, FBC, HCC, HBC, PCC, EA
57	BUDD.P W01.24			Install 144m3 of storage	£579k	Short	
Paulsgrove / Cosham							
58	BUDD.S C01.17	Station Road, Central Road, Drayton Lane, Salisbury Road, Mousehole Road, Newbolt Road, Allaway Avenue, Beverston Road	Flooding	Separation Solution 1 in 20 year, 60 minute storm 2050 20% Separation = 34.33 ha Road, 367 Number of roofs to separate & Residual Flood Volume = 8199 m3 (Worst Case) P07 Benefit = 1127 Properties, P04 Benefit = 1798 Properties	£TBC	Medium to Long	CP, FBC, HCC, HBC, PCC, EA
59	BUDD.P W01.25			Install 11375m3 of storage	£8,503k	Short	
Havant							
60	BUDD.S C01.19	Priorsdean Crescent, Brookside Road, Maylands Road, Purbrook Way, Park Lane, New Road, Hulbert Road etc.	Flooding	Separation Solution 1 in 20 year, 60 minute storm 2050 20% Separation = 38.67 ha Road, 4520 Number of roofs to separate & Residual Flood Volume = 8916 m3 (Worst Case) P07 Benefit = 254 Properties, P04 Benefit = 746 Properties	£TBC	Medium to Long	CP, FBC, HCC, HBC, PCC, EA
61	BUDD.P W01.27			Install 9834m3 of storage	£7,416k	Short	

Investment Needs – Budds Farm Havant (BUDD)

Flooding

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		Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners
Waterlooville							
62	BUDD.S C01.20	Catherington Lane, London Road, Spring Vale, Portsmouth Road, Dorset Close etc	Flooding	Separation Solution 1 in 20 year, 60 minute storm 2050 20% Separation = 38.67 ha Road, 4520 Number of roofs to separate & Residual Flood Volume = 10943 m3 (Worst Case) P07 Benefit = 433 Properties, P04 Benefit = 785 Properties	£TBC	Medium to Long	CP, FBC, HCC, HBC, PCC, EA
63	BUDD.P W01.28			Install 13193m3 of storage	£9,785k	Short	
64	BUDD.S C01.21	Greenfield Crescent, Erica Close, Erica Way	Flooding	Separation Solution 1 in 20 year, 60 minute storm 2050 20% Separation = 1.39 ha Road, 222 Number of roofs to separate & Residual Flood Volume = 132 m3 (Worst Case) P07 Benefit = 7 Properties, P04 Benefit = 24 Properties	£TBC	Medium to Long	CP, FBC, HCC, HBC, PCC, EA
65	BUDD.P W01.29			Install 167m3 of storage	£595k	Short	
66	BUDD.S C01.22	Coralin Grove and Ramblers Way	Flooding	Separation Solution 1 in 20 year, 60 minute storm 2050 20% Separation = 0.99 ha Road, 129 Number of roofs to separate & Residual Flood Volume = 1178 m3 (Worst Case) P07 Benefit = 18 Properties, P04 Benefit = 14 Properties	£TBC	Medium to Long	CP, FBC, HCC, HBC, PCC, EA
67	BUDD.P W01.30			Install 1463m3 of storage	£,1510k	Short	



Investment Needs – Budds Farm Havant (BUDD)

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Flooding

		Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners
Waterlooville (cont.)							
68	BUDD.S C01.23	Anmore Road, Little Mead, Hambledon Road, School Lane etc	Flooding	Separation Solution 1 in 20 year, 60 minute storm 2050 20% Separation = 0.03 ha Road, 106 Number of roofs to separate & Residual Flood Volume = 2007 m3 (Worst Case) P07 Benefit = 53 Properties, P04 Benefit = 152 Properties Install 2138m3 of storage	£TBC	Medium to Long	CP, FBC, HCC, HBC, PCC, EA
69	BUDD.P W01.31				£1,987k	Short	
70	BUDD.S C01.25	Serpentine Road, Shaftesbury Avenue, Geoffrey Avenue etc	Flooding	Separation Solution 1 in 20 year, 60 minute storm 2050 20% Separation = 6.26 ha Road, 747 Number of roofs to separate & Residual Flood Volume = 3035 m3 (Worst Case) P07 Benefit = 61 Properties, P04 Benefit = 158 Properties Install 3615m3 of storage	£TBC	Medium to Long	CP, FBC, HCC, HBC, PCC, EA
71	BUDD.P W01.33				£3,029k	Short	
72	BUDD.S C01.26	Laburnum Road, Regency Gardens and London Road	Flooding	Separation Solution 1 in 20 year, 60 minute storm 2050 20% Separation = 38.67 ha Road, 4520 Number of roofs to separate & Residual Flood Volume = 32 m3 (Worst Case) P07 Benefit = 2 Properties, P04 Benefit = 4 Properties Install 32m3 of storage	£TBC	Medium to Long	CP, FBC, HCC, HBC, PCC, EA
73	BUDD.P W01.34				£502k	Short	



Investment Needs – Budds Farm Havant (BUDD)

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Flooding

		Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners
Denmead							
74	BUDD.S C01.24	Hatchmore Road and Inhams Lane	Flooding	Separation Solution 1 in 20 year, 60 minute storm 2050 20% Separation = 0.003 ha Road, 17 Number of roofs to separate & Residual Flood Volume = 253 m3 (Worst Case) P07 Benefit = 6 Properties, P04 Benefit = 12 Properties	£TBC	Medium to Long	CP, FBC, HCC, HBC, PCC, EA
75	BUDD.P W01.32			Install 265.85m3 of storage	£664k	Short	

Investment Needs – Budds Farm Havant (BUDD)

Growth, Nutrient Neutrality and Groundwater Protection

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		Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners
35	BUDD.PW02.2	Budds Farm Havant WTW	Growth	Increase capacity of the Wastewater Treatment Works (WTW). Optimisation or extension of site to allow for the extra 2301m3 DWF required due to growth in catchment	£3000k	Medium	EA
36	BUDD.OT01.4	Chichester and Langstone Harbours, Solent and Dorset Coast, Solent Maritime	Nutrients	Study / Investigation: Develop a nutrient budget and investigate the risks and sources impacting these named Habitat sites	~£76k	Short	
37	BUDD.PW01.6	Source Protection Zones - North of catchment	Groundwater Pollution	Targeted CCTV/Electroscan surveys and proactive sewer rehabilitation to reduce risk of groundwater pollution.	£23,000k	Long	

Investment Needs – Budds Farm Havant (BUDD)

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Blockages

		Location	Issues	Option	Indicative Cost	Timescale	Potential Partners
1	BUDD.S C03.1	Hotspot 1 - Baffins	Flooding	Enhanced Customer Education Programme to prevent blockages	£120k	Short to Medium	CP FBB HCC PCC
2		Hotspot 2 - Denmead					
3		Hotspot 3 - Fratton					
4		Hotspot 4 - Hambledon					
5		Hotspot 5 - Havant					
6		Hotspot 6 - Hilsea					
7		Hotspot 7 - Horndean					
8		Hotspot 8 - Kingston					
9		Hotspot 9 - Milton					
10		Hotspot 10 - Paulsgrove / Cosham					
11		Hotspot 11 - Portsea					
12		Hotspot 12 - Rowlands Castle					
13		Hotspot 13 - Southsea					
14		Hotspot 14 - Tipner / North End					
15		Hotspot 15 - Waterlooville					



Investment Needs – Budds Farm Havant (BUDD)

Blockages, Pollution Risk, Flooding, Model Update

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		Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners
16	BUDD. SC03.2	Hotspot 1 - BUDDs Farm WTW	Pollution Risk	Enhanced Customer Education Programme to prevent blockages	£120k	Short to Medium	CP, FBB HCC. PCC
17		Hotspot 2 - Farlington					
18		Hotspot 3 - Havant					
19		Hotspot 4 - Hayling Island					
20		Hotspot 5 - Paulsgrove / Cosham					
21		Hotspot 6 - Waterlooville					
22	BUDD. OT01.1	Hotspot 1 - Hilsea	Flooding	Study / Investigation: Identify causes of internal flooding incidents (currently unknown)	~£232k	Short to Medium	
23		Hotspot 2 - Denmead					
24		Hotspot 3 - Fratton					
25		Hotspot 4 - Southsea					
26	BUDD. OT01.2	Mainland Drayton WPS Hambledon Road, Waterlooville	Pollution Risk	Study / Investigation: Identify causes of pollution incidents (currently unknown)	~£232k	Short to Medium	
27	BUDD. OT01.6	Catchment Wide	Flooding, Pollution Risk, Storm Overflows	Study / Investigation: Update and re-verify the Budds Farm Havant Hydraulic Model to improve model confidence	£375k	Short to Medium	

Other Issues from the DWMP Feedback / Input Log

- Link with the WRMP to investigate the potential for effluent recycling (pilot underway at Budds Farm)
- Saline intrusion and tide locking



Questions



Review of Investment Needs

Risks in the East Hampshire Catchment

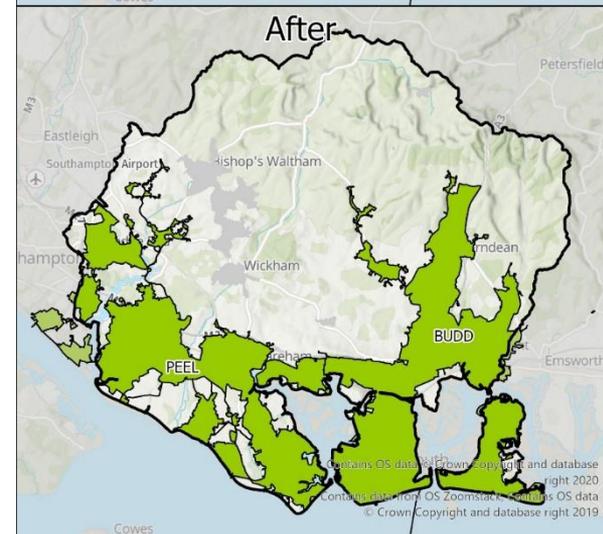
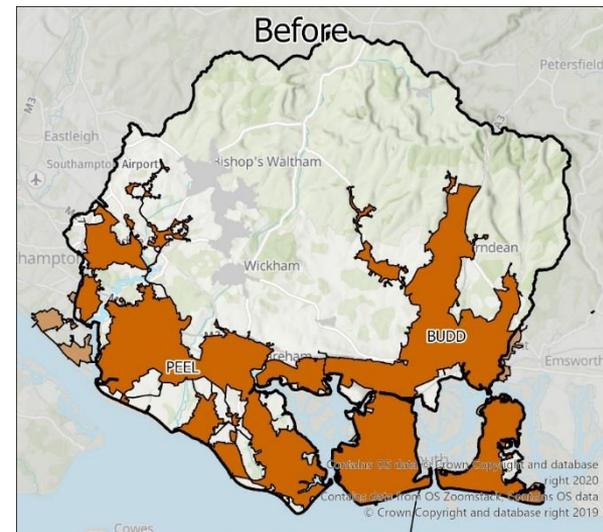
BRAVA Results indicated the main risks in this river basin catchment are for the following Planning Objectives (PO):

- Storm Overflows (PO5)
- Nutrients (PO11)

PO5 – Storm Overflow

DRAFT

East Hampshire		PO5	BRAVA (2050)	
Option Type		Est Cost(£)	Before	After
Budds Farm Havant				
	BUDD.OT01.10 - Storage	£1000 K	2	0
	BUDD.OT01.15 - Storage	£1000 K		
	BUDD.OT01.6 - Improve Hydraulic Model	£375 K		
	BUDD.OT01.7 - Storage	£1000 K		
	BUDD.OT01.8 - Storage	£1000 K		
	BUDD.OT01.9 - Storage	£1000 K		
	BUDD.PW01.10 - Storage	£2302 K		
	BUDD.PW01.11 - Storage	£1913 K		
Peel Common				
	PEEL.PW01.40 - Storage (FC01 - PEEL COMMON WTW)	£2268 K	2	0
	PEEL.PW01.41 - Storage (FC02 - HOOK PARK WPS)	£627 K		
	PEEL.PW01.42 - Storage (FC03 - ELMHURST ROAD FAREHAM CSO)	£947 K		
	PEEL.PW01.43 - Storage (FC04 - QUAY STREET FAREHAM CSO)	£742 K		
	PEEL.PW01.44 - Storage (FC05 - COW LANE PORTCHESTER WPS)	£574 K		
	PEEL.PW01.45 - Storage	£1000 K		
	PEEL.PW01.46 - Storage	£1000 K		
	PEEL.PW01.47 - Storage	£1000 K		
	PEEL.OT01.8 - Storage (FC01 - THE GILLIES FAREHAM CSO)	£1000 K		
	PEEL.OT01.9 - Storage (FC02 - HAMBLE LANE BURSLEDON WPS)	£1000 K		
	PEEL.OT01.10 - Storage (FC03 - ARUNDEL DRIVE FAREHAM CSO)	£1000 K		
	PEEL.OT01.11 - Storage (FC04 - SALTERNS LANE BURSLEDON WPS)	£1000 K		
	PEEL.OT01.12 - Storage (FC05 - FAREHAM ROAD GOSPORT OUTSIDE 359 CSO)	£1000 K		

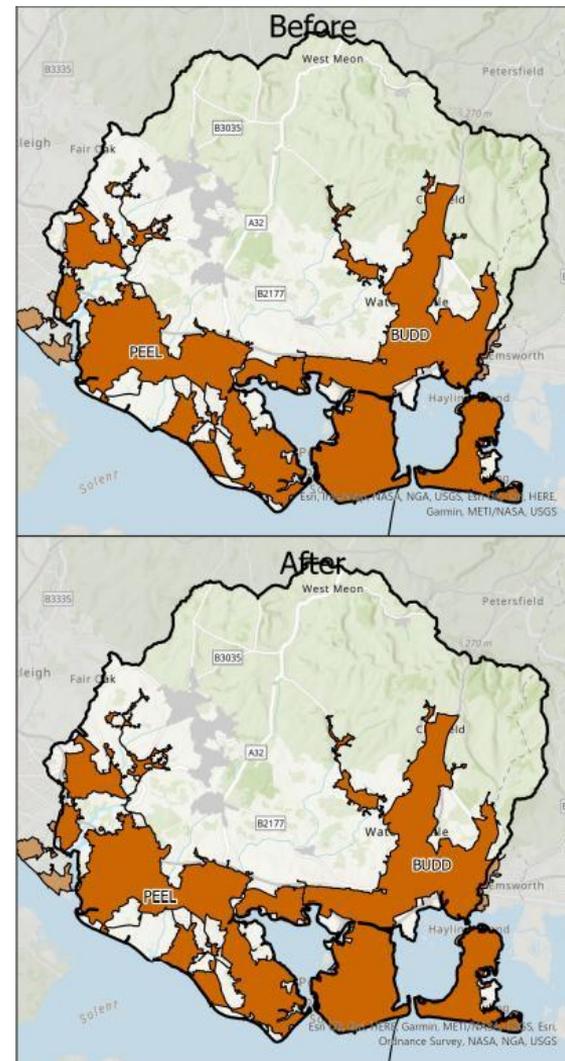


PO11 – Nutrient Neutrality

DRAFT

East Hampshire	PO11	BRAVA (2050)	
Option Type	Est Cost(£)	Before	After
Budds Farm Havant			
BUDD.OT01.4 - Nutrient Budget	£76 K*	2	2
Peel Common			
PEEL.OT01.6 - Nutrient Budget	£76 K*	2	2

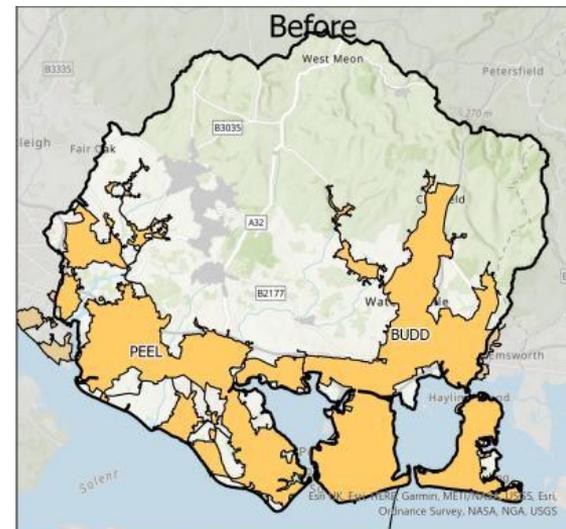
*Estimated cost is split between all catchments sharing nutrient designated sites – East Hampshire, New Forest, IOW, and Test and Itchen.



PO1 – Internal Flooding

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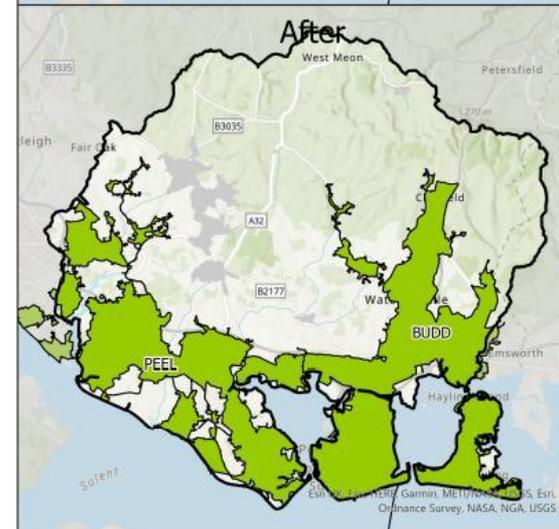
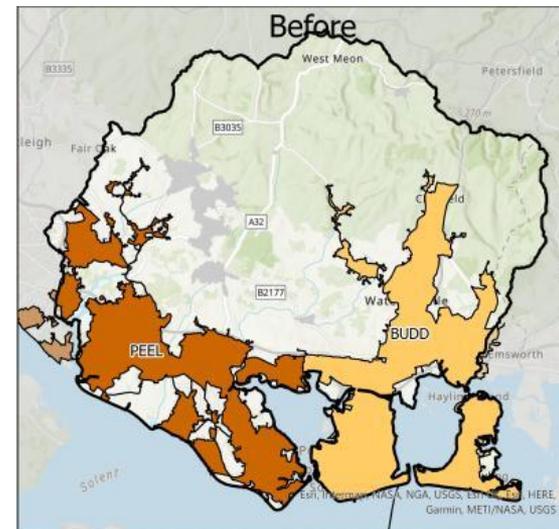
East Hampshire	PO1	Internal Flood Incidents (Nr in 3yrs)			BRAVA	
Option Type	Est Cost (£)	Solution Reduction	Total	Reduction Req'd for Band 0	Before	After
Budds Farm Havant						
BUDD.OT01.1 - Investigation into causes	£232 K	0	96	18	1	0
BUDD.OT01.6 - Improve Hydraulic Model	£375 K	0				
BUDD.SC03.1 - Customer Education Programme	£116 K	22				
Peel Common						
PEEL.SC03.6 - Customer Education Programme	£116 K	10	47	10	1	0
PEEL.PW01.16 - Jetting Programme	£446 K	10				



PO2 – Pollution Risk

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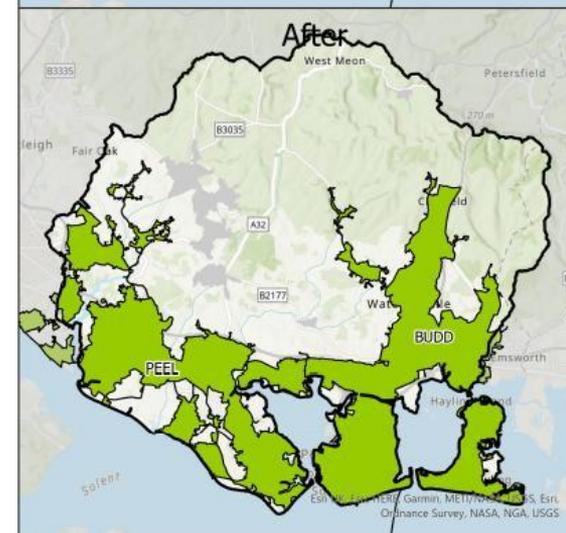
East Hampshire	PO2	Pollution Incidents (Nr in 3yrs)			BRAVA	
Option Type	Est Cost(£)	Solution Reduction	Total	Reduction Req'd for Band 0	Before	After
Budds Farm Havant						
BUDD.SC03.2 - Customer Education Programme	£116 K	2	22	1	1	0
BUDD.OT01.2 - Investigation into causes	£232 K	0				
Peel Common						
PEEL.SC03.7 - Customer Education Programme	£116 K	3	45	26	2	0
PEEL.PW01.13 - Maintenance Programme WPS	£3724 K	24				
PEEL.PW01.17 - Jetting Programme	£126 K	3				



PO3 – Sewer Collapse

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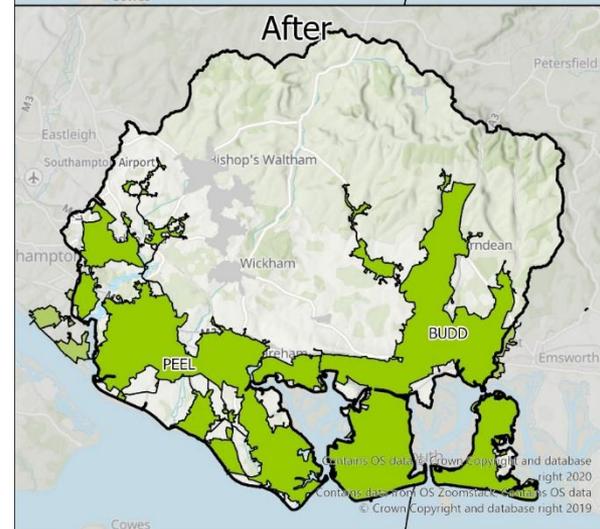
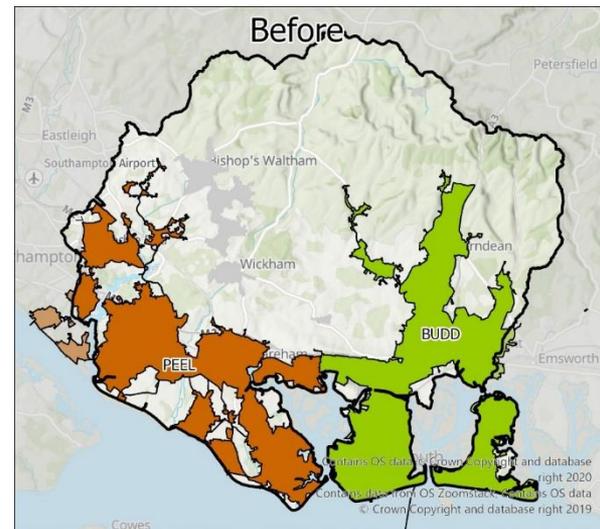
East Hampshire	PO3	Collapses and Bursts (Nr)			BRAVA	
		Solution Reduction	Total	Reduction Req'd for Band 0	Before	After
Budds Farm Havant					0	0
Peel Common					0	0



PO6 – WTW Compliance Failure

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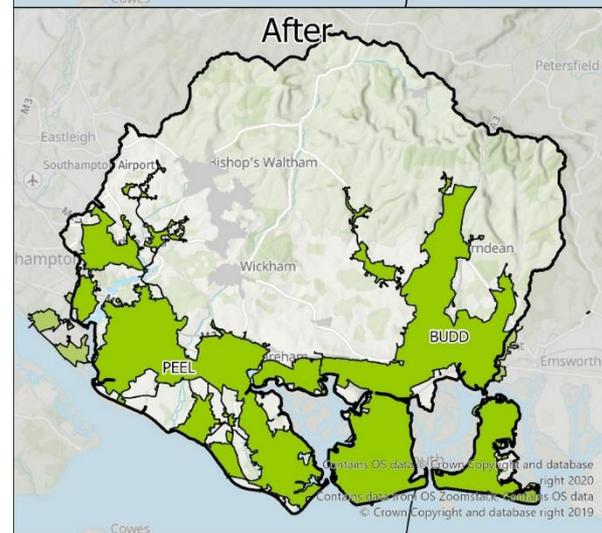
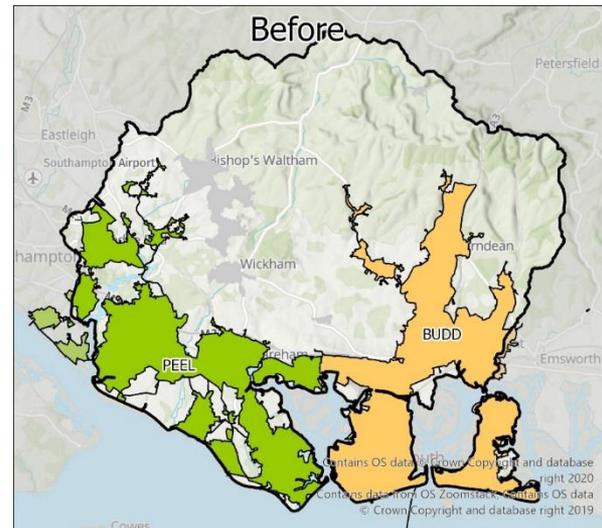
East Hampshire	PO6	BRAVA (2050)	
		Before	After
Option Type	Est Cost (£)		
Budds Farm Havant		0	0
Peel Common		2	0



PO7 – Hydraulic Overload

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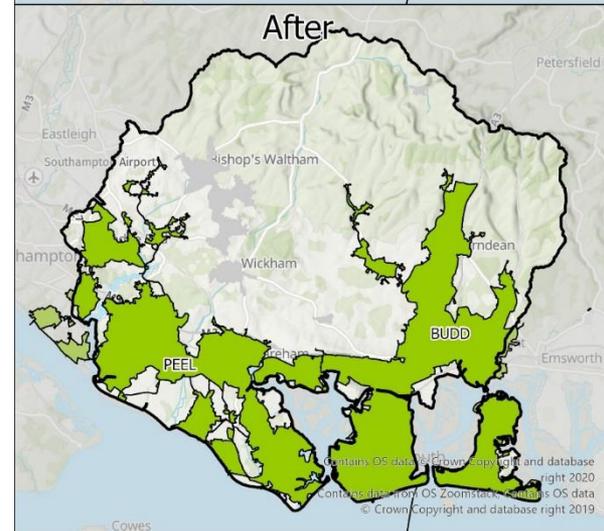
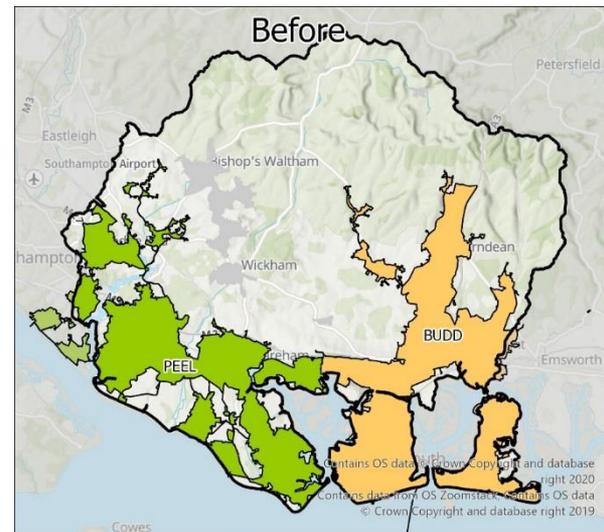
East Hampshire	PO7	BRAVA (2050)	
Option Type	Est Cost(£)	Before	After
Budds Farm Havant			
BUDD.OT01.6 - Improve Hydraulic Model	£375 K	1	0
BUDD.PW01.15 - Storage Option	£7792 K		
BUDD.PW01.16 - Storage Option	£2150 K		
BUDD.PW01.17 - Storage Option	£532 K		
BUDD.PW01.18 - Storage Option	£2975 K		
BUDD.PW01.19 - Storage Option	£691 K		
BUDD.PW01.21 - Storage Option	£763 K		
BUDD.PW01.22 - Storage Option	£1573 K		
BUDD.PW01.23 - Storage Option	£1783 K		
BUDD.PW01.24 - Storage Option	£579 K		
BUDD.PW01.25 - Storage Option	£8503 K		
BUDD.PW01.26 - Storage Option	£500 K		
BUDD.PW01.27 - Storage Option	£7417 K		
BUDD.PW01.28 - Storage Option	£9786 K		
BUDD.PW01.29 - Storage Option	£595 K		
BUDD.PW01.30 - Storage Option	£1511 K		
BUDD.PW01.31 - Storage Option	£1987 K		
BUDD.PW01.32 - Storage Option	£664 K		
BUDD.PW01.33 - Storage Option	£3029 K		
BUDD.PW01.34 - Storage Option	£503 K		



PO7 – Hydraulic Overload cont.

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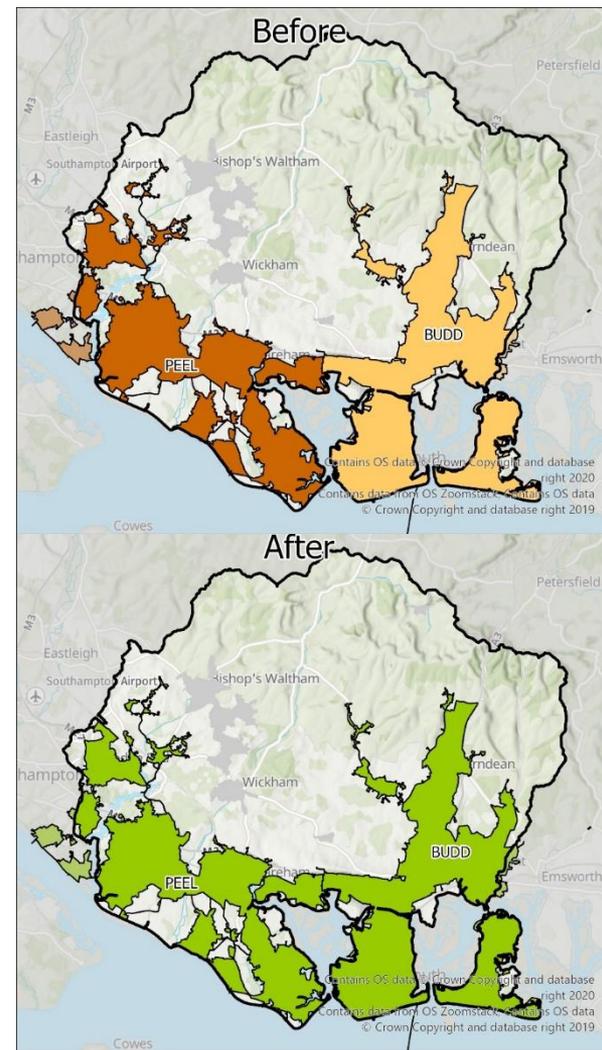
East Hampshire		PO7	BRAVA (2050)	
Option Type		Est Cost(£)	Before	After
Budds Farm Havant				
	BUDD.SC01.10 - Surface Water Separation	£19163 K	1	0
	BUDD.SC01.11 - Surface Water Separation	£1070 K		
	BUDD.SC01.13 - Surface Water Separation	£1826 K		
	BUDD.SC01.14 - Surface Water Separation	£3201 K		
	BUDD.SC01.15 - Surface Water Separation	£4482 K		
	BUDD.SC01.16 - Surface Water Separation	£1045 K		
	BUDD.SC01.17 - Surface Water Separation	£29072 K		
	BUDD.SC01.18 - Surface Water Separation	£748 K		
	BUDD.SC01.19 - Surface Water Separation	£146054 K		
	BUDD.SC01.20 - Surface Water Separation	£147484 K		
	BUDD.SC01.21 - Surface Water Separation	£7225 K		
	BUDD.SC01.22 - Surface Water Separation	£5244 K		
	BUDD.SC01.23 - Surface Water Separation	£4837 K		
	BUDD.SC01.24 - Surface Water Separation	£1128 K		
	BUDD.SC01.25 - Surface Water Separation	£25592 K		
	BUDD.SC01.26 - Surface Water Separation	£139785 K		
	BUDD.SC01.7 - Surface Water Separation	£73589 K		
	BUDD.SC01.8 - Surface Water Separation	£69646 K		
	BUDD.SC01.9 - Surface Water Separation	£581 K		
Peel Common				
			0	0



PO8 – DWF Compliance

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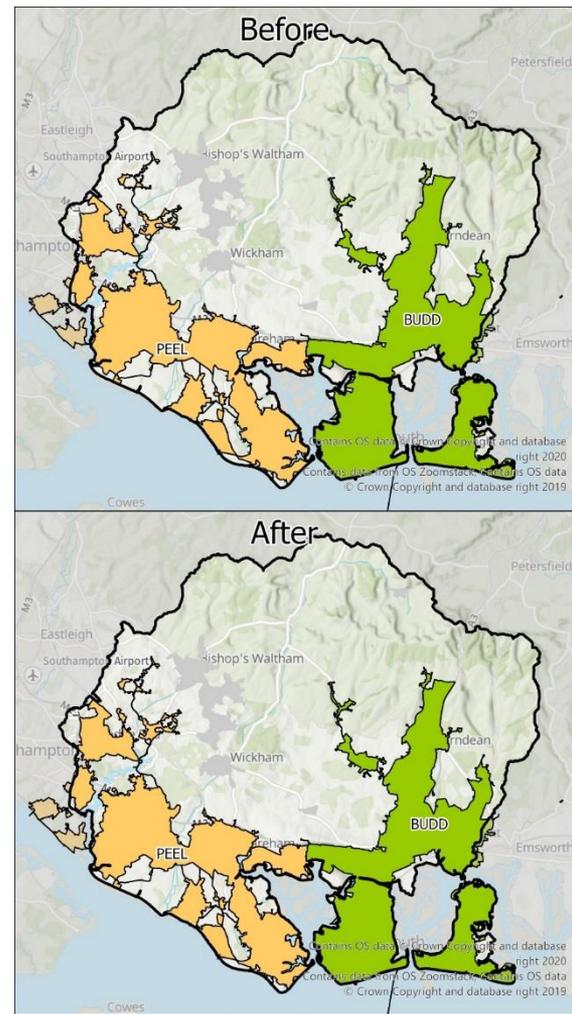
East Hampshire	PO8	BRAVA (2050)	
Option Type	Est Cost(£)	Before	After
Budds Farm Havant			
BUDD.PW02.2 - Increase DWF Capacity	£2764 K	1	0
Peel Common			
PEEL.PW02.10 –Optimisation and expansion of Treatment Works	£4451k	2	0



PO9 – Good Ecological Status

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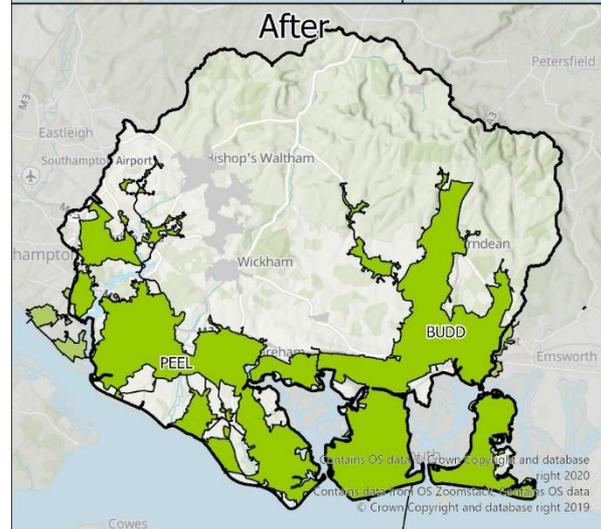
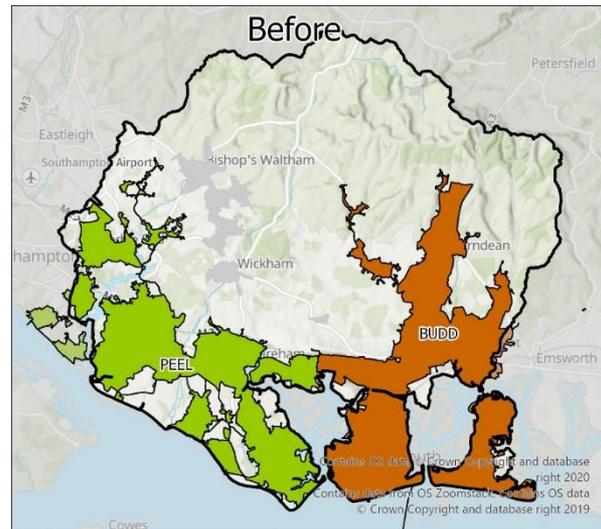
East Hampshire	PO9	BRAVA	
Option Type	Est Cost(£)	Before	After
Budds Farm Havant		0	0
Peel Common			
PEEL.OT01.5 - Study and Investigation	£76 K	1	1



PO12 – Groundwater Pollution Risk

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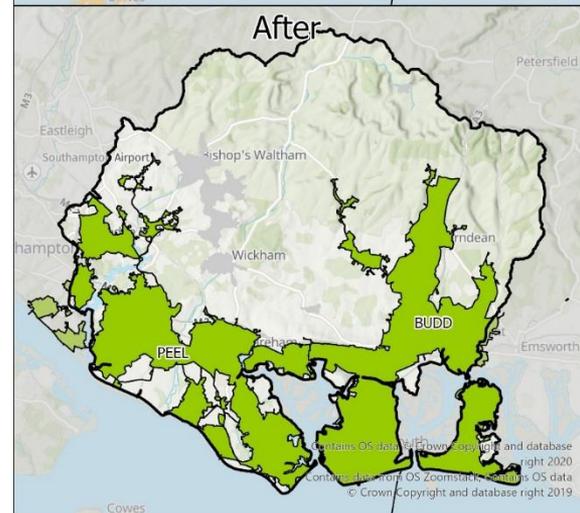
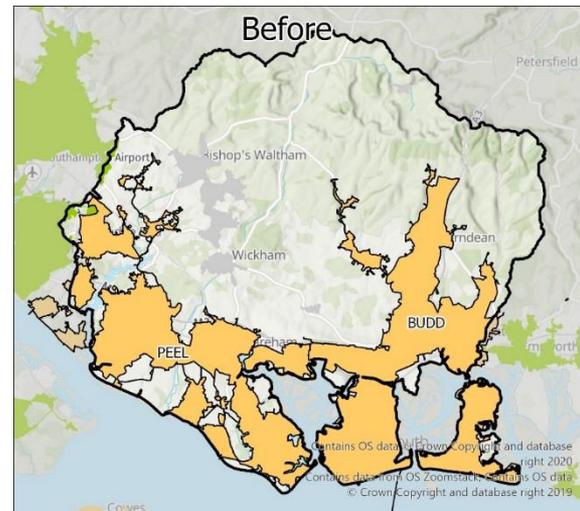
East Hampshire	PO12	BRAVA	
Option Type	Est Cost(£)	Before	After
Budds Farm Havant			
BUDD.PW01.6 - Pipe Rehabilitation Programme	£23,000 K	2	0
Peel Common		0	0



PO13 – Bathing Water

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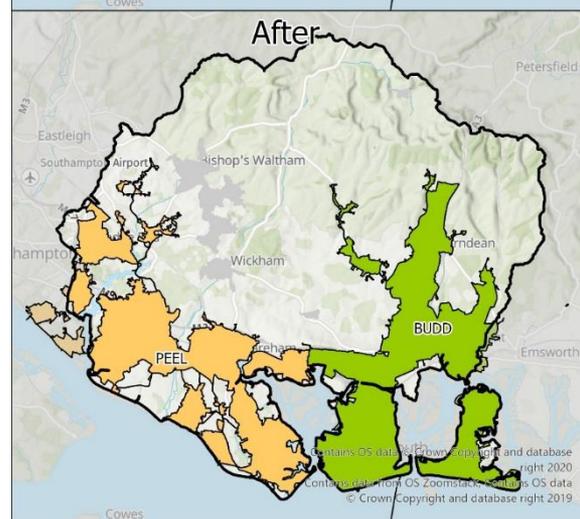
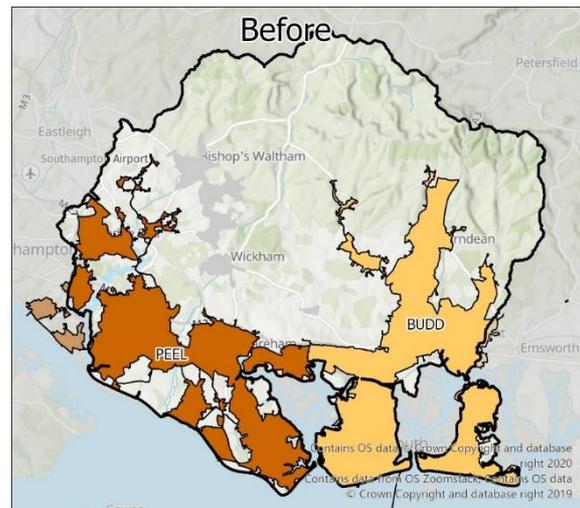
East Hampshire	PO13	BRAVA		
	Option Type	Est Cost (£)	Before	After
Budds Farm Havant				
BUDD.OT01.7 - Storage	£1000 K	1	0	
BUDD.PW01.11 - Storage	£1913 K			
Peel Common				
PEEL.PW01.40 - Storage (FC01 - PEEL COMMON WTW)	£2268 K	1	0	



PO14 – Shellfish Water

DRAFT

East Hampshire		PO14	BRAVA	
Option Type		Est Cost(£)	Before	After
Budds Farm Havant				
	BUDD.OT01.10 - Storage	£1000 K	1	0
	BUDD.OT01.8 - Storage	£1000 K		
	BUDD.OT01.9 - Storage	£1000 K		
	BUDD.PW01.10 - Storage	£2302 K		
	BUDD.PW01.11 - Storage	£1913 K		
Peel Common				
	PEEL.PW01.40 - Storage (FC01 - PEEL COMMON WTW)	£2268 K	2	1
	PEEL.PW01.41 - Storage (FC02 - HOOK PARK WPS)	£627 K		
	PEEL.PW01.42 - Storage (FC03 - ELMHURST ROAD FAREHAM CSO)	£947 K		
	PEEL.PW01.43 - Storage (FC04 - QUAY STREET FAREHAM CSO)	£742 K		
	PEEL.PW01.44 - Storage (FC05 - COW LANE PORTCHESTER WPS)	£574 K		
	PEEL.PW01.45 - Storage	£1000 K		
	PEEL.PW01.46 - Storage	£1000 K		
	PEEL.OT01.8 - Storage (FC01 - THE GILLIES FAREHAM CSO)	£1000 K		
	PEEL.OT01.10 - Storage (FC03 - ARUNDEL DRIVE FAREHAM CSO)	£1000 K		
	PEEL.OT01.11 - Storage (FC04 - SALTERNS LANE BURSLEDON WPS)	£1000 K		
	PEEL.OT01.12 - Storage (FC05 - FAREHAM ROAD GOSPORT OUTSIDE 359 CSO)	£1000 K		



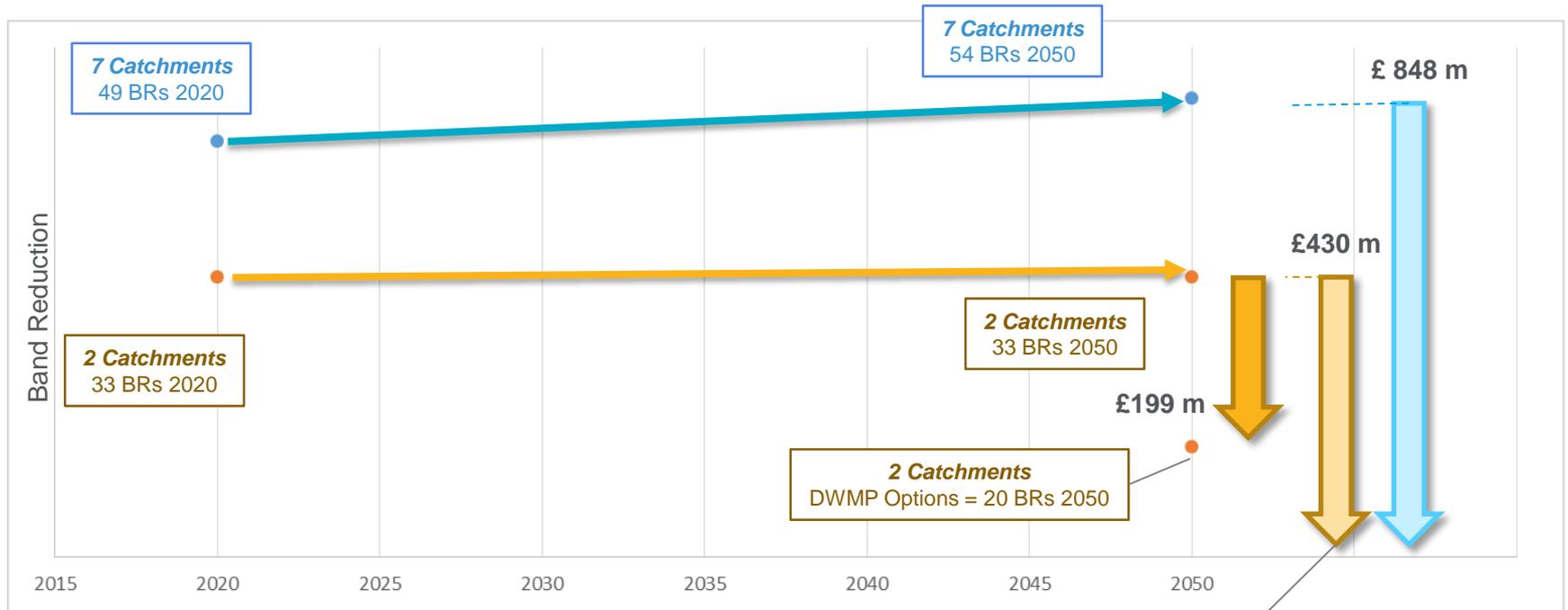
Programme Appraisal

Programme Appraisal

- Purpose: to develop an optimised 'best value' plan of measures to achieve the planning objectives
- Process: Collated all the investment needs from the 61 wastewater catchments, with information on costs and risk band reductions (across all 14 planning objectives)
- Extrapolated investment needs to other wastewater catchments in the river basin based on average cost per band reduction for each planning objective
- Optimise and prioritise investment needs for the final DWMP consultation



East Hampshire : DWMP Cost & Risk Band Reduction



2 Catchments
0 BRs Band 2050

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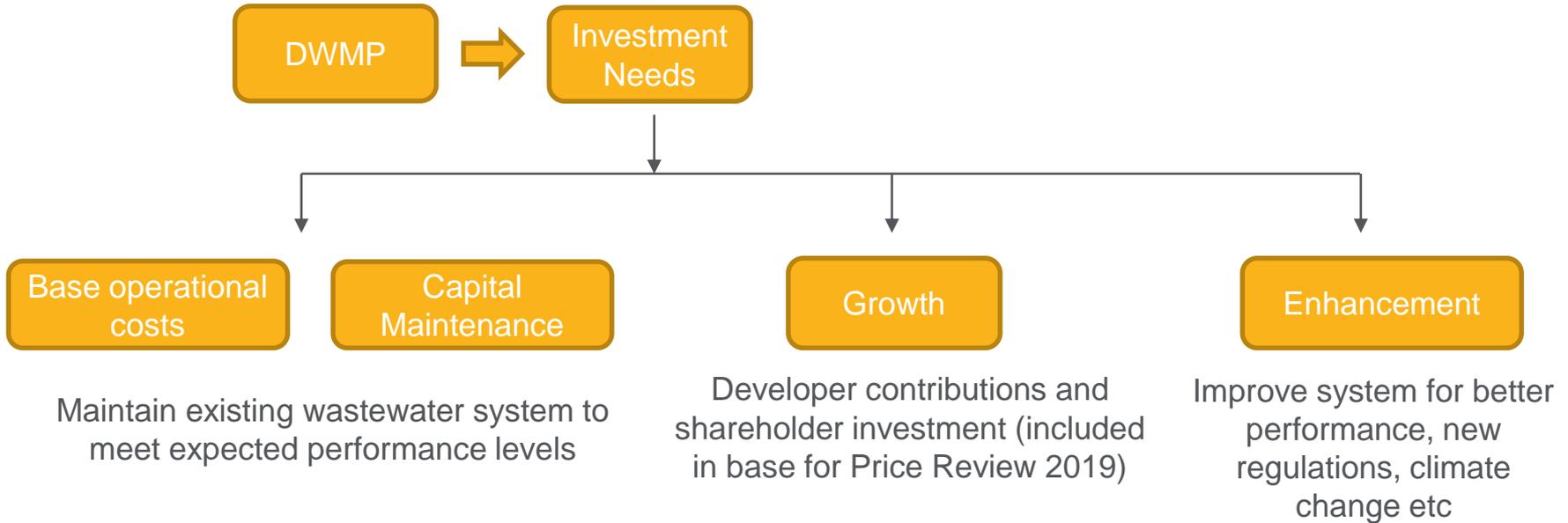
2 catchments = 622000 population
7 catchments = 640,000 population



Questions

Delivering the DWMP Investment Needs

Funding the DWMP Investment Needs in PR24



Examples of Enhancement Spend

- New environmental requirements
- New or emerging water quality risks or tightening of regulations
- Other new statutory or regulatory requirements
- Customer supported improvements – special cost cases
- Level of service improvement beyond upper quartile performance – special cost cases supported by customers



How to Fund Enhancements?

WINEP

Water Industry National Environment Programme: Owned by the EA
Potential for funding through this route if investment needs meet specific drivers set by the EA

Or

Special Cases

To meet customer needs

Special cases have a high evidence threshold, and must have:

- ✓ A clear need
- ✓ Clear efficient cost of delivery
- ✓ Customer support – Including a clear willingness to pay extra for it
- ✓ Clear cost benefit + proven environmental & social value
- ✓ Customer protection from non-delivery or significant underspend



Catchment and nature-based solutions

Key findings from our DWMP:

- Significant percentage of rainfall in sewers
- Need to tackle sewer flooding and storm overflows at source – surface water separation / attenuation
- Potentially huge benefits to people & the environment

Pathfinder projects in AMP7 – pioneering solutions in AMP7 to support our business cases for next Business Plan (PR24)

Catchment portfolios have been developed in our Water Resources Management Plan (WRMP), which include solutions such as:

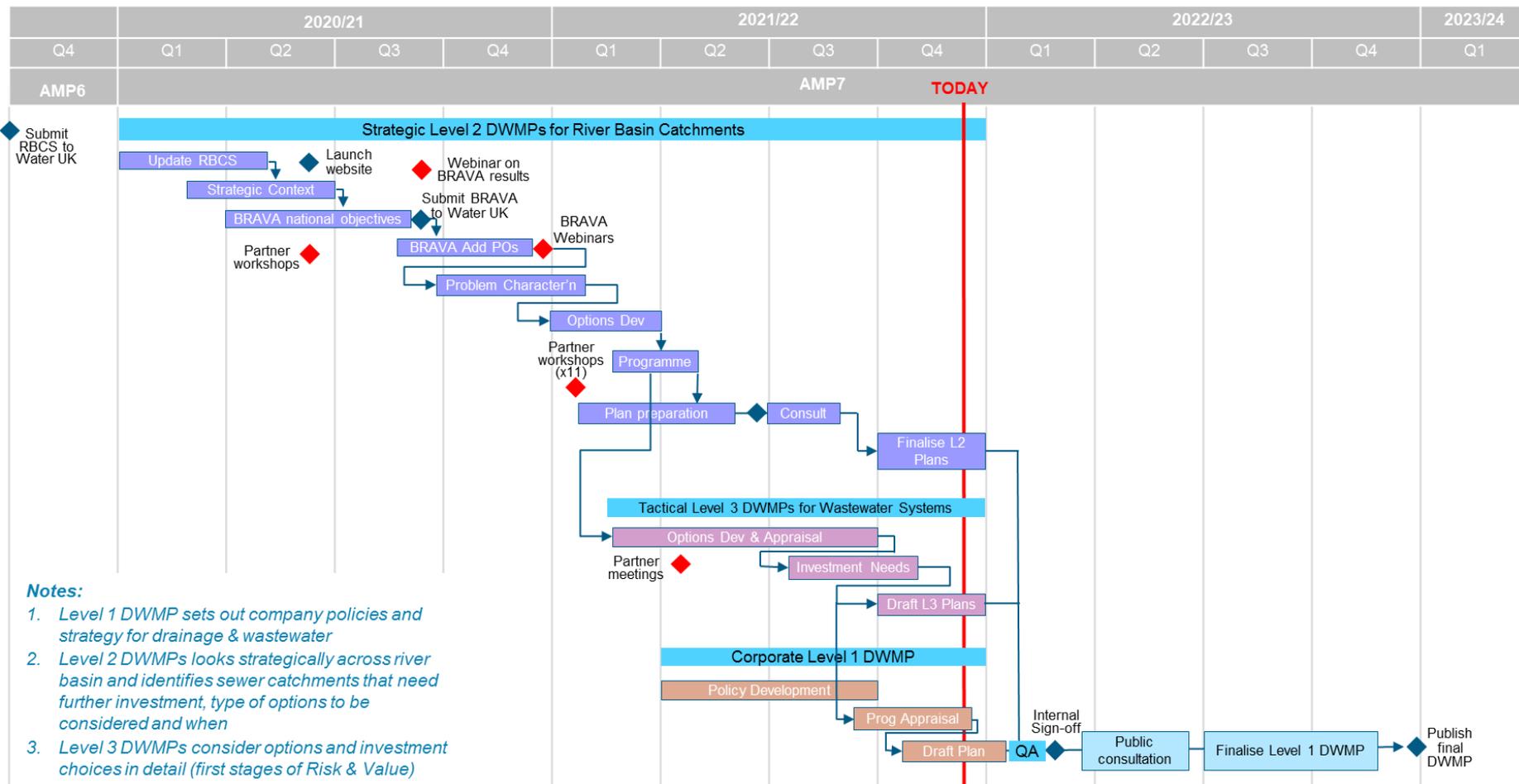
- River restoration
- Nutrient and sediment reduction
- Working with farmers to improve land management practices
- Sustainable drainage systems (SuDS)



Next Steps



Our DWMP Delivery Programme



Questions

Summary

Summary of Workshop

Our aim today was to:

- Discuss and refine the investment needs identified in the draft DWMP
- Flag any missing investment needs
- Discuss prioritisation and timing for investment needs
- Review opportunities to co-create and co-deliver solutions
- Look at total investment needs across the river basin

Poll



Thank you for participating today

Website: www.southernwater.co.uk/dwmp

Contact us: DWMP@southernwater.co.uk



from
**Southern
Water** 

The Southern Water logo graphic consists of three stylized, wavy blue lines of varying lengths, positioned to the right of the text "Southern Water".

Investment Needs for other wastewater catchments

Investment Needs - Peel Common (PEEL)

Fareham

DRAFT

No	Ref	Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners
1	PEEL.PW01.8	Wickham Rd/ Serpentine Road, North Fareham	Flooding	Upsize 40m of existing sewer from 150mm to 255mm and upsize 89m of existing sewer from 225mm/300mm to 1050mm.	£TBCK	Short / Medium	
2	PEEL.PW01.10	No.104, Highlands Road, Fareham	Flooding	Online storage tank built via upsizing and relaying 70m of existing 225mm pipe along Stow Crescent to a 1m x 1m box culvert	£TBCK	Short / Medium	
3	PEEL.PW01.18	PEEL FC01 Serpentine Road	Flooding	Upsize the private and local sewer network serving the DG5 properties on Serpentine Road, and provide online storage along Serpentine Road and Wickham Road, directly upstream from and to the wet well of Wickham Road WPS / CSO.	£TBCK	Short / Medium	
4	PEEL.PW01.20	PEEL FC03 Special Needs Facility, No.104 Highlands Road	Flooding	An online storage tank built via upsizing and relaying 70m of existing 225mm pipe along Stow Crescent to a 1m x 1m box culvert.	£TBCK	Short / Medium	
5	PEEL.PW01.21	PEEL FC04 Swanwick Shore Road, Swanwick	Growth	Upsize a 150mm pipe to a 2m wide by 1m high box culvert.	£2,416k	Long	
6	PEEL.PW01.27	PEEL FC10 Castle Trading Estate	Growth	Upsize 90m of 225mm sewer to 525mm	£2,416k	Long	
7	PEEL.PW01.31	PEEL FC14 Redlands Lane, Fareham	Growth	Upsizing of sewers	£2,416k	Long	
8	PEEL.PW01.22	PEEL FC05 Fareham	Growth	New sewers, pumping station and rising main.	£2,416k	Long	
9	PEEL.PW01.34	PEEL Shearwater Avenue	Growth	Upsize 145m of 525mm and 600mm to 900mm tank sewer Construct 2 3m diameter storage chambers	£2,416k	Long	

Investment Needs - Peel Common (PEEL)

Fareham

DRAFT

No	Ref	Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners
10	PEEL.PW01.36	PEEL FC19 Development upstream of Berry Lane WPS	Growth	Construct 12m ³ storage chamber near development. Construct a new 430m of 300mm pipe from future development off Berry Lane to Berry Lane WPS wet well.	£2,416k	Long	
11	PEEL.PW01.38	PEEL FC21 Hillson Drive	Growth	Construct a new 710m of 450mm pipe to discharge storm flows from future development off Hillson Drive to the existing storm outfall	£2,416k	Long	
12	PEEL.PW01.42	PEEL FC03 - ELMHURST ROAD FAREHAM CSO	Storm Overflows	Surface water separation to reduce spills from Elmhurst Road Fareham CSO storm overflow (costs provided for storage tank but sustainable solutions preferred)	£947k	Medium	LLFA, Fareham DC
13	PEEL.PW01.43	PEEL FC04 - QUAY STREET FAREHAM CSO	Storm Overflows	Surface water separation to reduce spills from Quay street Fareham CSO storm overflow (costs provided for storage tank but sustainable drainage solutions preferred)	£742k	Medium	LLFA, Fareham DC
14	PEEL.PW01.44	PEEL FC05 - COW LANE PORTCHESTER WPS	Storm Overflows	Surface water separation to reduce spills from Cow Lane Porchester CSO storm overflow (costs provided for storage tank but sustainable drainage solutions preferred)	£574k	Medium	LLFA, Fareham DC
15	PEEL.PW01.45	CAMS HILL FAREHAM CSO	Storm Overflows	Surface water separation to reduce spills from Cams Hill Fareham CSO storm overflow (average cost assumed to reduce CSO spills to Band 0)	~£1,000k	Medium	LLFA, Fareham DC
16	PEEL.OT01.8	PEEL FC01 - THE GILLIES FAREHAM CSO	Storm Overflows	Surface water separation to reduce spills from The Gillies Fareham CSO storm overflow (average cost assumed to reduce CSO spills to Band 0)	~£1,000k	Medium	LLFA, Fareham DC
17	PEEL.OT01.10	PEEL FC03 - ARUNDEL DRIVE FAREHAM CSO	Storm Overflows	Surface water separation to reduce spills from Arundel Drive Fareham CSO storm overflow (average cost assumed to reduce CSO spills to Band 0)	~£1,000k	Medium	LLFA, Fareham DC

Investment Needs - Peel Common (PEEL)

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Peel Common

No	Ref	Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners
18	PEEL.PW01.39	PEEL FC22 Peel Common	Growth	Additional online storage to improve sewer capacity. (Surface water separation also to be considered).	£2,416k	Long	
19	PEEL.PW01.40	PEEL FC01 - PEEL COMMON WTW	Storm Overflows	Surface water separation to reduce spills from Peel Common WTW storm overflow (costs provided for storage tank but sustainable drainage solutions preferred)	£2,268k	Medium	
20	PEEL.PW02.10	Treatment Works	Water Quality / DWF	Increase capacity of the Wastewater Treatment Works (WTW). Optimisation or extension of site to allow for the extra DWF required due to growth in the catchment (Permit Review required)	£4,451k	Medium	

Investment Needs - Peel Common (PEEL)

Gosport

DRAFT

No	Ref	Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners
21	PEEL.PW01.9	Foxbury Lane, Bridgemary, Gosport	Flooding	Surface water separation to manage flooding in the area including a new surface water storm outfall.	£TBCK	Medium	LLFA, Gosport DC
22	PEEL.PW01.19	PEEL FC02 Foxbury Lane	Flooding	Surface water separation to manage flooding in the area including a new surface water storm outfall.	£TBCK	Medium	LLFA, Gosport DC
23	PEEL.PW01.33	PEEL FC16 Barwell Lane	Growth	Surface water separation to manage growth near Barwell Lane (costs provided for storage tank but sustainable drainage solutions preferred)	£2,416k	Long	LLFA, Gosport DC
24	PEEL.PW01.46	GROVE ROAD GOSPORT WPS	Storm Overflows	Surface water separation to reduce spills from Grove Road Gosport WPS storm overflows (average cost assumed to reduce CSO spills to Band 0)	~£1,000k	Medium	LLFA, Gosport DC
25	PEEL.OT01.12	PEEL FC05 - FAREHAM ROAD GOSPORT OUTSIDE 359 CSO	Storm Overflows	Surface water separation to reduce spills from Fareham Road Gosport Outside 359 CSO storm overflow (average cost assumed to reduce CSO spills to Band 0)	~£1,000k	Medium	LLFA, Gosport DC

Investment Needs - Peel Common (PEEL)

Bursledon

DRAFT

No	Ref	Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners
26	PEEL.PW01.23	PEEL FC06 Bridge Road, Bursledon	Growth	New transfer sewer to discharge into 1700m3 offline tank in the land off Bridge Road with a pumped return of 20/s	£2,416k	Long	
27	PEEL.PW01.30	PEEL FC13 Hungerford Bottom	Growth	Sewer upsize and new Offline Storage Tank	£2,416k	Long	
28	PEEL.OT01.9	PEEL FC02 - HAMBLE LANE BURSLEDON WPS	Storm Overflows	Surface water separation to reduce spills from Hamble Lane Bursledon WPS storm overflow (average cost assumed to reduce CSO spills to Band 0)	~£1,000k	Medium	LLFA, Eastleigh DC
29	PEEL.OT01.11	PEEL FC04 - SALTERNNS LANE BURSLEDON WPS	Storm Overflows	Surface water separation to reduce spills from Salterns Lane Bursledon WPS storm overflow (average cost assumed to reduce CSO spills to Band 0)	~£1,000k	Medium	LLFA, Eastleigh DC

Investment Needs - Peel Common (PEEL)

Netley

DRAFT

No	Ref	Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners
30	PEEL.PW01.24	PEEL FC07 Ingleside, Netley	Growth	Upsize 50m of 225mm sewer to 300mm from SU46084905 to SU46084902.	£2,416k	Long	
31	PEEL.PW01.25	PEEL FC08 Woolston WTW	Growth	New sewer from the proposed developments to the south of Old Netley to Woolston WTW	£2,416k	Long	
32	PEEL.PW01.28	PEEL FC11 Hound Road, Netley Abbey	Growth	New diversion manhole with 2m weir New transfer sewer to discharge flows into a 370m3 offline tank in the land north of Hound Road with a pumped return of 10l/s.	£2,416k	Long	
33	PEEL.PW01.29	PEEL FC12 Hamble Development	Growth	Construct new pumping station in the land to the east of Hamble Lane with a discharge rate of 16l/s New raising main to a discharge point near the existing School Lane WPS.	£2,416k	Long	

Investment Needs - Peel Common (PEEL)

DRAFT

Warsash

No	Ref	Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners
34	PEEL.PW01.26	PEEL FC09 Hook Park	Growth	Upsize 30m of 600mm CEO to 750mm	£2,416k	Long	
35	PEEL.PW01.41	PEEL FC02 - HOOK PARK WPS	Storm Overflows	Surface water separation to reduce spills from Hook Park WPS storm overflow (costs provided for storage tank but sustainable drainage solutions preferred)	£627k	Medium	LLFA, Fareham DC

Botley

No	Ref	Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners
36	PEEL.PW01.32	PEEL FC15 Botley Park	Growth	1.4km of 225mm new sewer from the proposed developments to the north of Tollbar Way to connect with the network in the Botley Park proposed development near Boorley Green.	£2,416k	Long	
37	PEEL.PW01.35	PEEL FC18 Botley Park Development	Growth	New wet well on the site of the eastern Botley Park WPS wet well Increase the eastern Botley Park WPS pump rate from 8l/s to 18l/s	£2,416k	Long	
38	PEEL.PW01.37	PEEL FC20 Upper Hamble Country Park	Growth	Upsize 140m of 600mm sewer to 900mm	£2,416k	Long	
39	PEEL.PW01.47	HEATHEN LANE DURLEY WPS	Storm Overflows	Surface water separation to reduce spills from Heathen Lane Durley WPS storm overflow (average cost assumed to reduce CSO spills to Band 0)	~£1,000k	Medium	LLFA, Fareham DC

Catchment Wide

No	Ref	Location	Issues	Option	Indicative Cost	Indicative Timescale	Potential Partners
40	PEEL.SC03.6	Catchment Wide	Internal Sewer Flooding - Blockages	Enhanced Customer Education Programme to prevent blockages	£116k	Short	
41	PEEL.SC03.7	Catchment Wide	Pollution - Blockages	Enhanced Customer Education Programme to prevent blockages	£116k	Short	
42	PEEL.PW01.13	Catchment Wide	Pollution - Blockages	Enhanced maintenance programme for pumping stations to reduce the risk of a pollution incident due to an operational failure. Linking with the 'Pollution Reduction Programme'.	£3,724k	Short	
43	PEEL.PW01.16	Catchment Wide	Internal Sewer Flooding - Blockages	Enhanced Maintenance: Review and enhance jetting programme of the pipe network in this location to maximise the capacity of the network for rainfall	£446k	Short	
44	PEEL.PW01.17	Catchment Wide	Pollution - Blockages	Enhanced Maintenance: Review and enhance jetting programme of the pipe network in this location to maximise the capacity of the network for rainfall	£126k	Short	
45	PEEL.OT01.3	Catchment Wide	Pollution	Study and investigation into causes behind pollution incidents	~£300k	Short	
46	PEEL.OT01.13	Catchment Wide	Flooding	Study and Investigation into flooding and suitable solutions including surface water separation and natural flood management	£232k	Short	
47	PEEL.OT01.5	PORTSMOUTH HARBOUR SOUTHAMPTON WATER	Good Ecological Status	Study and Investigation into sources of nitrogen from wastewater and the impact on the environment. Develop possible solutions to reduce nitrogen in the harbour.	£76k	Short	NE, EA
48	PEEL.OT01.6	Portsmouth Harbour Solent and Dorset Coast	Nutrient Neutrality	Develop a nutrient budget and investigate the risks and sources impacting these named Habitat sites	£76k	Short	NE, EA