Drainage and Wastewater Management Plan (DWMP)

Overview of the Medway River Basin Catchment

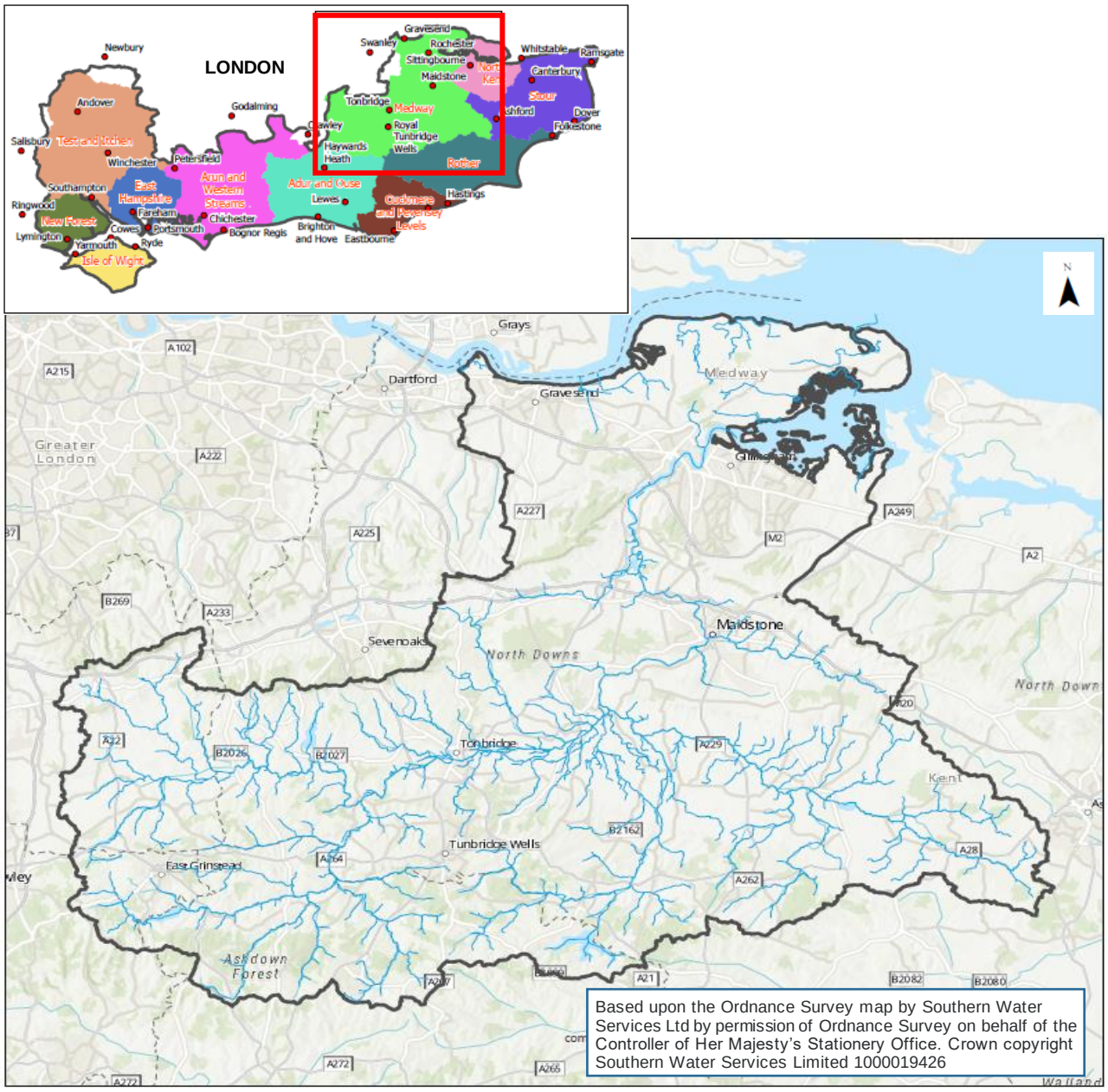
October 2022
Version 2

from Southern Water

Overview of the Medway River Basin Catchment

The Environment Agency has previously defined the River Basin District catchments in their River Basin Management Plans prepared in response to the European Union's Water Framework Directive. These river basin catchments are based on the natural configuration of bodies of water (rivers, estuaries, lakes etc.) within a geographical area, and relate to the natural watershed of the main rivers. We are using the same catchment boundaries for our Level 2 DWMPs. A map of the Medway river basin catchment is shown in figure 1.

Figure 1: The Medway river basin catchment in North East Kent, England



The River Medway, and its main tributaries the Rivers Eden, Beult and Teise, form the River Medway catchment. It is the largest river basin catchment in our region covering 1843 km^2 of Surrey, Kent and East Sussex.

The Medway rises to the north of Turners Hill near East Grinstead in the High Weald. It has an extensive network of tributaries including the Eden, Teise and Beult. The River Eden, a tributary which rises from the chalk at the foot of the North Downs, joins the Medway at Penshurst. The upper reaches of the rivers run through deep valleys and are very flashy with extremes of flow between the summer and winter. Downstream of Penshurst, the gradient reduces and the underlying geology becomes alluvial clay.

The River Beult, the Medway's longest tributary, joins it at Yalding. It has several sources near Ashford and is one of very few clay rivers in the south of England. Its main tributary, the River Teise rises near Tunbridge Wells in the High Weald. The Teise is joined by the River Bewl, a small tributary and the source of Bewl Water, an important reservoir and recreational centre, a few miles downstream of Lamberhurst. The Teise flows eastwards before it joins the River Beult at Hunton. The Beult flows through Yalding and then joins the Medway below Twyford Bridge.

Below Maidstone, the Medway becomes tidal and flows north joining the Medway Swale Estuary at Rochester, before it reaches the North Sea. Collectively, the low lying rivers are called Wealden Rivers.

The catchment is largely rural, although it has some major towns such as Royal Tunbridge Wells, Tonbridge, Maidstone and the Medway towns of Rochester, Chatham, Gillingham and Gravesend.

The main land use is agriculture and much of the catchment is valued for its varied habitats including wet meadows, peatlands, woodlands, salt marshes and mudflats. Nearly three quarters of the catchment is protected by national landscape designations of the Kent Downs Area of Outstanding Natural Beauty (AONB) and the High Weald AONB, and therefore protected from development.

The Medway Swale Estuary is one of the most important natural wetlands in northern Europe and is designated as a Marine Conservation Zone (MCZ) with its mix of fresh and sea waters providing a fertile environment for wildlife, particularly invertebrates, fish and birds. As a nationally rare clay river, the Beult is classified as a Site of Special Scientific Interest (SSSI) as it supports the habitats, plants and animal species characteristic of this type of river.

Historically and today, the Medway catchment is important for local industries, navigation and recreation, particularly angling. It is also provides one of the largest flood storage reservoirs in the UK.

The majority of groundwater abstractions in the catchment are taken from the North Downs chalk which drains into the estuary and there are three reservoirs although much of the water from these reservoirs is exported for use outside of the catchment. Bewl Water, at the head of the River Teise, is a major water supply source for the upper catchment. It is filled mainly by water abstracted from the downstream river.

Drainage and Wastewater Systems

Drainage and wastewater systems are designed to convey water. There are several different drainage systems, including:

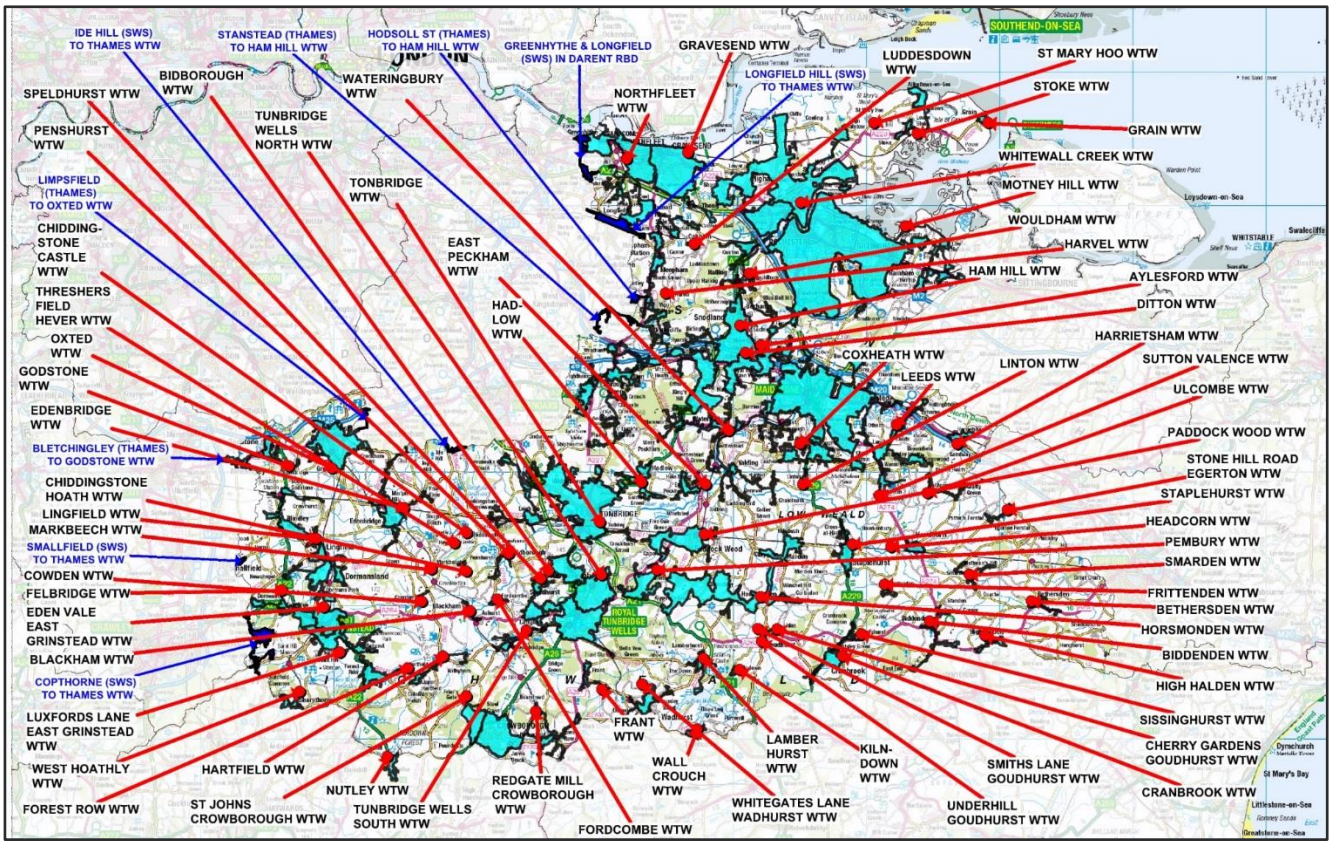
- land drains in fields to drain the land to enable it to be used for agricultural purposes
- highway drainage systems to ensure that roads and car parks remain safe and useable during rainfall
- rivers and streams to transport water running off the land to the sea
- surface water drainage systems that take water from roofs and paved areas to local rivers, and
- sewerage systems that take wastewater away from people's homes and businesses so it can be recycled and released safely back into the environment.

All these systems provide essential services to protect the economy and environment, and ensure public health, safety and hygiene. The links between water use and the management of wastewater is important to protect the wider environment. This excellent independent short film, called "The Drip", shows how the water cycle links everything together.

In the Medway river basin catchment, we own and operate 79 separate sewerage systems that collect wastewater over a geographical area known as a sewer catchment. These are the areas shaded blue on the map, see figure 2 below. Each sewer catchment is drained by a complex sewerage system comprising a network of pipes, pumps and wastewater treatments works (WTWs) that combine to remove wastewater from homes and businesses and re-cycle the water so it can be safely discharged back into the environment. Some of the sewer catchments cross the boundary between our operating area and Thames Water's area – as shown on figure 2 in the blue text. This means that we have 73 sewer catchments, but we only own and operate 69 wastewater treatments works.

Our sewer catchments generally cover the urban centres and communities. Of the 1,843 km^2 of land in the catchment, only 313km^2, or 17%, is covered by our sewer catchments. However, of the 387,742 residential properties and 19,359 businesses within the Medway catchment, 95% of the homes and 87% of the businesses are connected to our sewerage system. Remote rural properties are often not connected to sewerage systems and therefore rely upon a septic tank within their property to collect wastewater before it is periodically emptied by tankers and the wastewater is taken to a WTWs to be recycled.

Figure 2: Map of the Medway Catchment showing the sewer catchment areas (in blue) and locations of the WTWs



Over 4020 km of wastewater pipes serve the Medway catchment with 635 pumping stations within the network to pump sewage into 69 wastewater treatment works (WTWs) for recycling back into the rivers or the sea. Table 1 provides a summary of the 73 sewer catchments within the Medway river basin catchment, including the equivalent population that each sewerage system serves and the approximate length of sewers within the sewer catchment. The Population Equivalent is a measure of the quantity of sewage that the water recycling centre needs to process, and consists of the calculated equivalent number of people who would contribute the amount of sewage from within the sewer catchment from residential and commercial properties.

Of the 69 WTWs in the catchment, nine systems serve more than 30,000 population equivalent per day.

Table 1: Sewerage Catchments in the Medway River Basin Catchment

Sewer Catchment Ref	Sewer Catchment Name	Communities Served	Population Equivalent Served	Length of sewers (km)
MOTN	MOTNEY HILL	Chatham, Bluebell Hill, St. Marys Island, Walderslade, Gillingham, Brompton, Gillingham Business Park, Hempstead, Rainham, Rochester, Allhallows, Burham, Chattenden, Cliffe Woods, Cliffe, Cooling, Cuxton, Halling, High Halstow, Highham, Hoo, Lower Stoke, Medway City Estate, Middle Stoke, St. Marys Hoo, Strood, Upper Stoke, Wainscott, Wouldham, Rochester, Gillingham, Walderslade, Upchurch, Newington, Rainham, Hartlip, Bredhurst	254,144	1,731.383
AYLE	AYLESFORD	Aylesford, Eccles, Quarry Wood, Royal British Legion Village, Maidstone, Allington, Barming, Bearsted, Boughton Monchelsea, Boxley, Chart Sutton, Coxheath, Detling, Downswood, East Fairleigh, Grafty Green, Harrietsham, Hollingbourne, Hunton, Invicta Park, Kingswood, Langley, Leeds, Lenham Heath, Lenham, Linton, Mereworth, Nettlestead, Otham, Pendenen Heath, Sandling, Sutton Valence, Teston, Thurnham, Tovil, Ulcombe, Wateringbury, Weavering, West Fairleigh, Maidstone	127,018	828.632
HAMH	HAM HILL	Aylesford, Ditton, Larkfield, Quarry Wood, Royal British Legion Village, Cuxton, Borough Green, Fairseat, Ightham, Seal, Snodland, Dunks Green, Roughway, Tonbridge, West Malling, Addington, Birling, East Malling, Kings Hill, Leybourne, Offham, Trottiscliffe, Larkfield, Halling, Vigo, Shipbourne, Wrotham, Ightham, Platt, Ryarsh, Upper Halling	61,819	505.981
GRAV	GRAVESEND	Gravesend, Cobham, Meopham, Northfleet Green, Northfleet, Shorne, Southfleet, Vigo	59,928	417.286
NFLE	NORTHFLEET	Gravesend, Cobham, Northfleet Green, Northfleet, Sole Street Southfleet, Greenhithe, Hodsall Street, Swanscombe, Istead Rise, Meopham, Longfield, Rotham, Luddesdown	56,944	430.219
TONB	TONBRIDGE	Tonbridge, Underriver, Brenchley, Charcott, Chiddingstone Causeway, East Peckham, Five Oak Green, Golden Green, Hadlow, Hildenborough, Horsmonden, Leigh, Matfield, Paddock Wood, Penshurst, Roughway, Tudeley, Leigh, Weald	49,838	489.893
WCRK	WHITEWALL CREEK	Rochester, Hoo, Lower Upnor, Medway City Estate, Strood, Upnor, Wainscott, Cliffe Woods, Higham, Chattenden, Shorne, High Halstow, Cliffe	35,114	322.019
TUWN	TUNBRIDGE WELLS NORTH	Tunbridge Wells	31,376	187.330
TUWS	TUNBRIDGE WELLS SOUTH	Tunbridge Wells, Bells Yew Green, Langton Green, Groombridge, Rusthall	31,287	259.165

CRRM	REDGATE MILL CROWBOROUGH	Crowborough, Castle Hill, Mark Cross, Rotherfield, Stone Cross, Town Row, Hardfield, Castle Hill, Mark Cross, Colemans Hatch, Withyham, Eridge Green	20,574	180.188
LIMP	OXTED	Oxted, Limpsfield, Tanridge, Titsey	14,462	135.538
EVAL	EDEN VALE EAST GRINSTEAD	East Grinstead, Ashurst Wood, Dormans Park, Felbridge, Felcourt, Sharpthrone, West Hoathly, Forest Row, Wych Cross	13,683	109.954
LING	LINGFIELD	Felcourt, Lingfield, Blindley Heath, Dormansland, Newchapel, Blindley Heath, South Godstone, Oxted, Crowhurst, Dormans Park, Newchapel, Tandridge	10,878	122.774
DITT	DITTON	Aylesford, Ditton, Larkfield, East Malling	10,519	61.938
PAWD	PADDOCK WOOD	Tonbridge, Five Oak Green, Paddock Wood, Capel, Tudeley, Pembury, Tonbridge Wells, Brenchley	10,429	120.570
EDEN	EDENBRIDGE	Edenbridge, Bough Beech, Cowden, Crockham Hill, Four Elms, Hever, Mark Beech, Mark Beech, Marsh Green, Crockham Hill	10,208	77.647
WATE	WATERINGBURY	Maidstone, Laddingford, Wateringbury, Yalding, Teston, Barming, Mereworth, Nettlestead, Hunton, West Peckham, West Fairleigh, Marden, East Fairleigh, Maidstone, Barming	9,822	166.607
EGLL	LUXFORDS LANE EAST GRINSTEAD	East Grinstead, Ashurst Wood	9,602	103.051
BIDB	BIDBOROUGH	Tunbridge Wells, Southborough, Bidborough	9,496	81.329
COXH	COXHEATH	Maidstone, Boughton Monchelsea, East Fairleigh, Loose, West Fairleigh, Coxheath, Hunton	8,242	72.311
HORS	HORSMONDEN	Tonbridge, Marden, Horsmonden, Matfield, Brenchley, Goudhurst	7,537	133.572
CRAN	CRANBROOK	Cranbrook, Benenden, Frittenden, Goudhurst, Hawkhurst, Kilndown, Newenden, Rolvenden, Sandhurst, Sissinghurst	6,497	36.558
FELB	FELBRIDGE	East Grinstead, Felbridge, Newchapel, Copthorne, Crawley Down	6,466	63.337
PEMB	PEMBURY	Tunbridge Wells, Pembury	6,079	46.570
STAP	STAPLEHURST	Tonbridge, Staplehurst	5,421	56.649
GODS	GODSTONE	Bletchingley, Godstone	5,040	42.626
LEED	LEEDS	Kingswood, Hollingbourne, Leeds, Sutton Valance, Chart Sutton, Langley, Ulcombe Maidstone.	4,127	53.784
FORO	FOREST ROW	Forest Row, Wych Cross, Upper Hartfield, Ashurst Wood	4,090	45.770
SPEL	SPELDHURST	Langton Green, Speldhurst, Tunbridge Wells	3,556	43.207
HADL	HADLOW	Tonbridge, Hadlow, Golden Green	3,437	29.573
EPEC	EAST PECKHAM	Tonbridge, East Peckham	3,090	28.874
LENH	LENHAM	Lenham Heath, Lenham Maidstone, Platts Heath, Sandway	2,919	43.176
HEAD	HEADCORN	Headcorn, Ashford	2,899	20.212
TICE	TICEHURST	Wadhurst, Flimwell, Shovers Green, Stone Gate, Ticehurst	2,899	34.678

WADG	WHITEGATES LANE WADHURST	Wadhurst, Cousley Wood, Durgates, Pell Green, Sparrows Green	2,793	41.106
STOK	STOKE	Allhallows, Rochester, Lower Stoke, Hoo, Upper Stoke.	2,492	41.127
CRST	ST JOHNS CROWBOROUGH	Crowborough, St. Johns	2,258	40.131
BIDD	BIDDENDEN	Biddenden, Ashford, Cranbrook	2,016	28.203
HARR	HARRIETSHAM	Harrietsham, Maidstone, Lenham	1,670	14.423
GRAI	GRAIN	Grain	1,483	17.188
WESH	WEST HOATHLY	Sharpthorne, West Hoathly	1,396	13.822
WOUL	WOULDHAM	Wouldham	1,317	10.984
HIGH	HIGH HALDEN	High Halden, St. Michaels	1,087	17.032
SISS	SISSINGHURST	Cranbrook, Sissinghurst	1,063	11.112
LAMB	LAMBERHURST	Wadhurst, Tunbrdge Wells, Lamberhurst	1,045	20.735
SVAL	SUTTON VALENCE	Sutton Valence	1,008	8.246
HAFD	HARTFIELD	Hartfield, Upper Hartfield, Withyham	853	13.052
BEEN	BETHERSDEN	Bethersden	809	11.395
SMAR	SMARDEN	Smarden	759	15.730
FRAN	FRANT	Frant	720	11.507
ULCO	ULCOMBE	Ulcombe, Grafty Green,	684	14.029
UNDE	UNDERHILL GOUDHURST	Goudhurst	633	4.323
EGER	STONE HILL ROAD EGERTON	Egerton	537	10.559
PENS	PENSHURST	Penshurst, Chiddingstone Causeway	386	8.685
FRIT	FRITTENDEN	Frittenden	382	5.854
FORD	FORDCOMBE	Fordcombe	360	5.928
COWD	COWDEN	Cowden	335	4.031
KILN	KILNDOWN	Kilndown	323	3.500
BLAM	BLACKHAM	Ashurst, Blackham	308	6.291
CHER	CHERRY GARDENS GOUDHURST	Goudhurst	277	2.540
LINT	LINTON	Linton	248	4.896
SMIL	SMITHS LANE GOUDHURST	Goudhurst	227	2.474
TWIH	IDE HILL TO THAMES	Ide Hill	182	0
WALL	WALLCROUCH	Ticehurst, Wallcrouch	168	1.029
CHIH	CHIDDINGSTONE HOATH	Chiddington Hoath	143	3.502
TWSM	SMALLFIELD	Smallfield, Horne	117	2.047
LUDD	LUDDESDOWN	Luddesdown	103	1.035
HARV	HARVEL	Meopham	55	0
MBCH	MARKBEECH	Mark Beech, Hever	49	0.544
TWLH	LONGFIELD HILL TO THAMES	Longfield Hill	41	0

STMH	ST MARY HOO	St Mary Hoo	30	0.763
CHCA	CHIDDINGSTONE CASTLE	Chiddingstone	27	0.772
THFI	THRESHERS FIELD	Hever	20	0.391

Motney Hill sewerage system includes 31 wastewater pumping stations in the network to transport the water through the gravity sewers mainly in east, south and west of the catchment from homes and businesses to the treatment works. The sewage is then recycled and then discharged into the Medway estuary.

Aylesford WTW has 40 wastewater pumping stations in the network to transport the water through the sewers from homes and businesses to the treatment works. The works operates under a Waste Management Licence and receives tankered trade waste for treatment. The permitted to discharge 25,352m^3 of recycled water per day back into the River Medway.

The Ham Hill WTW catchment spreads out in a large area including Halling, Holborough, Snodland, Larkfield, West Malling and Kings Hill. There are mostly gravity sewers but there are over 30 wastewater pumping stations followed by short rising mains in the network to transport the water through the sewers from homes and businesses to the treatment works. The work processes and recycles the water before it is discharged into the Medway estuary. The works is permitted to discharge 12,200m^3 of recycled water per day.

Gravesend WTW serves communities along the south bank of River Thames neighbouring Northfleet Catchment to the west. The south boundary of the catchment is roughly along A2 with small section on the south side of the motorway. There are 11 wastewater pumping stations in the network to transport the water through the sewers from homes and businesses to the treatment works.

The Tonbridge catchment serves Tonbridge and a large surrounding area with an equivalent population of 49,838. The network is mainly a gravity system although sub-catchment sewage is transferred by 22 wastewater pumping stations to the treatment works.

The Tunbridge Wells South catchment serves the southern part of Royal Tunbridge Wells with an equivalent population of 31,287. The network is mainly served by gravity sewers and has 13 wastewater pumping stations.

The Environment Agency (EA) sets limits on the quality and quantity of recycled water (known as effluent) that can be discharged from WTWs. The EA issues discharge permits to ensure the recycled water released from WTWs complies with three main legal provisions

(i) The Water Resources Act (WRA) 1991;
(ii) The Environmental Permitting (England and Wales) Regulations 2010 and
(iii) The Urban Wastewater Treatment Regulations (UWWTR) 1994.

The permits ensure that the quality of the receiving water (i.e. the river or the sea) is protected and that the discharges do not cause an unacceptable impact on the environment. The flow that may be discharged (released) in dry weather is one of the limits set by permits. Our 69 WTWs operate in accordance with their permits and recycle the wastewater to the specifications set out by the EA to ensure it is safe and clean to be released back into the rivers and streams or directly to the sea.

Under heavy storm conditions, rainfall can enter the sewerage systems and significantly increase the flow in the system. The flow of water arriving at the WTWs can exceed the recycling capacity of the works, so any excess water is temporarily stored in large storm tanks. If these tanks ever fill to capacity, then they would discharge water into the rivers or sea through storm overflows. Our aim is to prevent any discharge of water that has not been fully recycled to the required standards. Any water released from storm tanks is screened to remove items such as wet wipes and solids. These discharges are permitted by our regulator and monitored carefully. This control mechanism is required to prevent the backing up of water within the sewers and putting homes at risk of flooding.

Wastewater System Performance

We routinely monitor, analyse and report the performance of our wastewater sewerage systems to enable us and our regulators to assess the service provided to our customers and the impact of our activities on the environment.

The current performance on the sewerage systems is a good starting point for the DWMP, and enables current issues to be highlighted so the planning objectives can be identified and defined for use throughout the DWMP. These planning objectives will determine the metrics that we used in the next stage of the DWMP, which is to determine the current and future risks to people, property and the environment of changes in the river basin catchment and in the performance of our sewerage systems.

The current performance, based on the last three years of date, is summarised below.

Sewer Blockages

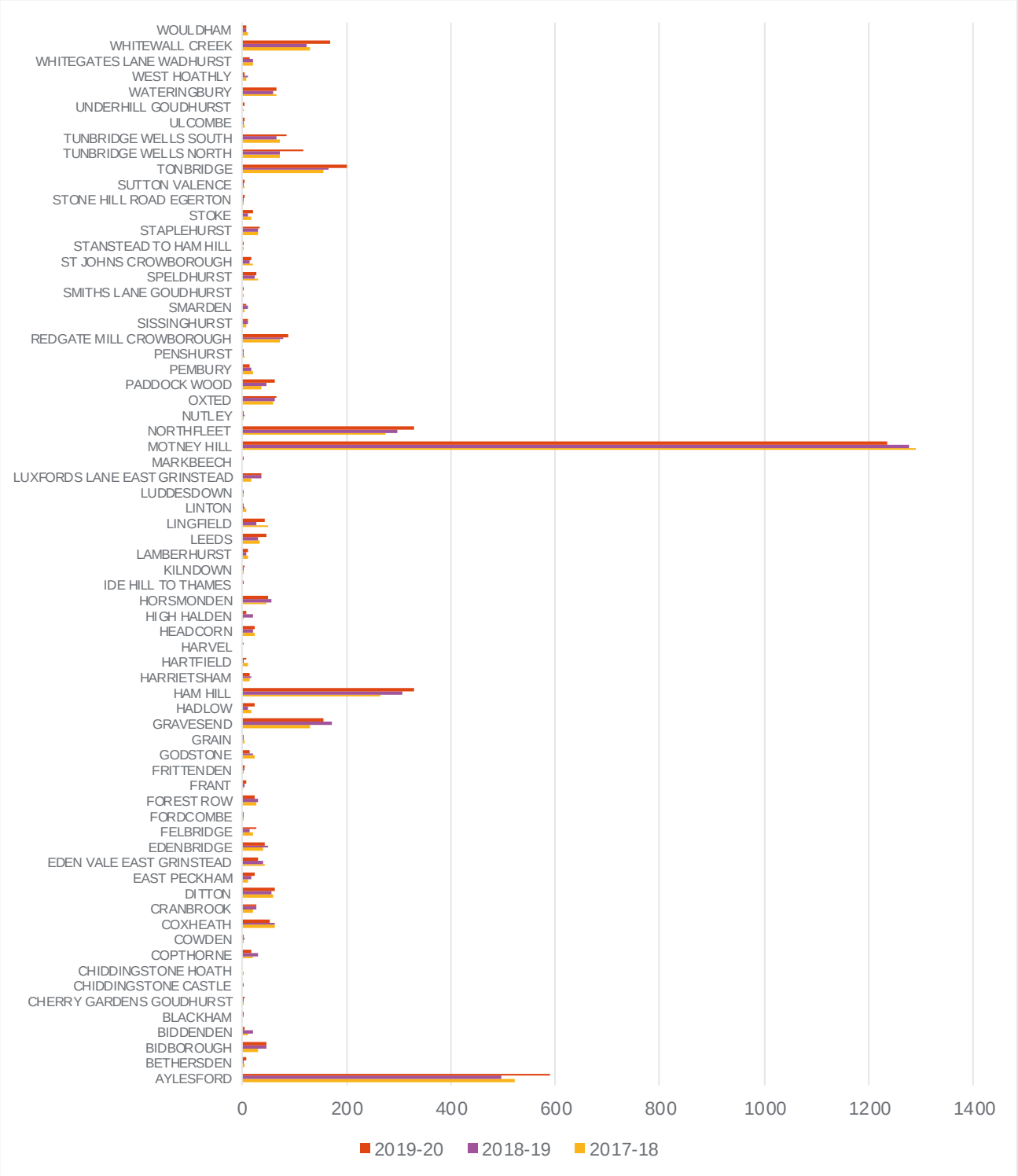
Every year there are thousands of avoidable blockages in our sewers caused by the flushing of wet wipes, cotton buds and other inappropriate items down the toilet, or by pouring fat, oil and grease down the sink. These items cause blockages within the sewer systems, and these blockages can result in flooding to customers' properties or impact upon watercourses or coastal waters.

Figure 3 shows the number of blockages recorded in the Medway river basin catchment. We have noticed an increasing trend in the number of blockages over the last three years, which we are tackling through our pollution and flooding reduction programmes.

Motney Hill, Aylesford and Ham Hill had the highest number of blockages.

We use high-powered water jets to clear blockages and ensure our sewers are running freely. In 2015, we launched our 'Keep it Clear' campaign which involves teams visiting 'blockage hotspot' areas to educate customers on how to safely dispose of items rather than putting them down their sinks or toilets. We visit almost 20,000 customers a year across the region to promote correct disposal of 'unflushable' items.

Figure 3: Number of blockages in each of the sewer catchments in the Medway river basin catchment

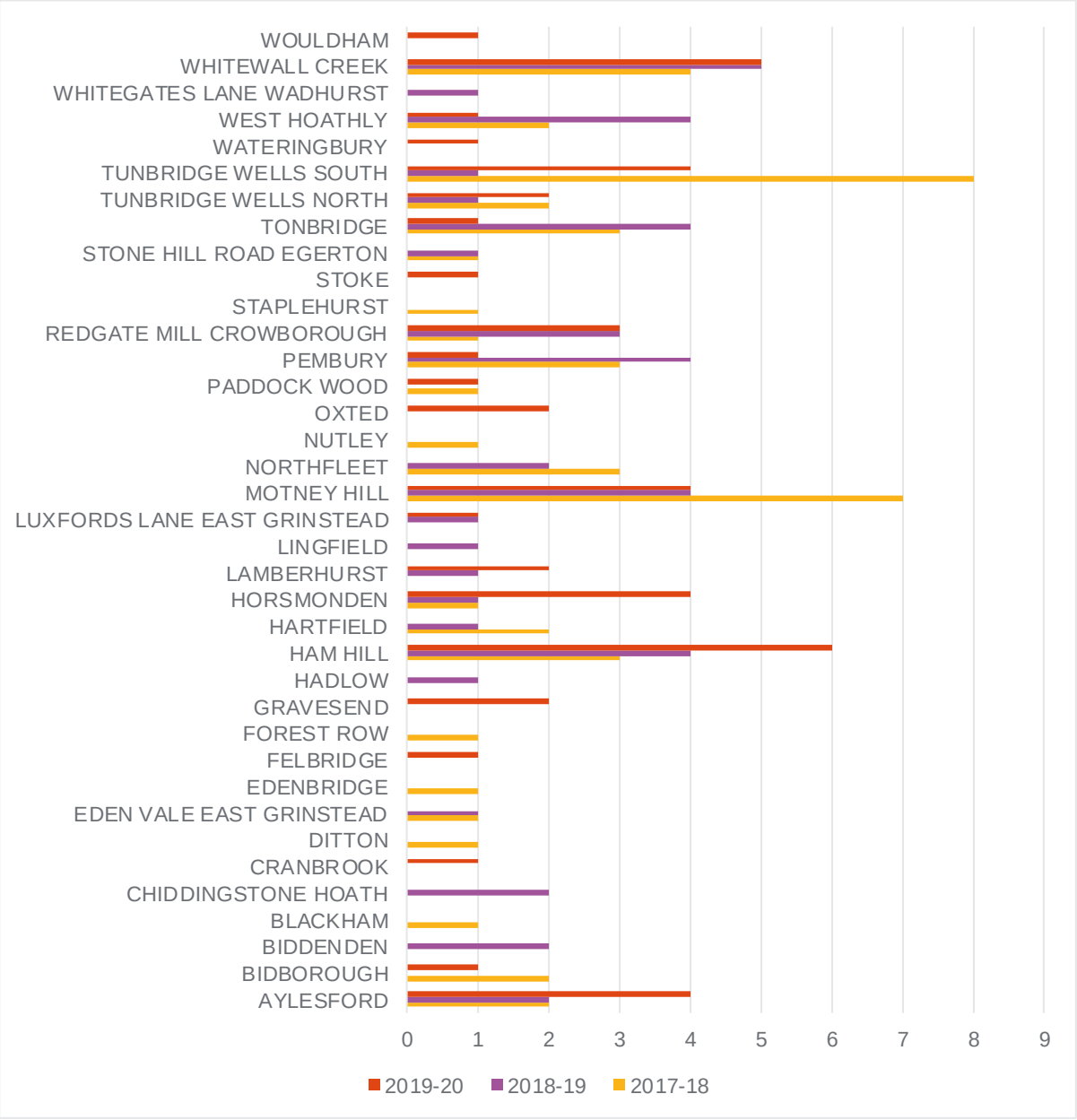


Sewer collapses and rising main bursts

Figure 4 shows the number of sewer collapses and rising main bursts recorded by our Sewer Incident Reporting for public sewers in the Medway river basin catchment over the last three years. Rising mains contain wastewater that is pumped under pressure from our wastewater pumping stations towards the treatment works.

The majority of these collapses and bursts were in Ham Hill, Whitewall Creek, Aylesford and Horsmonden. A collapse or burst can result in a discharge to the environment or flooding. We have an ongoing programme to inspect (by CCTV), replace or refurbish ageing sewers at high risk of collapse or where bursts are likely.

Figure 4: Number of incidents of sewer collapses and rising main bursts in the Medway River Basin by sewer catchment



Flooding Incidents

The most common cause of flooding is from blockages of debris such as wet wipes. However, flooding can also occur in wet weather when the sewerage system becomes overloaded due to rainwater entering the sewer system.

Within the Medway river basin catchment, several of our sewer catchment have both separate and combined sewer systems to carry wastewater. Combined systems convey both sewage from homes and businesses as well as rain and storm water collected from roofs and hard paved areas. During heavy rainfall, the capacity of combined sewers can be exceeded and lead to localised flooding as a result of the water backing up the system to the closest available escape route: manhole, toilet, sink, basement etc. In some combined sewer systems where flooding of properties could occur in heavy rainfall, there are built in overspill weirs, called storm overflows, which release excess water into rivers to prevent flooding of homes or businesses. Storm overflows (also known as Combined Sewer Overflows) are permitted by the Environment Agency to operate in certain conditions. The majority of storm overflows have equipment installed to record the number of times that water passes through the storm overflow. We monitor these carefully and report this information to the Environment Agency. There are 264 combined sewer overflows in the Medway catchment.

Figures 5 and 6 show the number of internal and external flooding incidents respectively over the last 3 years in the Medway catchment (note: only sewer catchments where flooding incidents have been recorded are shown in these figures). For the purpose of the DWMP, sewer flooding is defined as incidents caused by an escape of water and sewage from a public sewer due to a blockage, sewer collapse, rising main burst, equipment failure or from too much water entering the system (known as hydraulic overload). Importantly, the definition of sewer flooding excludes extreme storms with a probability of occurring of less than once in 20 years (i.e. less likely than a 5% chance in any given year). Internal flooding occurs inside a building or cellar, whilst external flooding occurs within a curtilage (garden) or on a highway or public space.

Of the 387,742 homes connected to the 73 sewer systems within the Medway river basin 70 properties experienced some form of internal flooding (including sewage backing up into a bath or shower tray) during the financial year 2019-20. This figure is down from 76 properties that experienced flooding in 2017-18. The data shows there have been an increase in the number of floods from the sewer network in Wateringbury, East Peckham and Chiddingstone catchments which we are targeting in our flooding reduction programme.

Figure 5: Internal Sewer Flooding within Properties by sewer catchment (number of incidents)

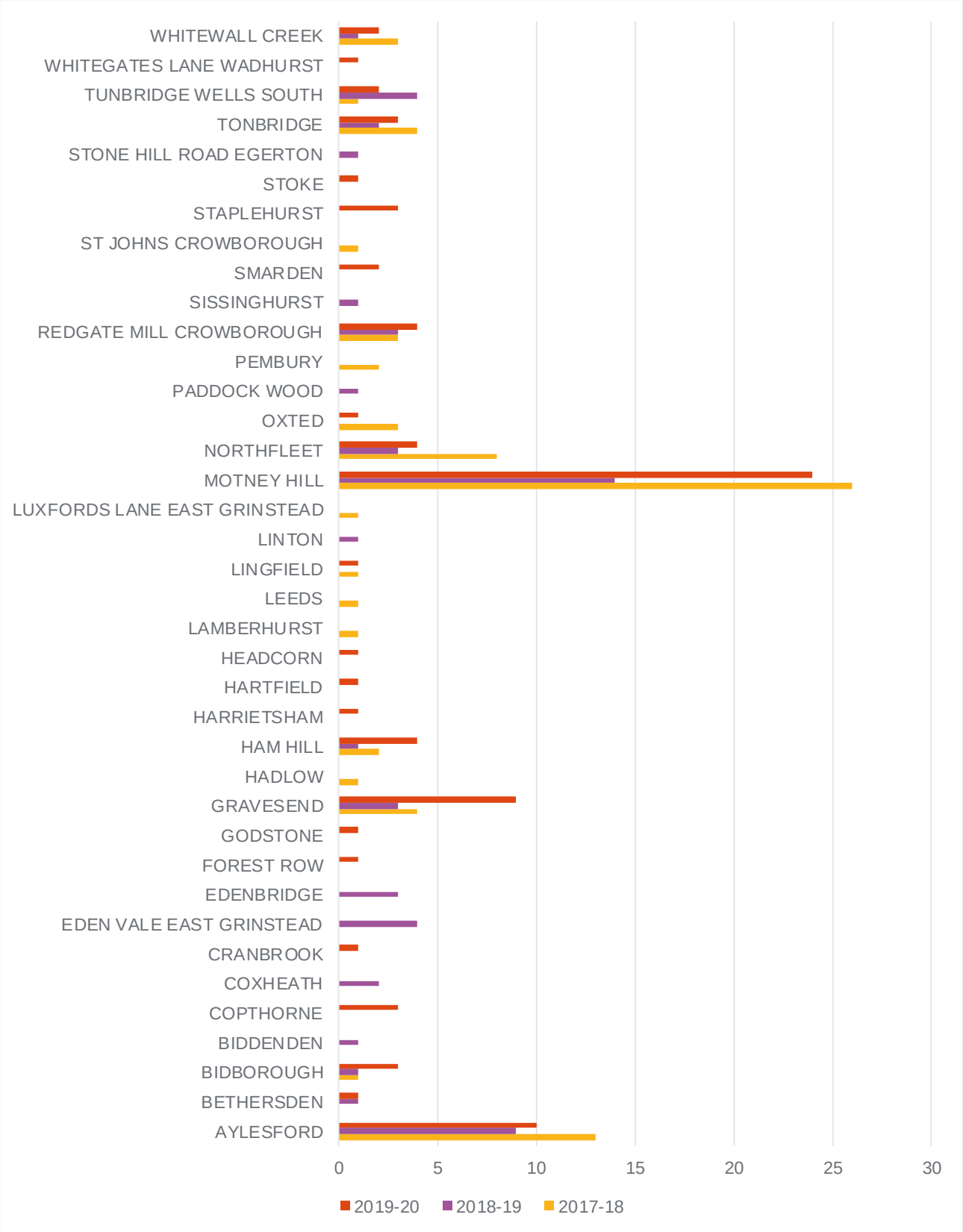
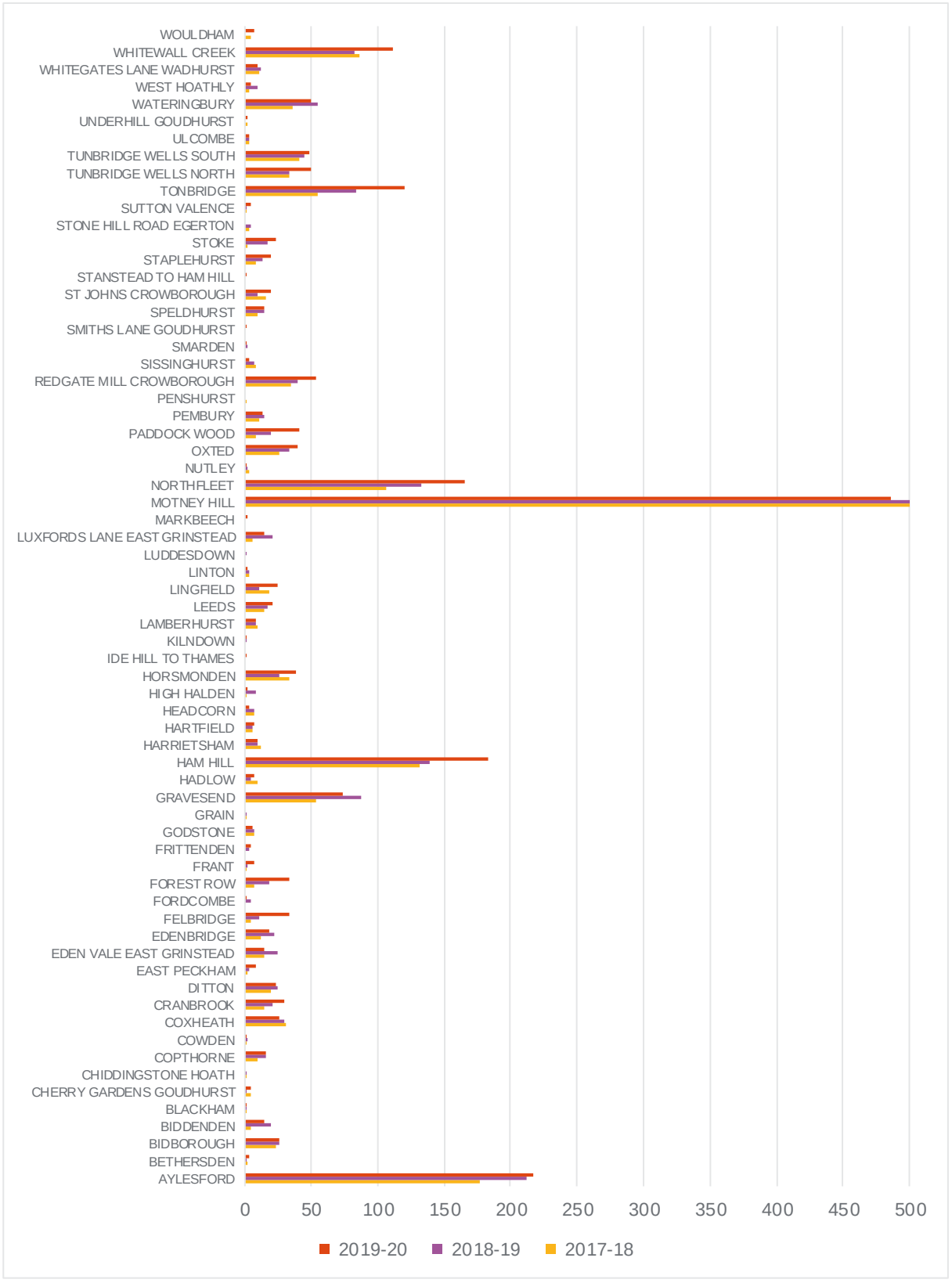


Figure 6: External Flooding within the curtilage of a property (not inside) by sewer catchment in the Medway river basin (number of incidents)



Pollution Incidents

Reducing the number of pollution incidents is a priority for us, our customers and our stakeholders. We have set the target to reduce the number of pollution incidents across the whole of our operating region to 79 incidents by 2024-25, and our aim by 2040 is to have zero pollution incidents. To achieve this we have created an extensive pollution incident reduction plan with the Environment Agency to significantly reduce pollution over the next five years in line with industry targets.

Pollution incidents connected with our wastewater assets (e.g. blocked sewers, pump failures) are reported to the Environment Agency.

The impact an incident has on the environment is categorised into one of four categories using the Common Incident Classification System (CICS). More information on the classification system can be found on the Ofwat website here. There are four categories for pollution incidents: 1 (major), 2 (significant), 3 (minor) or 4 (no pollution). Only category 1, 2 and 3 pollutions are reportable.

We continue to investigate the root causes of pollution incidents. Our improvements in monitoring of assets and data collection are informing our Pollution Reduction Programme and resulting in more pollutions being prevented. We have also strengthened our incident response team and arrangements to improve our response and reporting of a potential pollution incident.

In addition, our new Environment+ programme looks at all aspects of environmental compliance and performance. Our focus on wastewater treatment works compliance will bring about improved river quality, reduced pollution incidents and flooding, and enhance bathing water quality.

We publish pollution data in our Annual Report and on our website. However, we are not yet at the stage where we can publish that data in greater detail or make further detail publically available. To do so would also require the agreement of the Environment Agency as they provide some of the information. We are currently being investigated by the Environment Agency in relation to pollution events, and the management of some of our wastewater treatment works, so what we can say about these at this time is limited.

Wastewater Treatment Works Compliance with Permits

The Environment Agency sets limits on the quality and quantity of recycled water from WTWs entering rivers or the sea so the water does not cause an unacceptable impact on the environment. The flow that may be discharged in dry weather (known as Dry Weather Flow) is one of these limits. Dry weather flow (DWF) is the average daily flow to a wastewater treatment works during a period without rain. Exceedances of the DWF can be caused by a number of factors, but it can be due to the additional flow from new development in the sewer catchment. To enable further development, we work with planning authorities to understand where future development is planned and include growth schemes in our investment programme so we can increase the capacity of WTWs and continue to comply with our permits in the future.

We must comply with permits issued by the EA. Where we do not meet the permit requirement, we call this a compliance failure. In the Medway catchment, there have been no water quality compliance failures over the last three years.

We are investing in improved operational resilience to maintain wastewater treatment compliance at a high standard by achieving 99.0% as a minimum, but continuing to aim for 100% compliance.

Southern Water
October 2022

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