

Woolston 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	Hotspot 1 - Itchen	PO1- Internal Flooding	WOOL.SC01.1	Customer Education Programme	Customer education programme to reduce the risk.	Yes	Yes	Yes	Minor Positive +	£115K	Yes	Best Value
Control/ Reduce surface water entering the sewers	Hotspot 2 - Harefield	PO2- Pollution Risk	WOOL.SC01.2	Customer Education Programme	Customer education programme.	Yes	Yes	Yes	Minor Positive +	£115K	Yes	Best Value
Control/ Reduce surface water entering the sewers	Dena Road and Pound Street	PO4 and PO7 Flooding	WOOL.SC01.3	Surface Water Separation	DAP Option.	Yes	Yes	Yes	Major Positive +++	£198,855K	No	Best Value
Control/ Reduce surface water entering the sewers	SUNNINGDALE GARDENS and SOMERSET AVENUE	PO4 and PO7 Flooding	WOOL.SC01.4	Surface Water Separation	DAP Option.	Yes	Yes	Yes	Major Positive +++	£200,425K	No	Best Value
Control/ Reduce surface water entering the sewers	CANON PLACE and NAPIER ROAD	PO4 and PO7 Flooding	WOOL.SC01.5	Surface Water Separation	DAP Option.	Yes	Yes	Yes	Major Positive +++	£200,530K	No	Best Value
Control/ Reduce surface water entering the sewers	BUTTS ROAD and SOUTH EAST ROAD	PO4 and PO7 Flooding	WOOL.SC01.6	Surface Water Separation	DAP Option.	Yes	Yes	Yes	Major Positive +++	£200,275K	No	Best Value
Control/ Reduce surface water entering the sewers	SQUIRREL DRIVE	PO4 and PO7 Flooding	WOOL.SC01.7	Surface Water Separation	DAP Option.	Yes	Yes	Yes	Major Positive +++	£200,905K	No	Best Value
Control/ Reduce surface water entering the sewers	LAWRENCE GROVE, SWIFT ROAD and OBELISK ROAD	PO4 and PO7 Flooding	WOOL.SC01.8	Surface Water Separation	DAP Option.	Yes	Yes	Yes	Major Positive +++	£201,165K	No	Best Value
Control/ Reduce surface water entering the sewers	SWIFT ROAD and SWIFT GARDENS	PO4 and PO7 Flooding	WOOL.SC01.9	Surface Water Separation	DAP Option.	Yes	Yes	Yes	Major Positive +++	£199,085K	No	Best Value
Control/ Reduce surface water entering the sewers	BLACKTHORN ROAD, PEARTREE AVENUE and MERRIDALE ROAD	PO4 and PO7 Flooding	WOOL.SC01.10	Surface Water Separation	DAP Option.	Yes	Yes	Yes	Major Positive +++	£199,625K	No	Best Value
Control/ Reduce surface water entering the sewers	BRAESIDE ROAD	PO4 and PO7 Flooding	WOOL.SC01.11	Surface Water Separation	DAP Option.	Yes	Yes	Yes	Major Positive +++	£7,565K	No	Best Value
Control / Reduce groundwater infiltration												
Improve quality of wastewater entering sewers (inc reducing FOG, RAG, pre-treatment, trade waste)												
Control / Reduce the quantity / flow of wastewater entering sewer system												
Network Improvements (eg increase capacity, storage, conveyance)	Catchment Wide	PO1- Internal Flooding	WOOL.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						Risk and uncertainty - future resilience
Network Improvements (eg increase capacity, storage, conveyance)	Braeside Road, Cleethorpes Road, Victoria Road, Poole Road, Swift Road	PO1- Internal Flooding	WOOL.PW01.2	Additional Storage	Additional Storage.	No						Risk and uncertainty - future resilience
Network Improvements (eg increase capacity, storage, conveyance)	Hotspot 2 - Harefield	PO3- Sewer Collapse	WOOL.PW01.3	Pipe Rehabilitation Programme	Targeted CCTV / electroscan surveys and proactive sewer rehabilitation to reduce risk of sewer collapse.	Yes	Yes	Yes	Minor Positive +	£635K	Yes	Best Value
Network Improvements (eg increase capacity, storage, conveyance)	Catchment Wide	PO8 (2050)- Dry Weather Flow	WOOL.PW01.4	Pipe Rehabilitation Programme	Relining/improving structural grades of sewers across the catchment.	No						Cost Effective
Network Improvements (eg increase capacity, storage, conveyance)	WOOL FC01 Kathleen Road	PO4 - Flooding	WOOL.PW01.5	Offlinestorage	DAP Option.	No						
Network Improvements (eg increase capacity, storage, conveyance)	WOOL FC02 Merridale Road	PO4 - Flooding	WOOL.PW01.6	Flow Diversion and New Sewers	DAP Option.	No						
Network Improvements (eg increase capacity, storage, conveyance)	WOOL FC03 Off Hazel Road	PO4 and PO5 - Growth	WOOL.PW01.8	New sewer	DAP Option.	No						
Network Improvements (eg increase capacity, storage, conveyance)	WOOL FC06 Victoria Road	PO4 and PO5 - Growth	WOOL.PW01.9	New Development alternate connection point	DAP Option.	No						
Network Improvements (eg increase capacity, storage, conveyance)	WOOL FC04 Hazel Road/ Hazel Road WPS	PO4 and PO5 - Growth	WOOL.PW01.10	Sewer Upsizing, Upsize WPS pump rate	DAP Option.	No						
Network Improvements (eg increase capacity, storage, conveyance)	WOOL FC05 John Thornycroft Road and Vosper Road	PO4 and PO5 - Growth	WOOL.PW01.11	Sewer Upsizing, Throttle 150mm sewer	DAP Option.	No						
Network Improvements (eg increase capacity, storage, conveyance)	WOOL FC07 Sholing Road and South East Road	PO4 and PO5 - Growth	WOOL.PW01.12	Sewer Upsizing and New Development alternate connection point	DAP Option.	No						
Network Improvements (eg increase capacity, storage, conveyance)	WOOL FC08 Weston Lane	PO4 and PO5 - Growth	WOOL.PW01.13	New diversion chamber	DAP Option.	No						
Network Improvements (eg increase capacity, storage, conveyance)	WOOL FC09 Tickleford Drive	PO4 and PO5 - Growth	WOOL.PW01.14	Sewer Upsizing	DAP Option.	No						
Network Improvements (eg increase capacity, storage, conveyance)	Hotspot 1#	PO1- Internal Flooding	WOOL.PW01.15	Jetting Programme	Jetting Programme.	Yes	Yes	Yes	Minor Negative -	£135K	Yes	Least Cost
Network Improvements (eg increase capacity, storage, conveyance)	Catchment Wide	PO2- Pollution Risk	WOOL.PW01.16	Pipe Rehabilitation Programme	Pipe Rehabilitation Programme.	Yes	Yes	Yes	Minor Negative -	£65K	Yes	Least Cost
Network Improvements (eg increase capacity, storage, conveyance)	Hotspot 2 - Harefield	PO2- Pollution Risk	WOOL.PW01.20	Jetting Programme	Jetting Programme.	Yes	Yes	Yes	Minor Negative -	£35K	Yes	Least Cost
Improve treatment (capacity and quality at existing works or develop new WTWs)	Dena Road and Pound Street	PO4 and PO7 Flooding	WOOL.PW02.2	Storage	DAP Option.	Yes	Yes	Yes	Major Positive +++	£595K	Yes	Best Value
Improve treatment (capacity and quality at existing works or develop new WTWs)	SUNNINGDALE GARDENS and SOMERSET AVENUE	PO4 and PO7 Flooding	WOOL.PW02.3	Storage	DAP Option.	Yes	Yes	Yes	Major Positive +++	£2,215K	Yes	Best Value
Improve treatment (capacity and quality at existing works or develop new WTWs)	CANON PLACE and NAPIER ROAD	PO4 and PO7 Flooding	WOOL.PW02.4	Storage	DAP Option.	Yes	Yes	Yes	Major Positive +++	£2,365K	Yes	Best Value
Improve treatment (capacity and quality at existing works or develop new WTWs)	BUTTS ROAD and SOUTH EAST ROAD	PO4 and PO7 Flooding	WOOL.PW02.5	Storage	DAP Option.	Yes	Yes	Yes	Major Positive +++	£2,155K	Yes	Best Value

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Improve treatment (capacity and quality at existing works or develop new WTWs)	SQUIRREL DRIVE	PO4 and PO7 Flooding	WOOL.PW02.6	Storage	DAP Option.	Yes	Yes	Yes	Major Positive +++	£2,780K	Yes	Best Value
Improve treatment (capacity and quality at existing works or develop new WTWs)	LAWRENCE GROVE, SWIFT ROAD and OBELISK ROAD	PO4 and PO7 Flooding	WOOL.PW02.7	Storage	DAP Option.	Yes	Yes	Yes	Major Positive +++	£3,010K	Yes	Best Value
Improve treatment (capacity and quality at existing works or develop new WTWs)	SWIFT ROAD and SWIFT GARDENS	PO4 and PO7 Flooding	WOOL.PW02.8	Storage	DAP Option.	Yes	Yes	Yes	Major Positive +++	£820K	Yes	Best Value
Improve treatment (capacity and quality at existing works or develop new WTWs)	BLACKTHORN ROAD, PEARTREE AVENUE and MERRIDALE ROAD	PO4 and PO7 Flooding	WOOL.PW02.9	Storage	DAP Option.	Yes	Yes	Yes	Major Positive +++	£1,465K	Yes	Best Value
Improve treatment (capacity and quality at existing works or develop new WTWs)	BRAESIDE ROAD	PO4 and PO7 Flooding	WOOL.PW02.10	Storage	DAP Option.	Yes	Yes	Yes	Major Positive +++	£575K	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	Braeside Road, Cleethorpes Road, Victoria Road, Poole Road, Swift Road	PO1- Internal Flooding	WOOL.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	Catchment Wide	PO1- Internal Flooding	WOOL.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	PO3- Sewer Collapse	WOOL.OT01.2	CCTV Investigation	CCTV Investigation.	No						
Study/ investigation to gather more data	Catchment Wide	PO8 (2050)- Dry Weather Flow	WOOL.OT01.3	Pipe Rehabilitation Programme / CCTV Investigation / Infiltration Reduction Programme	Relining/improving structural grades of sewers across the catchment.	No						Risk and uncertainty - future resilience
Study/ investigation to gather more data	Solent and Dorset Coast Solent & Southampton Water	PO11 - Nutrient Neutrality	WOOL.OT01.4	Nutrient Budget	Catchment is Hydraulically linked to; Solent and Dorset Coast (Threat/Remedy Identified or Anticipated) Solent & Southampton Water (NO Threat/Remedy Identified or Anticipated).	Yes	Yes	Yes	Minor Positive +	£75K	Yes	Best Value
Study/ investigation to gather more data	Shellfish Water Sites	PO14- Shellfish Water Quality	WOOL.OT01.5	Study and Investigations to Improve Shellfish Waters	Study / Investigation required to understand the impact of wastewater discharges, and achieve or prevent deterioration of shellfish waters Linking with 'Asset Strategy and Planning Team'.	No						Deliver the required outcome
Study/ investigation to gather more data	Catchment Wide Overflow Locations	PO4- 1 in 50 year PO5- Storm Overflow PO7- Hydraulic Overload PO10- Surface Water Management	WOOL.OT01.6	Improve Hydraulic Model	Study / Investigation: Update and re-verify the Woolston Hydraulic Model to improve model confidence.	Yes	Yes	Yes	Minor Positive +	£190K	Yes	Best Value
Study/ investigation to gather more data	WOOL FC01 - WOOLSTON WTW	PO5 - Spill Assessments	WOOL.OT01.7	Storage ( FC01 - WOOLSTON WTW)	The DAP model has a confidence score of 2 and was last verified in 2014.	Yes	Yes	Yes	Major Positive +++	£1,000K	Yes	Best Value
Study/ investigation to gather more data	Catchment Wide	PO1 PO4 PO7 PO10	WOOL.OT01.8	Study / Investigations - data sharing	Sutdy / Investigation: Sharing of flood data to ensure flooding locations identified by SWS and SCC match.	Yes	Yes	Yes	Minor Positive +	£TBC - With Partners	Yes	Best Value
Study/ investigation to gather more data	Catchment Wide	PO1 PO4 PO7 PO10	WOOL.OT01.9	Study / Investigations - Identify misconnections	Study / Investigation: Identify locations of misconnections, reducing the unknown sources of flow into the catchments sewer systems.	Yes	Yes	Yes	Minor Positive +	£TBC - With Partners	Yes	Best Value