

DRAINAGE AND WASTEWATER MANAGEMENT PLANS (DWMP)



LEVEL 2 STRATEGIC PLANNING AREA SUMMARY – TEESSIDE

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OVERVIEW

The Drainage and Wastewater Management Plan (DWMP) covers seven Strategic Planning Areas (SPA). The seven areas align broadly with the river basin catchments within the region and the main urban areas.

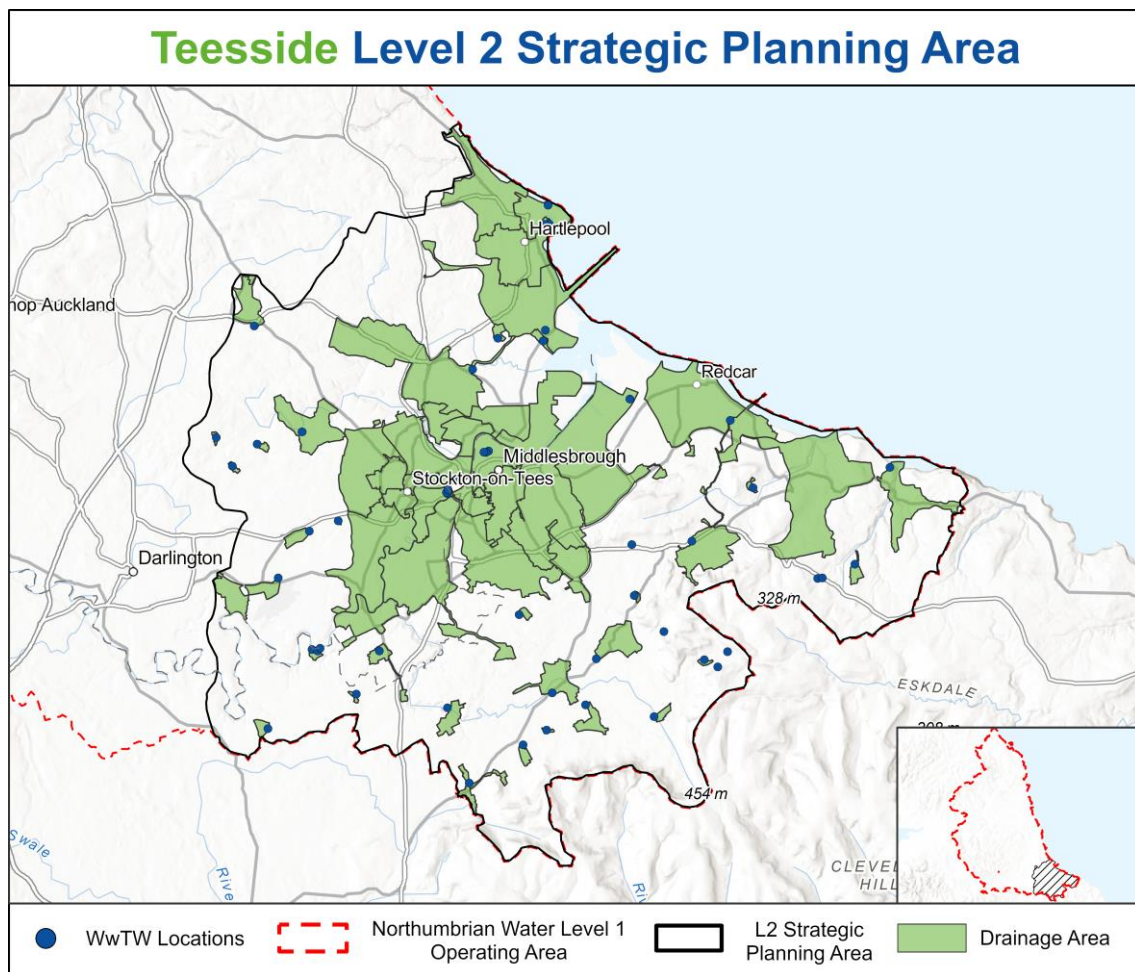
This document provides an overview of the DWMP for the **Teesside Level 2 SPA**.

Within the Teesside Level 2 SPA, there are:

- 37 Wastewater Treatment Works (WwTW)
- 36 Level 3 Tactical Planning Unit (TPU) areas
- 67 Wastewater Drainage Areas

The total estimated population of the Teesside Level 2 SPA is 619,000.

TEESSIDE LEVEL 2 STRATEGIC PLANNING AREA



DRAINAGE AREAS WITHIN TEESSIDE L2 SPA

The following table outlines all of the drainage areas within the Teesside Level 2 SPA. The table also outlines whether the drainage area triggered during the Risk Based Catchment Screening (RBCS) stage of the DWMP for detailed analysis as part of the Baseline Risk and Vulnerability Assessment (BRAVA) stage.

Drainage Area Reference	Drainage Area Name	WwTW Name	Triggered BRAVA?
11-D01	Great Stainton	Great Stainton WwTW	No
11-D02	Little Stainton	Little Stainton WwTW	No
11-D03	Bishopton	Bishopton WwTW	No
11-D04	Middleton St George	Stressholme WwTW	Yes
11-D05	Oaktree & Teesside Airport	Teesside Airport WwTW	Yes
11-D08	Newby	Newby WwTW	Yes
11-D09	Great Ayton	Great Ayton WwTW	Yes
11-D10	Gribdale Terrace	Gribdale Terrace WwTW	No
11-D11	Ingleby Greenhow	Ingleby Greenhow WwTW	No
11-D12	Kildale	Kildale WwTW	No
11-D13	Stokesley	Stokesley WwTW	Yes
11-D14	Carlton in Cleveland	Carlton In Cleveland WwTW	Yes
11-D15	Great Busby	Great Busby WwTW	No
11-D16	Great Broughton	Great Broughton WwTW	Yes
11-D17	Hornby	Hornby WwTW	No
11-D18	Low Worsall	Low Worsall WwTW	No
11-D19	Picton	Picton WwTW	No
11-D20	Hutton Rudby	Hutton Rudby WwTW	Yes
11-D21	Swainby	Swainby WwTW	Yes
11-D22	Faceby	Swainby WwTW	Yes
11-D23	Potto	Swainby WwTW	Yes
11-D24	Hartlepool North	Seaton Carew WwTW	Yes
11-D25	Thorpe Street/Headland	Seaton Carew WwTW	Yes
11-D26	Middleton	Seaton Carew WwTW	Yes
11-D27	Burn Valley	Seaton Carew WwTW	Yes
11-D28	Hartlepool South	Seaton Carew WwTW	Yes
11-D29	Greatham	Greatham WwTW	Yes
11-D30	Graythorp	Graythorpe WwTW	No
11-D31	South Bank Eston	Bran Sands WwTW	Yes
11-D32	Redcar	Marske WwTW	Yes
11-D33	Marske	Marske WwTW	Yes
11-D34	Saltburn, Skelton Brotton	Marske WwTW	Yes
11-D35	Loftus	Skinningrove WwTW	Yes

Drainage Area Reference	Drainage Area Name	WwTW Name	Triggered BRAVA?
11-D36	Guisborough	Marske WwTW	Yes
11-D37	Moorsholm	Moorsholme WwTW	No
11-D38	Newton under Roseberry	Newton Under Roseberry WwTW	No
11-D39	Dunsdale	Marske WwTW	No
11-D40	Upleatham	Upleatham WwTW	No
11-D41	Mount Pleasant	Marske WwTW	Yes
11-D42	Tees Valley	Bran Sands WwTW	Yes
11-D43	Thornfield Road	Bran Sands WwTW	Yes
11-D44	Middlesbrough North	Bran Sands WwTW	Yes
11-D45	Middlesbrough South	Bran Sands WwTW	Yes
11-D46	Middlesbrough East	Bran Sands WwTW	Yes
11-D47	Nunthorpe	Bran Sands WwTW	Yes
11-D48	Sedgefield	Sedgefield WwTW	Yes
11-D49	North Billingham	Billingham WwTW	Yes
11-D51	South Billingham	Bran Sands WwTW	Yes
11-D52	Stockton East	Bran Sands WwTW	Yes
11-D53	Stockton West	Bran Sands WwTW	Yes
11-D54	Eastbourne	Bran Sands WwTW	Yes
11-D55	Stockton Centre	Bran Sands WwTW	Yes
11-D56	Stockton South	Bran Sands WwTW	Yes
11-D57	Eaglescliffe	Bran Sands WwTW	Yes
11-D58	Yarm	Bran Sands WwTW	Yes
11-D59	Thornaby North	Bran Sands WwTW	Yes
11-D60	Thornaby South & Ingleby Barwick	Bran Sands WwTW	Yes
11-D61	Whitton & Thorpe Thewles	Carlton & Redmarshall WwTW	Yes
11-D63	Longnewton	Longnewton WwTW	Yes
11-D64	Kirklevington	Kirklevington WwTW	Yes
11-D65	Aislaby Village	Bran Sands WwTW	Yes
11-D66	Haverton Hill	Bran Sands WwTW	Yes
11-D67	High Clarence	Bran Sands WwTW	Yes
11-D68	Port Clarence	Bran Sands WwTW	Yes
11-D69	Little Kildale	Little Kildale WwTW	No
11-D70	New Row	Kildale New Row WwTW	No
11-D71	Juniper Grove, Elton	Juniper Grove, Elton WwTW	No

KEY STAKEHOLDERS

It is widely recognised and acknowledged that drainage systems are complex and have numerous interactions, both known and unknown. It was therefore important that the DWMP was not created

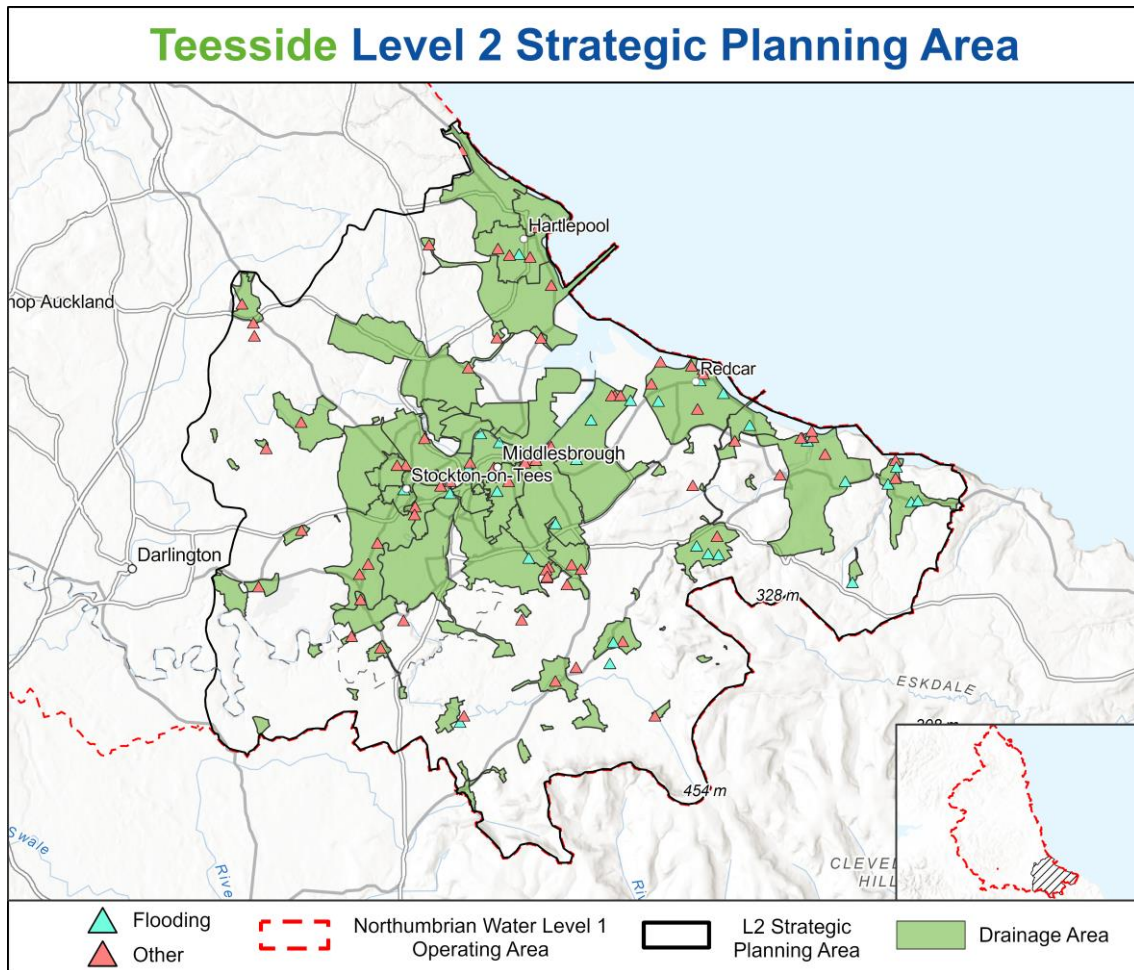
solely by Northumbrian Water. While NWL have been tasked with the delivery of the DWMP, it was critical that the public and relevant stakeholders actively participated and offered support in its creation. We have worked with a range of relevant stakeholders in the production of the DWMP, including the Environment Agency (EA), Lead Local Flood Authorities, Local Planning Authorities, housing developers and environmental partners.

Through different partnerships and strategies, we play an active role within the region, working collaboratively with stakeholders on several projects. The DWMP builds on the strong foundation of the Northumbria Integrated Drainage Partnership (NIDP), which consists of 14 Lead Local Flood Authorities, the EA and Northumbrian Water. One of the aims of the NIDP is to identify opportunities to deliver surface water management schemes within catchments to reduce the risk and impact of flooding. Catchments are taken from the investigation stages where opportunity areas are identified, through to the outline business case stage to determine funding sources, and ultimately through to scheme delivery. The award-winning partnership approach, which is based around collaboration to identify priority investment areas where benefits can be delivered for multiple stakeholders, provides an excellent platform for the DWMP.

To ensure that existing and future opportunities for working collaboratively with stakeholders were included in the production of the DWMP, engagement sessions were held in March 2023. During these sessions, all the geographical areas covered by the DWMP were reviewed to identify, record and map ongoing and future opportunities.

Key Stakeholders
Environment Agency Local Authorities National Farmers Union Rivers Trusts Natural England Developers National Parks

Collaborative Working Opportunities



Significant Collaborative Working Opportunities

Drainage Area Reference	Organisation	Opportunity Type
11-D27	Hartlepool Borough Council	Potential to work with Hartlepool Borough Council to utilise land by railway for storage.
11-D28	Environment Agency	Flood and Coastal Risk Management Programme August 2021
11-D32	Northumbria Integrated Partnership Programme (NIDP)	Northumbria Integrated Drainage Partnership 2026-2027 (Fleet Beck/Dormanstown)
11-D36	Environment Agency	Environment Programme Pipeline Projects 2023-2028, Flood and Coastal Risk Management Programme August 2021
11-D52	Environment Agency	Flood and Coastal Risk Management Programme 2021. Potential to work with the Environment Agency.
11-D54	Environment Agency	Environment Programme Pipeline Projects 2023 – 2028. Flood and Coastal Risk Management Programme August 2021.
11-D54	Environment Agency	Potential to work with Environment Agency and Council on green infrastructure.

Drainage Area Reference	Organisation	Opportunity Type
11-D57	Environment Agency	Environment Programme Pipeline Projects 2023-2028, Flood and Coastal Risk Management Programme August 2021, Tees Valley Nature Recovery Network, Lustrum Beck urban restoration
11-D59	Environment Agency	Environment Programme Pipeline Projects 2023-2028, Flood and Coastal Risk Management Programme August 2021
11-D61	Environment Agency	Environment Programme Pipeline Projects 2023-2028

CATCHMENT NEEDS

Through the Baseline Risk and Vulnerability Assessment (BRAVA) and Problem Characterisation stages of the DWMP, the requirements for investment within catchments were identified.

The following summaries provide the detail of the 'Catchment Needs' that have been identified within the Teesside Level 2 SPA.

Storm Overflow Discharge Reduction Plan

The following table summarises the number of storm overflows within the Teesside Level 2 SPA and how many have been included in the DWMP for improvement in line with the Storm Overflow Discharge Reduction Plan (SODRP).

Storm Overflow Categorisation	Count	Storm Overflows Requiring Improvement
Inland – High Priority	103	64
Inland – Not High Priority	91	59
Bathing Water	23	18
Coastal / Estuarine (not linked to Bathing Water)	12	8
Total	229	149

Storm Overflow Screening

Under the SODRP, all storm overflows are required to include 6mm screening provision on any discharges that are made.

The following table summarises the number of storm overflows within the Teesside Level 2 SPA that have been included in the DWMP for the provision of 6mm screening.

Storm Overflow Categorisation	Count	Storm Overflows Requiring Screening
Inland – High Priority	103	49
Inland – Not High Priority	91	42
Bathing Water	23	6
Coastal / Estuarine (not linked to Bathing Water)	12	3
Total	229	100

The full list of storm overflows within the Northumberland Level 2 SPA is included in the following table.

Storm Overflow Site Name	Drainage Area Code	Drainage Area Name	Storm Overflow Spill Frequency Reduction Scheme - Delivery Period
BISHOPTON STW	11-D03	Bishopton	2035 - 2040
SUNDIAL PLACE CSO	11-D03	Bishopton	2035 - 2040
MIDDLETON ONE ROW CSO	11-D04	Middleton St George	2030 - 2035
MIDDLETON AIRPORT STORM TW	11-D04	Middleton St George	2035 - 2040
GREAT AYTON STW	11-D09	Great Ayton	2035 - 2040
GRANGE MILL CSO	11-D09	Great Ayton	2035 - 2040
GRIBDALE TERRACE STW	11-D10	Gribdale Terrace	2045 - 2050
INGLEBY GREENHOW STW	11-D11	Ingleby Greenhow	2040 - 2045
WEST END SPS	11-D13	Stokesley	2045 - 2050
LEVENSIDE/MANOR CLOSE CSO	11-D13	Stokesley	2045 - 2050
STOKESLEY SPS NO 2 CSO	11-D13	Stokesley	2045 - 2050
STOKESLEY SEWAGE TREATMENT WORKS	11-D13	Stokesley	No Improvement Required
TAME BRIDGE PS	11-D13	Stokesley	No Improvement Required
SOWERBY CRESCENT/NORTH RD JUNCT CSO	11-D13	Stokesley	No Improvement Required
TANTON ROAD CSO	11-D13	Stokesley	No Improvement Required
STOKESLEY PUMPING STATION NO 1 SSO	11-D13	Stokesley	No Improvement Required
CARLTON IN CLEVELAND STW	11-D14	Carlton in Cleveland	2045 - 2050
GREAT BROUGHTON & KIRBY CSO MH6	11-D16	Great Broughton	2030 - 2035
GREAT BROUGHTON STW	11-D16	Great Broughton	2030 - 2035
KIRKBY SEWAGE PUMPING STATION CSO	11-D16	Great Broughton	No Improvement Required
HIGH STREET CSO	11-D16	Great Broughton	No Improvement Required
HUTTON RUDBY SEWAGE TREATMENT WORKS	11-D20	Hutton Rudby	2035 - 2040
HUTTON RUDBY SPS	11-D20	Hutton Rudby	2035 - 2040
SWAINBY STW Storm Tank	11-D22	Faceby	2045 - 2050
BRUS SEWAGE PUMPING STATION	11-D24	Hartlepool North	2040 - 2045

Storm Overflow Site Name	Drainage Area Code	Drainage Area Name	Storm Overflow Spill Frequency Reduction Scheme - Delivery Period
CRIMDON PARK PUMPING STATION	11-D24	Hartlepool North	2040 - 2045
CSO TO REAR OF 8 OTTERINGTON CLOSE	11-D24	Hartlepool North	2040 - 2045
KING OSWY DRIVE CSO WEST VIEW ROAD	11-D24	Hartlepool North	2040 - 2045
LIMEKILN GILL SAMPLING PT. FOR EA18	11-D24	Hartlepool North	No Improvement Required
KING OSWY DRIVE CSO	11-D24	Hartlepool North	No Improvement Required
BRUS SEWAGE PUMPING STATION Soft Leas	11-D25	Thorpe Street/Headland	2040 - 2045
THORPE STREET SPS	11-D25	Thorpe Street/Headland	2040 - 2045
CLEVELAND ROAD C.S.O.	11-D25	Thorpe Street/Headland	2040 - 2045
ALBION TERRACE STORM RETENTION	11-D25	Thorpe Street/Headland	No Improvement Required
MAINSFORTH TERRACE PS	11-D27	Burn Valley	2025 - 2030
CLIFTON LODGE CSO	11-D27	Burn Valley	2035 - 2040
CSO AT REAR OF HOLLY HOUSE	11-D27	Burn Valley	2035 - 2040
BRIDGE STREET PUMPING STATION	11-D27	Burn Valley	2035 - 2040
CONISCLIFFE ROAD CSO	11-D27	Burn Valley	No Improvement Required
GRAYTHORP STW	11-D28	Hartlepool South	2025 - 2030
MILLBURNGATE CSO SOUTH END	11-D28	Hartlepool South	2025 - 2030
SEATON CAREW SEWAGE TREATMENT WORKS	11-D28	Hartlepool South	2025 - 2030
ELWICK SPS	11-D28	Hartlepool South	2040 - 2045
ELWICK SPS	11-D28	Hartlepool South	2040 - 2045
GLENTOWER GROVE SPS	11-D28	Hartlepool South	No Improvement Required
DALTON PIERCY SPS	11-D28	Hartlepool South	No Improvement Required
SOUTHERN MAIN DRAINAGE SEWER BRENDA ROAD CSO	11-D28	Hartlepool South	No Improvement Required
BRENDA ROAD/PARK VIEW CSO	11-D28	Hartlepool South	No Improvement Required
OWTON MANOR LANE CSO	11-D28	Hartlepool South	No Improvement Required
THE GREEN COMBINED SEWER OVERFLOW	11-D28	Hartlepool South	No Improvement Required

Storm Overflow Site Name	Drainage Area Code	Drainage Area Name	Storm Overflow Spill Frequency Reduction Scheme - Delivery Period
WEST ROW CSO HP008	11-D29	Greatham	2030 - 2035
GREATHAM STW Storm Tank	11-D29	Greatham	2030 - 2035
GREATHAM STW CSO INLET	11-D29	Greatham	2040 - 2045
BRAN SANDS TREATMENT WORKS	11-D31	South Bank Eston	2030 - 2035
ABBAY COURT (AMPLEFORTH AVENUE) CSO	11-D31	South Bank Eston	2040 - 2045
TEES DOCK ROAD CSO	11-D31	South Bank Eston	2040 - 2045
PASTURE LANE CSO	11-D31	South Bank Eston	2040 - 2045
CSO & PUMPING STN DOCK ROAD	11-D31	South Bank Eston	2040 - 2045
QUEEN STREET ALLOTTMENTS CSO	11-D31	South Bank Eston	2040 - 2045
CARGO FLEET STW (OUTLET B)	11-D31	South Bank Eston	2045 - 2050
CHURCH LANE HIGH STREET CSO	11-D31	South Bank Eston	No Improvement Required
A CSO AT SMITHS DOCK ROAD	11-D31	South Bank Eston	No Improvement Required
SKIPPER'S LANE INDUSTRIAL ESTATE PS	11-D31	South Bank Eston	No Improvement Required
GREYSTONE RD SSO SOUTH LACKENBY	11-D31	South Bank Eston	No Improvement Required
HARWAL ROAD CSO (REF. L16)	11-D32	Redcar	2025 - 2030
LAKES CSO	11-D32	Redcar	2025 - 2030
NEW COATHAM CSO REF L73	11-D32	Redcar	2025 - 2030
STATION ROAD CSO	11-D32	Redcar	2025 - 2030
GRANVILLE TCE SSO	11-D32	Redcar	2025 - 2030
MCCLEAN AVENUE CSO (REF NO L15)	11-D32	Redcar	2040 - 2045
WARRENBY SEA OUTFALL	11-D32	Redcar	2040 - 2045
WEST COATHAM LANE CSO	11-D32	Redcar	No Improvement Required
MCCLEAN AVENUE CSO (REF NO L15) Eskdale Road	11-D32	Redcar	No Improvement Required
GRINKLE ROAD CSO	11-D32	Redcar	No Improvement Required
LOCKE PARK CSO	11-D32	Redcar	No Improvement Required

Storm Overflow Site Name	Drainage Area Code	Drainage Area Name	Storm Overflow Spill Frequency Reduction Scheme - Delivery Period
OAK ROAD CSO	11-D32	Redcar	No Improvement Required
NEW MARSKE METHODIST CHURCH LONGBECK	11-D33	Marske	2025 - 2030
BYDALE SCHOOL CSO	11-D33	Marske	2025 - 2030
THE STRAY STORM RETENTION TANK	11-D33	Marske	2025 - 2030
HOWLE BECK OVERFLOWS (MARSKE CEMETE ST GERMAINS LANE	11-D33	Marske	2025 - 2030
DALE STREET CSO (REF.L27)	11-D33	Marske	2025 - 2030
MARSKE SEWAGE TREATMENT WORKS	11-D33	Marske	2025 - 2030
STRANGHOW ROAD NO2 CSO	11-D34	Saltburn, Skelton Brotton	2030 - 2035
SALTBURN ATTENUATION TANK NO1 CARAVAN PARK	11-D34	Saltburn, Skelton Brotton	2030 - 2035
Saltburn Bank CSO NWL name	11-D34	Saltburn, Skelton Brotton	2030 - 2035
HOBDALE HOUSE CSO	11-D34	Saltburn, Skelton Brotton	2035 - 2040
CSO SKELTON (SALTBURN LANE)	11-D34	Saltburn, Skelton Brotton	2035 - 2040
LAYLAND BRIDGE PUMPING STATION	11-D34	Saltburn, Skelton Brotton	2035 - 2040
RICHARD STREET PUMPING STATION	11-D34	Saltburn, Skelton Brotton	2035 - 2040
COTTAGE HOSPITAL CSO	11-D34	Saltburn, Skelton Brotton	2035 - 2040
CHARLTON VILLAGE 1 SSO	11-D34	Saltburn, Skelton Brotton	No Improvement Required
MARGROVE PARK CSO THE CARRS TILERY LANE	11-D34	Saltburn, Skelton Brotton	No Improvement Required
LAYLAND BRIDGE CSO	11-D34	Saltburn, Skelton Brotton	No Improvement Required
BROTTON MILLHOLME DRIVE	11-D34	Saltburn, Skelton Brotton	No Improvement Required
SALTBURN ATTENUATION TANK NO2 MARINE PARADE	11-D34	Saltburn, Skelton Brotton	No Improvement Required
DOWNE STREET SPS CSO	11-D35	Loftus	2035 - 2040
LIVERTON MINES SSO	11-D35	Loftus	2035 - 2040
STATION HOTEL SPS	11-D35	Loftus	2035 - 2040
MILL LANE CSO	11-D35	Loftus	2035 - 2040
SKINNINGROVE SEWAGE PUMPING STATION 1	11-D35	Loftus	2035 - 2040

Storm Overflow Site Name	Drainage Area Code	Drainage Area Name	Storm Overflow Spill Frequency Reduction Scheme - Delivery Period
KILTON MILL CSO	11-D35	Loftus	2035 - 2040
ZETLAND ROW CSO	11-D35	Loftus	No Improvement Required
SKINNINGROVE SEWAGE PUMPING STATION 2	11-D35	Loftus	No Improvement Required
TUDOR CROFT COTTAGE CSO L017	11-D36	Guisborough	2025 - 2030
PARK LANE CSO	11-D36	Guisborough	2025 - 2030
GUISBOROUGH STW	11-D36	Guisborough	2030 - 2035
BLANKNEY CLOSE CSO	11-D36	Guisborough	2035 - 2040
ATHERSTONE DRIVE CSO (L022)	11-D36	Guisborough	2035 - 2040
FERNIE ROAD SSO	11-D36	Guisborough	2035 - 2040
GUISBOROUGH STW OVERFLOW	11-D36	Guisborough	No Improvement Required
ST LEONARDS ROAD SSO	11-D36	Guisborough	No Improvement Required
MOORSHOLM SEWAGE TREATMENT WORKS	11-D37	Moorsholm	2045 - 2050
PRIORY ROAD CSO	11-D42	Tees Valley	2045 - 2050
OLD RIVER TEES PUMPING STATION	11-D42	Tees Valley	2045 - 2050
STAINSBY ROAD CSO	11-D42	Tees Valley	No Improvement Required
KELL GATE SSO	11-D42	Tees Valley	No Improvement Required
ACKLAM STREET OUTFALL	11-D44	Middlesbrough North	2030 - 2035
NEWPORT ROAD CSO	11-D44	Middlesbrough North	2030 - 2035
SNOWDON ROAD PS	11-D44	Middlesbrough North	2040 - 2045
VULCAN STREET OUTFALL	11-D44	Middlesbrough North	No Improvement Required
DEEPDALE AVENUE NO2 CSO (M007)	11-D45	Middlesbrough South	No Improvement Required
RAVENSCROFT AVE CSO	11-D45	Middlesbrough South	No Improvement Required
PRISSICK SSO	11-D46	Middlesbrough East	2045 - 2050
CSO 1 MARTON AVENUE	11-D46	Middlesbrough East	2045 - 2050
VERONICA STREET CSO	11-D46	Middlesbrough East	2045 - 2050

Storm Overflow Site Name	Drainage Area Code	Drainage Area Name	Storm Overflow Spill Frequency Reduction Scheme - Delivery Period
GROVE ROAD CSO M009	11-D46	Middlesbrough East	2045 - 2050
JAMES STREET SSO	11-D46	Middlesbrough East	2045 - 2050
LEVEN ROAD CSO	11-D46	Middlesbrough East	2045 - 2050
THORNTON STREET PS	11-D46	Middlesbrough East	2045 - 2050
CSO IN TOLLESBY LANE	11-D46	Middlesbrough East	No Improvement Required
CSO IN GUNNERGATE LANE	11-D46	Middlesbrough East	No Improvement Required
CSO 1 MARTON AVENUE	11-D46	Middlesbrough East	No Improvement Required
OAKFIELD ROAD CSO	11-D46	Middlesbrough East	No Improvement Required
DORMER WAY PS	11-D46	Middlesbrough East	No Improvement Required
TOLLESBY MANOR SPS & CSO	11-D46	Middlesbrough East	No Improvement Required
NUNTHORPE NO 1 SPS	11-D47	Nunthorpe	2035 - 2040
THE MEADOWS CSO (SE 022)	11-D48	Sedgefield	2040 - 2045
STOCKTON ROAD CSO (SE 024)	11-D48	Sedgefield	2040 - 2045
EAST END CSO (SE 026)	11-D48	Sedgefield	2040 - 2045
SEDFIELD SEWAGE TREATMENT WORKS	11-D48	Sedgefield	2040 - 2045
BEACON AVENUE SPS	11-D48	Sedgefield	No Improvement Required
WHITE HOUSE ROAD 1+2 CSO	11-D49	North Billingham	2035 - 2040
BILLINGHAM STW CSO INLET	11-D49	North Billingham	2035 - 2040
BILLINGHAM STW CSO INLET High level outfall 1 to Greatham Creek	11-D49	North Billingham	2035 - 2040
BILLINGHAM STW Storm Tank	11-D49	North Billingham	2035 - 2040
COWPEN BEWLEY SPS	11-D49	North Billingham	2035 - 2040
WHITE HOUSE ROAD 1+2 CSO	11-D49	North Billingham	No Improvement Required
BILLINGHAM STW CSO INLET High level outfall 2 to Cowbridge Beck	11-D49	North Billingham	No Improvement Required
STATION ROAD STORM SEWAGE OVERFLOW	11-D51	South Billingham	2045 - 2050
TEESDALE AVENUE CSO	11-D51	South Billingham	2045 - 2050

Storm Overflow Site Name	Drainage Area Code	Drainage Area Name	Storm Overflow Spill Frequency Reduction Scheme - Delivery Period
NEW ROAD CSO	11-D51	South Billingham	2045 - 2050
QUEENSPORT CLOSE CSO	11-D52	Stockton East	2025 - 2030
TILERY STORM SEWAGE PUMPING STATION	11-D52	Stockton East	2025 - 2030
NORTH TEES SEWAGE PUMPING STATION Stockton east CSO	11-D52	Stockton East	2030 - 2035
HILLS SEWAGE PUMPING STATION	11-D52	Stockton East	2030 - 2035
PORTRACK SEWAGE TREATMENT WORKS CSO INLET	11-D52	Stockton East	2030 - 2035
PORTRACK SEWAGE TREATMENT WORKS Storm Tank	11-D52	Stockton East	2030 - 2035
NEWPORT SEWAGE PUMPING STATION	11-D52	Stockton East	2040 - 2045
NORTON SEWAGE PUMPING STATION	11-D52	Stockton East	2040 - 2045
CALF FALLOW LANE SPS	11-D52	Stockton East	No Improvement Required
WESTFIELD COURT CSO	11-D53	Stockton West	No Improvement Required
LEALHOME GROVE CSO	11-D53	Stockton West	No Improvement Required
KILBURN ROAD CSO	11-D53	Stockton West	No Improvement Required
GREEN'S LANE CSO	11-D53	Stockton West	No Improvement Required
DARLINGTON LANE SSO	11-D53	Stockton West	No Improvement Required
WOODBOROUGH LANE CSO	11-D53	Stockton West	No Improvement Required
GRAYS ROAD CSO	11-D54	Eastbourne	2025 - 2030
LONDONDERRY ROAD/GREEN LANE CSO	11-D54	Eastbourne	2025 - 2030
BISHOPTON ROAD CSO	11-D54	Eastbourne	2030 - 2035
EASTBOURNE SOUTH CSO	11-D54	Eastbourne	2030 - 2035
LUSTRUM HIGH LEVEL CSO	11-D54	Eastbourne	2030 - 2035
OXBRIDGE LANE CSO	11-D54	Eastbourne	2030 - 2035
EASTBOURNE EAST & WEST CSO	11-D54	Eastbourne	2030 - 2035
CSO TO REAR OF 62 GRANGE AVE	11-D54	Eastbourne	No Improvement Required
GRANGFIELD ROAD SSO	11-D54	Eastbourne	No Improvement Required

Storm Overflow Site Name	Drainage Area Code	Drainage Area Name	Storm Overflow Spill Frequency Reduction Scheme - Delivery Period
GRAYS ROAD CSO	11-D54	Eastbourne	No Improvement Required
BROWNS BRIDGE CSO	11-D54	Eastbourne	No Improvement Required
TOWER STREET CSO M2	11-D55	Stockton Centre	2035 - 2040
BISHOP STREET NORTH SSO M2	11-D55	Stockton Centre	2035 - 2040
BISHOP STREET NORTH SSO M3	11-D55	Stockton Centre	2035 - 2040
TOWER STREET CSO M2	11-D55	Stockton Centre	No Improvement Required
BISHOP STREET NORTH SSO M4	11-D55	Stockton Centre	No Improvement Required
CSO AND SPS AT MIDDLESBROUGH ROAD	11-D55	Stockton Centre	No Improvement Required
BOATHOUSE LANE PUMPING STATION	11-D56	Stockton South	2035 - 2040
QUARRY PLANTATION (ABOVE CLIFTON GARDENS)	11-D57	Eaglescliffe	2025 - 2030
DARLINGTON CSO	11-D57	Eaglescliffe	2025 - 2030
EGGLESCLIFFE BANK CSO	11-D57	Eaglescliffe	2025 - 2030
TEESSIDE HIGH SCHOOL PS	11-D57	Eaglescliffe	2025 - 2030
TEESBANK AVENUE CSO	11-D57	Eaglescliffe	2025 - 2030
SPRING WAY CSO ST021	11-D57	Eaglescliffe	2025 - 2030
SEYMOUR CRESCENT CSO	11-D57	Eaglescliffe	2040 - 2045
PRESTON LANE CSO	11-D57	Eaglescliffe	No Improvement Required
ABATTOIR ST CSO	11-D57	Eaglescliffe	No Improvement Required
BOWESFIELD LANE CSO	11-D57	Eaglescliffe	No Improvement Required
YARM BRIDGE CSO	11-D57	Eaglescliffe	No Improvement Required
YARM ROAD / MUIRFIELD ROAD CSO	11-D57	Eaglescliffe	No Improvement Required
SEWAGE PUMPING STATION AT SITE OF OLD YARM STW	11-D58	Yarm	2030 - 2035
CLOCKWOOD SEWAGE PUMPING STATION	11-D58	Yarm	2030 - 2035
WORSALL ROAD PUMPING STATION	11-D58	Yarm	2040 - 2045
CLOCKWOOD SEWAGE PUMPING STATION	11-D58	Yarm	No Improvement Required

Storm Overflow Site Name	Drainage Area Code	Drainage Area Name	Storm Overflow Spill Frequency Reduction Scheme - Delivery Period
WEST STREET P STN SSO	11-D58	Yarm	No Improvement Required
STATION STREET CSO	11-D59	Thornaby North	2025 - 2030
CSO AT GREEN LANE	11-D59	Thornaby North	2030 - 2035
SUN STREET STORM SEWAGE OVERFLOW	11-D59	Thornaby North	2030 - 2035
SUN STREET STORM SEWAGE OVERFLOW	11-D59	Thornaby North	2030 - 2035
A66 RIDER SEWER CSO	11-D59	Thornaby North	2045 - 2050
CORNFIELD ROAD PUMPING STATION	11-D59	Thornaby North	No Improvement Required
SEAMER PS	11-D60	Thornaby South & Ingleby Barwick	2035 - 2040
CASTLETON WALK CSO	11-D60	Thornaby South & Ingleby Barwick	2035 - 2040
HILTON PS	11-D60	Thornaby South & Ingleby Barwick	No Improvement Required
ACKLAM ROAD CSO	11-D60	Thornaby South & Ingleby Barwick	No Improvement Required
TEDDER AVENUE SSO	11-D60	Thornaby South & Ingleby Barwick	No Improvement Required
ALLENSWAY CSO	11-D60	Thornaby South & Ingleby Barwick	No Improvement Required
THORPE THEWLES SPS	11-D61	Whitton & Thorpe Thewles	2025 - 2030
BISHOPTON MILL PS	11-D61	Whitton & Thorpe Thewles	2025 - 2030
CARLTON PUMPING STATION	11-D61	Whitton & Thorpe Thewles	2025 - 2030
STILLINGTON OLD WORKS CSO ST004	11-D61	Whitton & Thorpe Thewles	2025 - 2030
CARLTON & REDMARSHALL STW	11-D61	Whitton & Thorpe Thewles	2025 - 2030
SOUTH STREET CSO ST003	11-D61	Whitton & Thorpe Thewles	No Improvement Required
KIRK STREET CSO	11-D61	Whitton & Thorpe Thewles	No Improvement Required
CSO AT MILL TERRACE	11-D61	Whitton & Thorpe Thewles	No Improvement Required
LONG NEWTON SEWAGE TREATMENT WORKS	11-D63	Longnewton	2030 - 2035
LONGNEWTON CSO STO07	11-D63	Longnewton	2030 - 2035
CSO AT CRATHORNE PUMPING STATION	11-D64	Kirklevington	2040 - 2045
KIRKLEVINGTON SEWAGE TREATMENT WORK	11-D64	Kirklevington	2040 - 2045

Storm Overflow Site Name	Drainage Area Code	Drainage Area Name	Storm Overflow Spill Frequency Reduction Scheme - Delivery Period
AISLABY QUAY SPS	11-D65	Aislaby Village	No Improvement Required
FURNESS PS OUTFALL	11-D67	High Clarence	2035 - 2040
PORT CLARENCE WEST PS OUTFALL	11-D68	Port Clarence	2035 - 2040
PORT CLARENCE EAST PUMPING STATION	11-D68	Port Clarence	No Improvement Required

Wastewater Treatment Works Compliance

Analyses have been completed to determine the interventions that are likely to be required to ensure all wastewater treatment works (WwTW) are operating in compliance with the permits for dry weather flow (DWF) treatment and treated effluent discharge quality.

The following table summarises the number of WwTWs within the Teesside Level 2 SPA that have been included in the DWMP for DWF permit compliance and treated effluent discharge quality permit compliance (phosphorous (P), biological oxygen demand (BOD) and ammonia (Amm) indicators).

WwTW Name	Intervention(s) Required
Bishopton WwTW	Bishopton WwTW has been identified as requiring an investigation for discharge quality compliance has been identified for Phosphorous between 2025 and 2030.
Great Ayton WwTW	Great Ayton WwTW has been identified as requiring an investigation for discharge quality compliance has been identified for Phosphorous between 2025 and 2030.
Stokesley WwTW	Stokesley WwTW has been identified as requiring an investigation for discharge quality compliance has been identified for Phosphorous between 2025 and 2030.
Swainby WwTW	Swainby WwTW has been identified as requiring an investigation for discharge quality compliance has been identified for Ammonia between 2040 and 2045.
Moorsholme WwTW	Moorsholme WwTW has been identified as requiring an investigation for discharge quality compliance has been identified for Phosphorous between 2030 and 2035.
Sedgefield WwTW	Sedgefield WwTW has been identified as requiring an investigation for discharge quality compliance has been identified for Ammonia between 2025 and 2030.
Longnewton WwTW	Longnewton WwTW is being investigated/upgraded currently for dry weather flow compliance.
Kirklevington WwTW	Kirklevington WwTW is being investigated/upgraded currently for dry weather flow compliance.

Long-Term Delivery Strategy for Flooding and Pollution

The National Infrastructure Commission's report 'Reducing the risk of surface water flooding'¹ highlighted the importance of a national approach to tackle flooding, and the costs and challenges of eliminating sewer flooding. Given this, and the greater insight we have gained from developing the DWMP, the ambition for flooding and pollution risk has been adjusted to what is considered a stretching but achievable level that would be economically beneficial to deliver.

¹ <https://nic.org.uk/studies-reports/reducing-the-risks-of-surface-water-flooding/surface-water-flooding-final-report/>

Our Long-Term Delivery Strategy identifies a target of reducing sewer flooding by 60% from our 2025 position. To achieve this, we will plan to reduce hydraulic flood risk regionally in the period between 2030 and 2050 by a total of:

- 17,999 internal flood risk properties
- 216,074 external flood risk properties

This approach deals with the impact of climate change, growth and urban creep.

The following table summarises the level of risk within the Teesside L2 SPA against the flooding and pollution planning objectives.

Planning Objective	Measure	Count				
		2020	2025	2030	2045	2060
PO1 – Internal Flood Risk	Count of properties at risk of flooding internally during a 1 in 20 year return period rainfall event	3,708	3,681	3,725	5,299	5,669
PO2 – External Flood Risk	Count of properties at risk of flooding externally during a 1 in 20 year return period rainfall event	55,339	55,613	56,078	72,544	75,669
PO3 – 1 in 50 Year Population at Risk	Population at risk of flooding during a 1 in 50 year return period rainfall event	114,847	115,534	116,471	149,811	156,840
PO6 – Pollution	Count of manholes near watercourses at risk of flooding during a 1 in 5 year return period rainfall event	518	514	525	695	721

PLANNING OBJECTIVE ASSESSMENT

Planning Objective Risk Scoring

The DWMP planning objectives have been assessed in line with the common scoring approach followed by all water companies.

Risk scores have been calculated at drainage area level, following the approach outlined below. Further detail on how the scores have been calculated for each of the planning objectives is within the Problem Characterisation methodology.

Risk Score	Description
0	Low Risk – Levels of planning objective risk within the drainage area are in the bottom quartile and/or there are no assets identified as higher priority requiring interventions throughout the planning periods.
1	Medium Risk – Levels of planning objective risk within the drainage area are in the middle two quartiles and/or there are assets identified as lower priority requiring interventions throughout the planning periods.
2	High Risk – Levels of planning objective risk within the drainage area are in the top quartile and/or there are assets identified as higher priority requiring interventions throughout the planning periods.

Drainage Area		PO1 – Internal Flood Risk			PO2 – External Flood Risk			PO3 – 1 in 50 Year Population at Risk			PO4 – Bathing Water			PO5 – River Water			PO6 - Pollution			PO8 – WwTW DWF Compliance		
		2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060
11-D01	Great Stainton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D02	Little Stainton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D03	Bishopton	2	2	2	1	1	1	2	2	2	0	0	0	2	2	2	2	2	2	0	0	0
11-D04	Middleton St George	0	1	1	1	1	1	0	1	1	0	0	0	2	2	2	0	0	0	0	2	2
11-D05	Oaktree & Teesside Airport	0	0	0	2	2	2	2	2	2	0	0	0	0	0	0	0	1	1	0	0	0
11-D08	Newby	0	0	0	0	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0
11-D09	Great Ayton	1	1	1	1	2	2	2	2	2	0	0	0	1	1	1	2	2	2	0	0	0
11-D10	Gribdale Terrace	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D11	Ingleby Greenhow	0	0	0	0	0	0	2	2	2	0	0	0	2	2	2	0	0	0	0	0	0
11-D12	Kildale	0	0	0	0	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0
11-D13	Stokesley	1	1	1	1	2	2	2	2	2	0	0	0	1	1	1	1	1	1	0	0	0
11-D14	Carlton in Cleveland	1	1	1	0	1	1	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0
11-D15	Great Busby	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D16	Great Broughton	1	1	1	1	2	2	2	2	2	0	0	0	2	2	2	2	2	2	0	0	0
11-D17	Hornby	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D18	Low Worsall	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	2	2	2	0	0	0
11-D19	Picton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D20	Hutton Rudby	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	2	2	0	0	0
11-D21	Swainby	0	1	1	2	2	2	2	2	2	0	0	0	0	0	0	2	2	2	0	0	0
11-D22	Faceby	2	2	2	1	1	1	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0
11-D23	Potto	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	1	1	1	0	0	0

Drainage Area		PO1 – Internal Flood Risk			PO2 – External Flood Risk			PO3 – 1 in 50 Year Population at Risk			PO4 – Bathing Water			PO5 – River Water			PO6 - Pollution			PO8 – WwTW DWF Compliance		
		2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060
11-D24	Hartlepool North	1	1	1	1	2	2	1	1	1	2	2	2	2	2	2	1	1	1	0	0	0
11-D25	Thorpe Street/Hea dland	2	2	2	1	1	1	2	2	2	0	0	0	1	1	1	0	0	0	0	0	0
11-D26	Middleton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D27	Bum Valley	1	1	1	0	1	1	0	1	1	2	2	2	1	1	1	0	1	1	0	0	0
11-D28	Hartlepool South	1	1	1	0	1	1	0	1	1	2	2	2	2	2	2	1	1	1	0	0	0
11-D29	Greatham	1	2	2	2	2	2	0	0	0	0	0	0	2	2	2	0	0	0	0	0	0
11-D30	Graythorp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D31	South Bank Eston	1	2	2	1	2	2	1	1	2	0	0	0	2	2	2	0	0	0	0	0	0
11-D32	Redcar	1	1	1	1	1	1	1	2	2	2	2	2	0	0	0	0	0	0	0	0	0
11-D33	Marske	0	1	1	1	1	1	1	1	1	2	2	2	0	0	0	0	0	0	0	0	0
11-D34	Saltburn, S kelton Brotton	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1	1	1	0	0	0
11-D35	Loftus	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	0	0	0
11-D36	Guisborou gh	2	2	2	1	2	2	1	2	2	0	0	0	2	2	2	0	0	0	0	0	0
11-D37	Moorsholm	2	2	2	1	1	1	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0
11-D38	Newton under Roseberry	2	2	2	1	1	1	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0
11-D39	Dunsdale	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
11-D40	Upleatham	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D41	Mount Pleasant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D42	Tees Valley	0	0	0	0	1	1	0	0	1	0	0	0	1	1	1	1	1	1	0	0	0
11-D43	Thornfield Road	1	1	2	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
11-D44	Middlesbro ugh North	1	2	2	2	2	2	1	1	2	0	0	0	2	2	2	0	0	0	0	0	0

Drainage Area		PO1 – Internal Flood Risk			PO2 – External Flood Risk			PO3 – 1 in 50 Year Population at Risk			PO4 – Bathing Water			PO5 – River Water			PO6 - Pollution			PO8 – WwTW DWF Compliance		
		2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060
11-D45	Middlesbrough South	1	2	2	1	1	1	2	2	2	0	0	0	0	0	0	1	1	1	0	0	0
11-D46	Middlesbrough East	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	0	0	0
11-D47	Nunthorpe	1	2	2	1	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
11-D48	Sedgefield	1	1	2	1	1	1	1	2	2	0	0	0	1	1	1	0	0	0	0	0	0
11-D49	North Billingham	0	1	1	1	1	1	1	1	2	0	0	0	1	1	1	1	1	1	0	0	0
11-D51	South Billingham	2	2	2	2	2	2	2	2	2	0	0	0	1	1	1	0	0	0	0	0	0
11-D52	Stockton East	1	1	1	1	2	2	1	2	2	0	0	0	2	2	2	0	0	0	0	0	0
11-D53	Stockton West	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	0	0	0
11-D54	Eastbourne	1	1	1	1	1	1	1	1	1	0	0	0	2	2	2	1	1	1	0	0	0
11-D55	Stockton Centre	2	2	2	2	2	2	0	1	1	0	0	0	2	2	2	0	0	0	0	0	0
11-D56	Stockton South	0	0	0	0	0	0	1	1	1	0	0	0	2	2	2	0	0	0	0	0	0
11-D57	Eaglescliffe	1	1	1	1	1	1	1	1	1	0	0	0	2	2	2	0	1	1	0	0	0
11-D58	Yarm	1	1	1	0	1	1	0	1	1	0	0	0	2	2	2	1	1	1	0	0	0
11-D59	Thornaby North	1	1	1	1	1	1	1	1	1	0	0	0	2	2	2	0	0	0	0	0	0
11-D60	Thornaby South & Ingleby Barwick	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0
11-D61	Whitton & Thorpe Thewles	1	1	2	1	1	1	1	2	2	0	0	0	2	2	2	2	2	2	0	0	0
11-D63	Longnewton	0	0	0	0	0	0	1	1	1	0	0	0	2	2	2	2	2	2	0	2	2
11-D64	Kirklevington	1	1	1	0	1	1	1	1	1	0	0	0	1	1	1	1	1	1	0	2	2
11-D65	Aislaby Village	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D66	Haverton Hill	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0

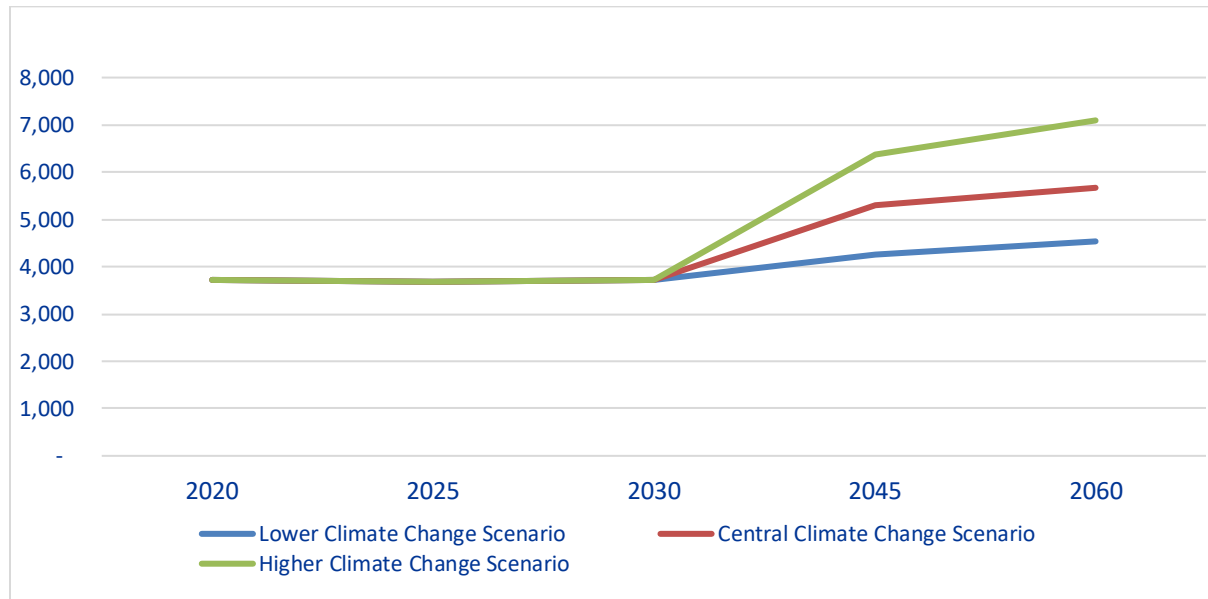
Drainage Area		PO1 – Internal Flood Risk			PO2 – External Flood Risk			PO3 – 1 in 50 Year Population at Risk			PO4 – Bathing Water			PO5 – River Water			PO6 - Pollution			PO8 – WwTW DWF Compliance		
		2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060
11-D67	High Clarence	2	2	2	2	2	2	2	2	2	0	0	0	2	2	2	0	0	0	0	0	0
11-D68	Port Clarence	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	0	0	0	0	0	0
11-D69	Little Kildale	0	0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0
11-D70	New Row	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0
11-D71	Juniper Grove, Elton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Climate Change Sensitivity

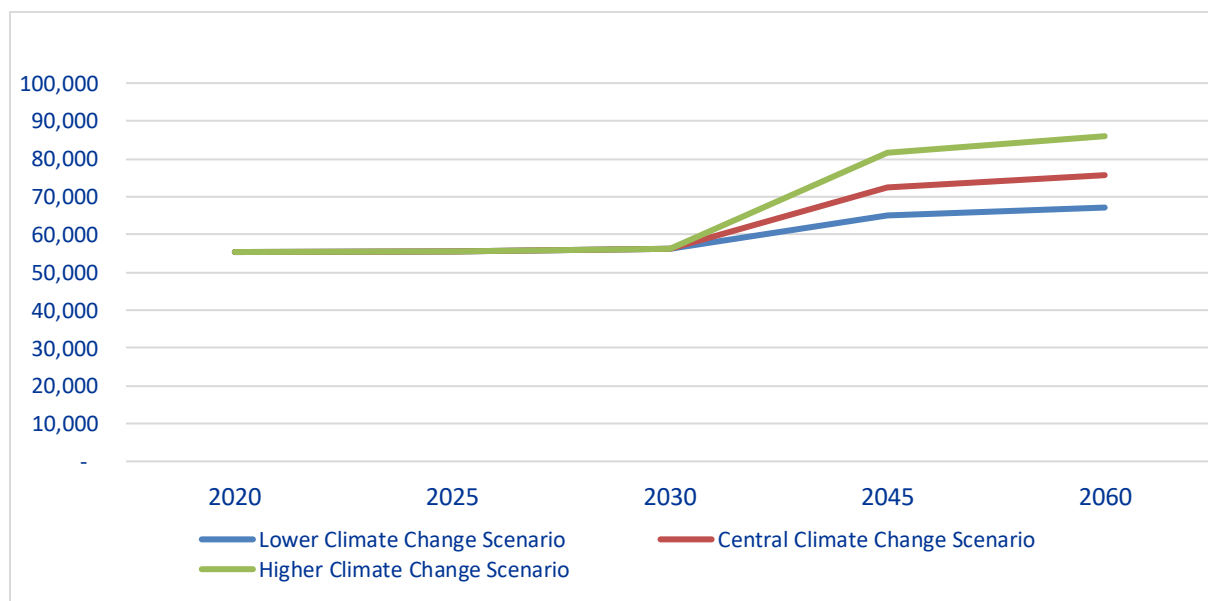
As outlined in the BRAVA methodology, two additional climate scenarios were analysed to evaluate the impact on the planning objectives of Lower Emissions and Higher Emissions climate scenarios.

The following graphics outline the impact on the planning objective risk numbers for the flooding and pollution planning objectives within the Teesside Level 2 SPA in the different climate scenarios that have been modelled.

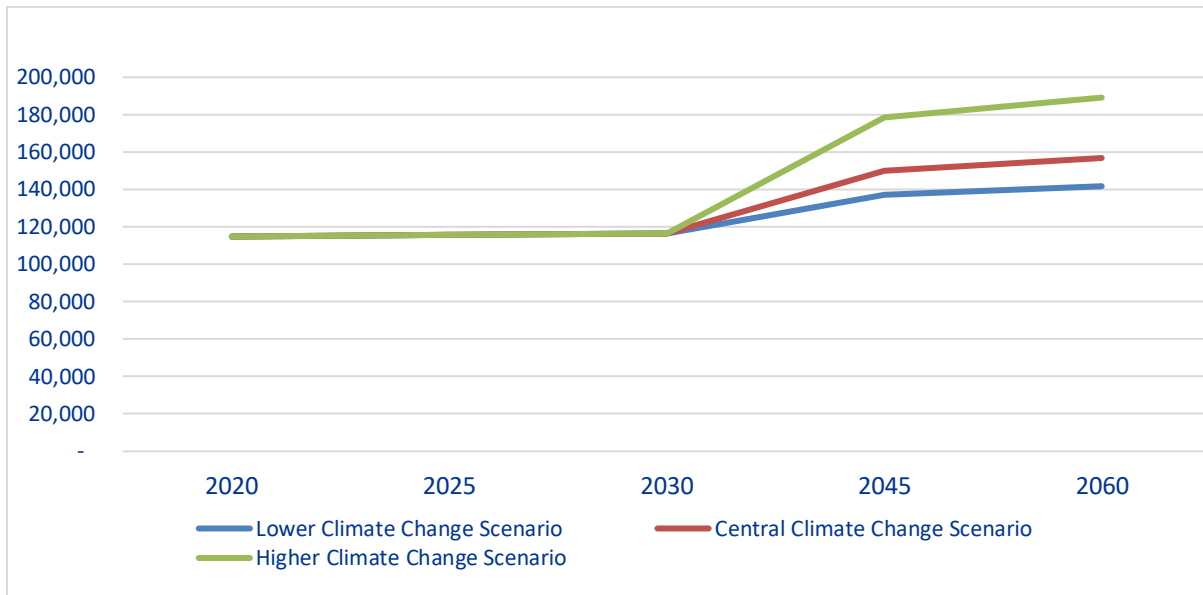
PO1 – Internal Flood Risk – Teesside L2 SPA



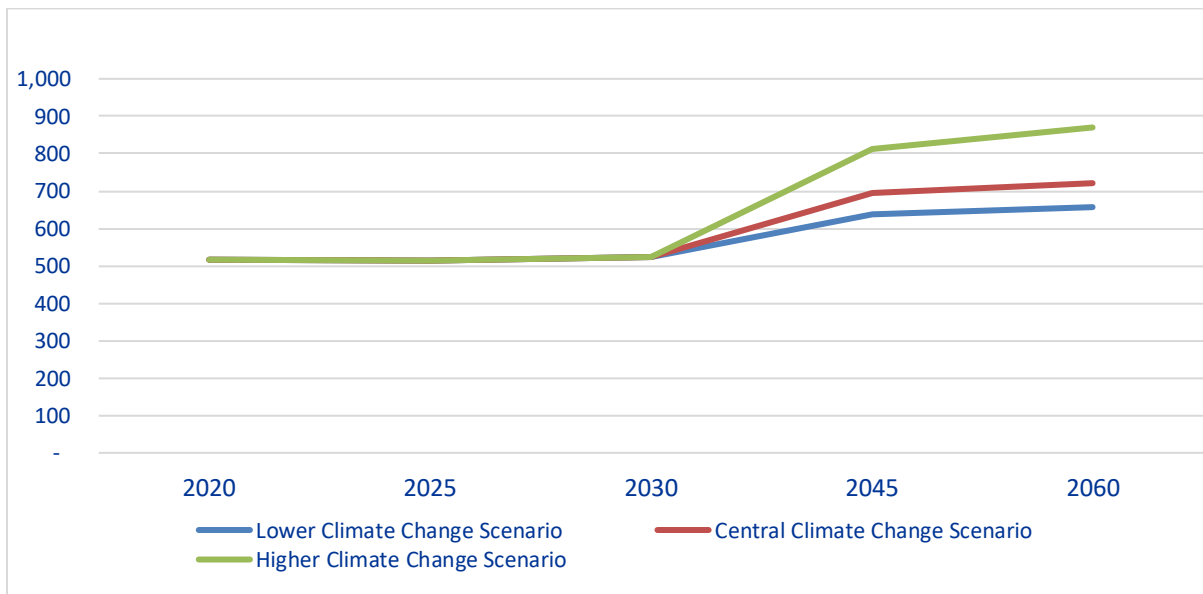
PO2 – External Flood Risk – Teesside L2 SPA



PO3 – 1 in 50 Year Population at Risk – Teesside L2 SPA



PO6 – Pollution – Teesside L2 SPA



Our business plan is based on adaptive planning principles. We begin to use this more and more to think about an uncertain future. This long-term strategy is being developed alongside the long-term planning frameworks – in particular, the well-established Water Resources Management Plan process and the new Drainage and Wastewater Management Plan process.

OPTION DEVELOPMENT

Our Plan for the Teesside L2 SPA

What Are We Doing?

The DWMP has been prepared taking the Best Value options within catchments and also including sustainable options that were not identified as Best Value but did reduce the volume of below-ground storage required within a catchment.

A summary of the interventions that have been included within the DWMP within the Teesside L2 SPA are included within the following tables.

Storm Overflow Discharge Reduction Plan

Intervention Type	2025 to 2030	2030 to 2035	2035 to 2040	2040 to 2045	2045 to 2050
Storm Overflows addressed by Spill Frequency Reduction Schemes	33	27	37	29	21
Storm Overflows requiring Screening Provision Schemes	12	10	29	34	15

Wastewater Treatment Works Compliance

Intervention Type	2025 to 2030	2030 to 2035	2035 to 2040	2040 to 2045	2045 to 2050	2050 to 2055	2055 to 2060
WwTW DWF Compliance – Investigations / Schemes	-	-	-	-	-	-	-
WwTW Quality Compliance – Investigations	3 (P) - (BOD) 1 (Amm)	1 (P) - (BOD) - (Amm)	- (P) - (BOD) - (Amm)	- (P) - (BOD) 1 (Amm)	- (P) - (BOD) - (Amm)	- (P) - (BOD) - (Amm)	- (P) - (BOD) - (Amm)
WwTW Quality Compliance - Schemes	2 (P) - (BOD) 1 (Amm)	1 (P) - (BOD) - (Amm)	1 (P) - (BOD) - (Amm)	- (P) - (BOD) - (Amm)	- (P) - (BOD) 1 (Amm)	- (P) - (BOD) - (Amm)	- (P) - (BOD) - (Amm)

Long-Term Delivery Strategy – Flooding and Pollution

The Government's 25 Year Environment Plan (25YEP) requires us to invest to:

- Reduce nitrogen and phosphorus pollution, through catchment and nature-based solutions where possible.
- Improve drainage and environmental water quality, and reduce surface water flooding risk, through our Drainage and Wastewater Management Plan (DWMP).

Our long term delivery strategy sets out our ambition to continue to reduce sewer flooding over the next 25 years. Our plan sets out how we will match the 25YEP by reducing internal and external sewer flooding by 60% by 2050.

How Much Does Our Plan Cost?

The following table summarises the costs that are included within the DWMP for the delivery of the identified interventions. The costs shown in the table are £million.

Intervention Type	2025 to 2030	2030 to 2035	2035 to 2040	2040 to 2045	2045 to 2050	2050 to 2055	2055 to 2060
Storm Overflow Spill Frequency Reduction Schemes	418.62	154.97	75.48	45.75	68.86	-	-
Screening Provision Schemes	9.37	8.98	45.11	7.42	3.27	-	-

Long-Term Delivery Strategy for Flooding

It is anticipated that we will achieve our flood risk reduction targets in a number of ways. For example,

- Working in partnership with others in the Northumbria Integrated Drainage Partnership
- Working with customers and communities for the widescale disconnection of roof drainage from the combined sewer network
- Implementing source control via sustainable drainage measures (SuDS) including wetland creation
- Implementing SMART networks throughout the region
- Disconnecting highway runoff from the combined sewer network
- Working with others to implement permeable pathing and roadways schemes.

We have estimated that the cost of achieving our ambitious targets will be £1 billion between 2030 and 2050. We will seek customer support for investment to achieve these targets.

The following table summarises the level of risk within the Wear L2 SPA for the flooding planning objectives following the implementation of the Long-Term Delivery Strategy for flooding.

Planning Objective	Measure	Count				
		2020	2025	2030	2045	2060
PO1 – Internal Flood Risk	Count of properties at risk of flooding internally during a 1 in 20 year return period rainfall event	3,708	3,681	3,725	2,263	1,631

Planning Objective	Measure	Count				
		2020	2025	2030	2045	2060
PO2 – External Flood Risk	Count of properties at risk of flooding externally during a 1 in 20 year return period rainfall event	55,339	55,613	56,078	33,436	27,760

Planning Objective Risk Scoring

The planning objective risk scores have been evaluated with the proposed DWMP interventions delivered.

Drainage Area		PO1 – Internal Flood Risk			PO2 – External Flood Risk			PO3 – 1 in 50 Year Population at Risk			PO4 – Bathing Water			PO5 – River Water			PO6 - Pollution			PO8 – WwTW DWF Compliance		
		2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060
11-D01	Great Stainton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D02	Little Stainton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D03	Bishopton	2	0	0	1	0	0	2	1	1	0	0	0	2	0	0	2	2	2	0	0	0
11-D04	Middleton St George	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
11-D05	Oaktree & Teesside Airport	0	0	0	2	2	2	2	2	2	0	0	0	0	0	0	0	1	1	0	0	0
11-D08	Newby	0	0	0	0	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0
11-D09	Great Ayton	1	0	0	1	0	0	2	2	2	0	0	0	1	0	0	2	2	2	0	0	0
11-D10	Gribdale Terrace	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D11	Ingleby Greenhow	0	0	0	0	0	0	2	2	2	0	0	0	2	0	0	0	0	0	0	0	0
11-D12	Kildale	0	0	0	0	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0
11-D13	Stokesley	1	0	0	1	0	0	2	2	2	0	0	0	1	1	0	1	1	1	0	0	0
11-D14	Carlton in Cleveland	1	0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0
11-D15	Great Busby	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D16	Great Broughton	1	0	0	1	0	0	2	2	2	0	0	0	2	0	0	2	2	2	0	0	0
11-D17	Hornby	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D18	Low Worsall	1	0	0	1	0	0	1	1	1	0	0	0	0	0	0	2	2	2	0	0	0
11-D19	Picton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D20	Hutton Rudby	1	0	0	1	0	0	1	1	1	0	0	0	1	0	0	1	2	2	0	0	0
11-D21	Swainby	0	0	0	2	2	2	2	2	2	0	0	0	0	0	0	2	2	2	0	0	0
11-D22	Faceby	2	0	0	1	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
11-D23	Potto	2	0	0	2	0	0	2	2	2	0	0	0	0	0	0	1	1	1	0	0	0

Drainage Area		PO1 – Internal Flood Risk			PO2 – External Flood Risk			PO3 – 1 in 50 Year Population at Risk			PO4 – Bathing Water			PO5 – River Water			PO6 - Pollution			PO8 – WwTW DWF Compliance		
		2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060
11-D24	Hartlepool North	1	0	0	1	1	1	1	1	1	2	0	0	2	0	0	1	1	1	0	0	0
11-D25	Thorpe Street/Headland	2	0	1	1	0	0	2	1	1	0	0	0	1	0	0	0	0	0	0	0	0
11-D26	Middleton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D27	Bum Valley	1	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	1	1	0	0	0
11-D28	Hartlepool South	1	0	0	0	0	0	0	0	0	2	0	0	2	0	0	1	1	1	0	0	0
11-D29	Greatham	1	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
11-D30	Graythorp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D31	South Bank Eston	1	0	0	1	0	0	1	1	1	0	0	0	2	0	0	0	0	0	0	0	0
11-D32	Redcar	1	0	0	1	0	0	1	1	1	2	0	0	0	0	0	0	0	0	0	0	0
11-D33	Marske	0	0	0	1	1	1	1	1	1	2	0	0	0	0	0	0	0	0	0	0	0
11-D34	Saltburn, Skelton Brotton	1	0	0	1	0	0	1	1	1	2	0	0	2	0	0	1	1	1	0	0	0
11-D35	Loftus	1	0	0	1	0	0	1	1	1	0	0	0	1	0	0	1	1	1	0	0	0
11-D36	Guisborough	2	0	0	1	0	0	1	1	1	0	0	0	2	0	0	0	0	0	0	0	0
11-D37	Moorsholm	2	0	0	1	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0
11-D38	Newton under Roseberry	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D39	Dunsdale	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
11-D40	Upleatham	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D41	Mount Pleasant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D42	Tees Valley	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	1	1	1	0	0	0
11-D43	Thornfield Road	1	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
11-D44	Middlesbrough North	1	0	1	2	0	0	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0
11-D45	Middlesbrough South	1	0	0	1	0	0	2	1	1	0	0	0	0	0	0	1	1	1	0	0	0

Drainage Area		PO1 – Internal Flood Risk			PO2 – External Flood Risk			PO3 – 1 in 50 Year Population at Risk			PO4 – Bathing Water			PO5 – River Water			PO6 - Pollution			PO8 – WwTW DWF Compliance		
		2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060
11-D46	Middlesbrough East	1	0	0	1	0	0	1	1	1	0	0	0	1	1	0	1	1	1	0	0	0
11-D47	Nunthorpe	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D48	Sedgefield	1	0	0	1	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0
11-D49	North Billingham	0	0	0	1	1	1	1	1	1	0	0	0	1	0	0	1	1	1	0	0	0
11-D51	South Billingham	2	0	0	2	0	0	2	1	1	0	0	0	1	1	0	0	0	0	0	0	0
11-D52	Stockton East	1	0	0	1	0	0	1	1	1	0	0	0	2	0	0	0	0	0	0	0	0
11-D53	Stockton West	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0	1	1	1	0	0	0
11-D54	Eastbourne	1	0	0	1	0	0	1	0	0	0	0	0	2	0	0	1	1	1	0	0	0
11-D55	Stockton Centre	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
11-D56	Stockton South	0	0	0	0	0	0	1	1	1	0	0	0	2	0	0	0	0	0	0	0	0
11-D57	Eaglescliffe	1	0	0	1	0	0	1	1	1	0	0	0	2	0	0	0	1	1	0	0	0
11-D58	Yarm	1	0	0	0	0	0	0	1	1	0	0	0	2	0	0	1	1	1	0	0	0
11-D59	Thornaby North	1	0	0	1	0	0	1	1	1	0	0	0	2	0	0	0	0	0	0	0	0
11-D60	Thornaby South & Ingleby Barwick	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
11-D61	Whitton & Thorpe Thewles	1	0	1	1	0	0	1	1	1	0	0	0	2	0	0	2	2	2	0	0	0
11-D63	Longnewton	0	0	0	0	0	0	1	1	1	0	0	0	2	0	0	2	2	2	0	0	0
11-D64	Kirklevington	1	0	1	0	0	0	1	1	1	0	0	0	1	0	0	1	1	1	0	0	0
11-D65	Aislaby Village	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-D66	Haverton Hill	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
11-D67	High Clarence	2	0	1	2	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0
11-D68	Port Clarence	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0

Drainage Area		PO1 – Internal Flood Risk			PO2 – External Flood Risk			PO3 – 1 in 50 Year Population at Risk			PO4 – Bathing Water			PO5 – River Water			PO6 - Pollution			PO8 – WwTW DWF Compliance		
		2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060	2020	2045	2060
11-D69	Little Kildale	0	0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0
11-D70	New Row	2	0	0	2	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
11-D71	Juniper Grove, Elton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CONCLUDING COMMENTS

Our DWMP forms part of our long-term delivery strategy. As we go about this, we will need to review our progress and adapt our future plans to take into account changing circumstances. These include how customer views about priorities and affordability evolve; new technologies that emerge; how supply chain capacity develops; changes in weather patterns; and customer behaviour changes.

Setting a long-term delivery strategy allows us to seek early certainty on the investment we do not expect to change, while acknowledging these factors could mean choosing different pathways in future. We will consider those choices as and when we update our DWMP and at subsequent price reviews, which take place every five years. At each point we update our DWMP, we will look further into the future to maintain a 40-year outlook on these issues.

Our PR24 business plan, covering 2025-30, will include projects to drive better, more efficient, and nature-based solutions to tackling drainage and storm overflows in the future.

CONTACTING US

To view our DWMP, please go to our website at: www.nwl.co.uk/dwmp.

To contact us:

Go to the Contact Us page at: [Contact us \(nwl.co.uk\)](http://www.nwl.co.uk/contact-us)

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