COMMUNITY LEADERSHIP OVERVIEW & SCRUTINY COMMITTEE

28th JANUARY 2025

REPORT OF ASSISTANT DIRECTOR OF HOUSING & ENVIRONMENT

A.1 WATER QUALITY IN THE TENDRING DISTRICT

(Report prepared by *Grant Fenton-Jones)*

PURPOSE OF THE REPORT
To examine evidence around water quality in the District – including sea water, freshwater courses and drinking water.

INVITEES
Contact was made with the following organisations: **Environmental Agency** **Maritime Marine Organisation** **Harwich Haven Port Authority** **Brightlingsea Harbour Commissioners** **Surfers Against Sewage** **Internal Services within Tendring District Council, inc Leisure, Assets, Emergency Planning and Environmental Health** **Discussion with the Portfolio Holder for Environment – Cllr Adrian Smith (*in attendance*)** The above organisations will not be in attendance but have provided specific data that can be viewed within the body of this report, and where appropriate, in the attached Appendices at the end of this report. No response was received from Surfers Against Sewage or the Maritime Marine Organisation. The Harwich Haven Port Authority do not have responsibility for monitoring Water Quality, so therefore, no data was provided by them.

BACKGROUND
The purpose of this report is to provide statistical evidence and data with regard to the quality of Seawater, Freshwater Courses and Drinking Water within the district of Tendring. The data collated has been obtained via the above external organisations, along with further information on water quality and data around Private Water Supplies and Oyster

beds provided by the Council's Environmental Health Service. It is proposed that The Community Leadership Overview & Scrutiny Committee scrutinise the evidence and data presented as part of this report and make recommendations to the Portfolio Holder for Environment and for formal Cabinet to discuss.

DETAILED INFORMATION

The Community Leadership Overview & Scrutiny Committee will srutinise the evidence and data provided as part of this report regarding water quality in different settings, and look at the measures that have been implemented within the district with a view to consider the appropriateness of those measures.

Water quality is of paramount importance in any setting but especially so in districts or boroughs that are seaside tourist destinations like Tendring. It is important those councils aim for continuous improvement with regard to their bathing waters. Therefore, scrutinising evidence and data around the aforementioned areas supports the following themes from the Council's Corporate Plan 2024-28 and annual Cabinet highlight priorities:

- **Championing our local environment**
- **Pride in our area and services to residents**
- **Working with Partners to improve quality of life**
- **Promoting our heritage offer, attracting visitors and encouraging them to stay longer**

Bathing Water (Sea Water) - Environment Agency

A lot of specific data can be accessed via the **Water Quality Archive** which provides data on water quality measurements carried out by the Environment Agency. Samples are taken from sampling points round the country, including: agricultural, coastal, estuary, rivers, lakes, ponds, canals, sewage discharges, trade discharges, pollution investigation points and waste sites. Samples are then analysed by laboratories to measure aspects of the water quality or the environment at the sampling point. The archive provides data on these measurements and samples dating from the year 2000. It contains 58 million measurements on nearly 4 million samples from 58 thousand sampling points. Currently, the data does not include all groundwater data nor externally supplied data.

Specific scientific data regarding the quality of bathing water in the Tendring District can be found using the following link provided by The Environment Agency: (Open Water). Open WIMS data

Information and data regarding bathing water quality in the district for the past five years has been arranged by area and is contained within **Appendix A** at the end of this report.

Anglian Water

The Environment Agency are responsible for water quality, which includes both rivers and seas, however, Anglian Water (AW) work closely with them regarding bathing water quality. Information about bathing waters can be found on Defra's data services platform – https://environment.data.gov.uk/bwq/profiles/

Clacton and Walton regained excellent classification, but there is some further information below regarding the bathing waters at Manningtree and Holland-on-Sea that received a disappointing classification this year:

Manningtree Beach

Anglian Water is disappointed with the "**Sufficient**" classification at Manningtree Beach this year. Their assets in the area were not active at or before the times when elevated results were recorded this year, but they will do more work to investigate the causes of these elevations. Anglian Water have proposed an investigation into potential impacts from their infrastructure and the wider environment in their business plan for 2025-30, which is currently with Ofwat for approval.
Although they know the result is not related to their assets, they recognise that they have an important role to play in supporting tourism and residents' enjoyment of our region's coastline, and they are committed to working with other agencies to ensure all our region's bathing spots have the best possible water quality.

Cold WaterSwimming – Mermaids

Mermaids are a group spearheading a campaign, SWiM (Safe Water in Manningtree), to improve water quality, with a goal to stop pollution entering waterways and the group's precious swimming areas. 'The problem is that there is no way of identifying where the pollution is coming from. There are three combined sewer overflows (CSOs), which are upstream from the swim location, and the Manningtree Water Recycling Centre is nearby.

Only one of these is monitored by Anglian Water, and monitoring only began in April 2022. As well as the CSOs, there is a pipe that releases treated effluent from the Water Recycling Centre, which should be safe to swim in. The CSOs should only be used as an emergency release if there has been lots of rain but the Environment Agency has said that water companies are discharging far too much. There could be an issue with not enough storage space; another problem may be an increase in houses using the system.' or future new builds to meet government targets.

The group is working with Surfers Against Sewage and led a protest day in April 2022 to highlight the problem. It inspired the group to start focusing on what it could do to find out the state of the water at Manningtree beach – part of an Area of Outstanding Natural Beauty (the Stour) and how to improve it.

Through the campaign the group are applying for bathing water designation off Manningtree beach. If the designation is secured, the Environment Agency will have to test the water on a weekly basis during the bathing season from May to September. If they find high levels of harmful bacteria, E coli and intestinal enterococci, they will have to find the source and whatever organisation is polluting the water will have a legal obligation to clear it up. It will mean swimmers will be taking their morning dip in cleaner water and it will protect the area for the next generation.'

Despite more than 400 coastal locations around the UK that have been given bathing water designation, only a handful of rivers are included. 'It is important to know what they're doing and if they're doing it correctly. The local sailors are now involved, as well as the kayakers and paddleboarders.

Holland (dropped from excellent to good)

It is disappointing to see that Holland has lost its 'Excellent' status this year. Despite only experiencing one elevated result over the past twelve months, this bathing water has been impacted by an unusually high result in 2023 that was not linked to Anglian Water infrastructure. Although this result is not related to AW assets, they recognise that they have an important role to play in supporting tourism and residents' enjoyment of our region's coastline, and they are committed to working with other agencies to ensure all our region's bathing spots have the best possible water quality.

A breakdown of the above two locations ratings can be found in **Appendix A** at the end of this report.

Emergency or Storm Overflows

The majority of sewers in England are "combined sewers" and carry both sewage and surface water from roofs and drains. A storm overflow operates during heavy rainfall when the sewerage system becomes overwhelmed by the amount of surface water. The overflow prevents sewage from backing up pipes and flooding properties and gardens. An emergency overflow will only operate infrequently, for example due to pump failure or blockage in the sewerage system.

Between 1988 and 2000 large parts of the sewage infrastructure were significantly upgraded. There remains a storm and emergency discharge near the north east end of the Clacton beach, known as the Gunfleet outfall, which may operate during periods of extreme rainfall. This bathing water is included in the Surfers Against Sewage "Safer Seas Service". This service can alert you to Combined Storm Sewer Overflow discharges via a phone App and in addition, it includes the Environment Agency Pollution Risk Forecast warnings where they are available. Further details of the service can be found at - http://www.sas.org.uk/safer-seas-service/

Anglian Water have now received final determination from Ofwat. Over the coming weeks they will be reviewing the feedback in detail and continuing discussions with Ofwat as necessary. However, they have provided some information on their proposed investment within the Tendring District – Between 2025 and 2030 they are proposing to invest £70.4 million across the district.

Below are proposed figures to improve River and Bathing water quality are:

- Over £19 million to reduce spills from Brightlingsea LWR Park storm overflow
- Over £17 million to disinfect final effluent from the Manningtree Water Recycling Centre to protect the bathing water in the River Stour estuary from bacteria
- Spill reduction schemes also planned at Jaywick Water Recycling Centre, Frinton Upper Second Avenue, Brightlingsea Lower Park Road, Brightlingsea Spring Road and Brightlingsea Station Road.

They are unable to confirm this proposed investment until they have finished reviewing Ofwat's feedback. They have agreed to provide an update in early 2025.

Anglian Water are in the process of doing a lot of upgrades to sewage treatment works within Tendring with additional treatment for the removal of phosphorus.

In addition, Anglian Water are looking to install a new very large attenuation tank underneath the grass overflow car park TDC own to the rear of Bath House Meadow/Walton Leisure Centre. TDC staff are working closely to support this and one of the benefits is that it should improve the sea water quality off the coast in Walton and Frinton. Current timeframe is around 12 months for construction which will begin towards the end of 2025/early 2026. Anglian Water are currently still in the design phase of this project.

Housing Demand

A further area that needs to be taken into consideration is that of Housing supply and the impact it may have in the future.

To ensure we meet with Government targets for building new homes, it is imperative that Anglian Water's show a willingness to grant Discharge Consents. This is necessary and is a significant factor in achieving the required growth in housing supply.

Anglian Water – Support to TDC

From an emergency planning perspective Anglian Water provides support as a Cat 2 Responder under the CCA, both through the Local Resilience Forums, and to individual agencies to help plan for and respond to incidents related to Water and Water Recycling services, or events that may cause effects on these.

Should a flooding event occur, they help identify if this was caused by a sewage asset and can respond to asset issues by undertaking activities such as tanking. They also take actions to mitigate the effects of flooding on the sewage system where possible. Where sewage systems are inundated with significant flooding (such as tidal issues), they will ensure the sewage system is recovered once the flooding has subsided to manageable levels. During those events they work with the Local Authority and are part of the ERF flood response.

For drinking water events, these can broadly be split into two groups, Water Quality Events and No Water Events.

Should the drinking water fail water quality tests, water companies will generally issue a Boil Notice to the customers in question. Depending on the area and duration of the event, vulnerable customers may be provided with an alternative supply at this time.

For No Water events, the Security and Emergency Measures Direction (SEMD 2022) and relevant Emergency Planning Guidance states that Water Companies should provide an alternative supply to domestic customers at a rate of 10 liters per head per day, raising to 20 Liters per Head per Day after 5 days. Water Companies also operate a robust Mutual Aid system should a large scale alternative supplies response be required.

In both cases, water companies will give due consideration to larger vulnerable institutes in the affected areas such as Hospitals and Prisons, and will work with Local Authorities and Local Resilience Forums to support the communities affected by such events.

Anglian Water has strong links to the District and County Emergency planning so are available to help and advise during flooding events (and planning for such events).

Brightlingsea Harbour Commisioners (BHC)

BHC do not gather data on water quality as a matter of course, however they do a great deal of work with others that do. The harbours water quality is measured by the EA https://environment.data.gov.uk/bwq/profiles/profile.html?site=ukh3311-11700 and the data is available in **Appendix A**.

Over the years they have completed many projects regarding Oysters, where they have monitored water quality.

More recently they have considered the impact of Scrubbing the hulls of yachts/boats on the water quality. Essex university is carrying out some research which is attached as **Appendix F**. It is hoped that evidential outcomes will shape future policy.

Harwich Haven Port Authority

Harwich Haven Authority do not undertake any monitoring of water quality, and therefore, they were unable to provide any data to form part of this report.

Surfers Against Sewage

There has been no response from Surfers against Sewage following a request for data they hold and any campaigns they are currently promoting. Data on their website only covers 2023 and updates for 2024 are not available.

Held data highlights that there are no rivers or bathing waters within Tendring that feature in the top 20 worst performance nationwide.

There was a 63% difference between the worst and best performing water companies in 2023, with South West Water crowned as the worst and Anglian Water as the best for average spills per asset. Future spills forecasting of what average spills per asset might look like in 2030 and 2035 have been completed, and can be found at **Appendix B**.

The data shows that if present levels of spills continue, there will be an expotential increase for some water companies, whilst others will improve. This will create a wider disparity and difference in spills by the water companies. The data shows Anglian Water will be the cleanest by some fair stretch.

Private Water Supplies

Tendring District Council (Environmental Health) are the regulators of Private Water Supplies (PWS) within the district. The Environmental Protection team are responsible for monitoring and sampling PWS under The Private Water Supplies (England) (Amendment) Regulations 2018.

https://environment.data.gov.uk/water-quality/view/landing. (Ground Water)

Private Water supplies are properties that are not connected to mains water (not billed by Affinity Water) and their drinking water is from a borehole, well or spring.

Within Tendring there are a total of 141 properties on a Private Water Supply. They are broken down as follows:

- 10 x Regulation 9 supplies (commercial supplies)
- 43 x Regulation 10 shared supplies
- 88 x Regulation 10 single supplies

PWS within the district are risk assessed and sampled by Officers from the Environmental Protection team. Risk assessments and sampling is routinely completed by Officers in line with the relevant legislation, to ensure that drinking water is safe and wholesome. Officers ensure that the appropriate treatment, maintenance and mitigation is undertaken at each supply to ensure the drinking water is safe. The quality of the water and type of treatment required will be dependent on the supply type.

A well is more likely to be contaminated with microbiology parameters (E.coli) and a borehole is likely to be contaminated with metals. The water quality will also be influenced by the local geology, surrounding area, land use, localised contamination, fertilisers and pesticides use, and much more.

If drinking water is found to be unsafe or unwholesome formal enforcement action can be taken by the Council, by serving enforcement notices under section 18 or 80 of The Water Industry Act 1991. The notices may require the resident to install treatment, clean water storage tanks or connect to a mains supply.

This year only one exceedance was found and this was a test sample to determine the quality of the water – no formal enforcement action was taken as the supply is served by a main water supply and the owners requested sampling from a well at their property.

The sampling and monitoring routine is dependent on the supply type and set out in legislation:

- Regulation 10 single supplies: Only risk assessed and sampled at the resident's request
- Regulation 10 shared supplies: Risk assessed every five years and supplied every five years.
- Regulation 9 commercial suppliers: Risk assessed every five years and supplied at least once a year.

- Regulation 10 supplies are sampled for Enterococci; Escherichia coli (E. coli), Conductivity, Hydrogen ion (pH value), Turbidity, (plus other parameters determined by the risk assessment or at the request of the resident)

- Regulation 9 are sampled for Ammonium, Coliform bacteria, Colony counts, Conductivity, E. coli, Hydrogen ion (pH), Odour, Taste, Turbidity, Boron, Chloride, Clostridium perfringens (including spores), Chromium, Colour, Conductivity, Copper, Enterococci, Iron, Lead, Manganese, Nickel, Nitrate, Nitrite, Sodium and Sulphate. (plus other parameters determined by the risk assessment)

The legislation changed in January 2024 and the Council are now also responsible for risk assessing and sampling all Regulation 8 supplies. This is where mains water is further distributed, and a resident receives mains water indirectly by a third party. This includes some caravan's parks and mobile home sites (protected sites). This is change of legislation has significantly increased the Environmental Protection's team statutory workload.

Currently, the Environmental Protection team are reviewing the potential Regulation 8 supplies within Tendring alongside the water authority. The Environmental Protection team will look to start undertaking risk assessments and sampling next year. Regulation 8 supplies are considered low risk due to the water supply being a mains supply. Sampling and risk assessment will be undertaken on a priority and risk basis.

Mains Drinking Water

Affinity Water (AFW) release yearly data reports for particular zones within Tendring and the current data is attached at Appendix B at the end of this report. Generally, the water quality within Tendring is good, albeit hard which can fluctuate across the district.

The attached data sheet (**Appendix C**) highlights that there are no "remarkable results" that are a cause for concern. Environmental Health (Environmental Protection Team) continue to work closely with AFW in relation to "Water Quality Exceedance" notifications concerning dwellings within the area.

Below is a link to the AFW website that provides a break down of data for the year and an overview of the district. (https://www.affinitywater.co.uk/water-quality/quality-in-your-area)

Currently, there is a tier 2 exceedance of Polyfluoroalkyl Substances (PFAS) within the mains drinking water in Tendring. There is a lot of legislation change around abstraction of drinking water from ground sources, and the drinking water in Tendring currently comes from two boreholes in Dedham, but Affinity Water are looking to abstract more water from Ardleigh Reservoir. Affinity Water keep us updated on any exceedance or issues with the main drinking water network in Tendring.

What are PFAS and what is PFAS testing?

Per- and polyfluoroalkyl substances (PFAS) are a set of manufactured substances that have been used since the 1940s in various industrial and consumer products like nonstick cookware, stain repellent clothing, food contact materials, detergents and other cleaning products, as well as firefighting foams. Their industrial utility is due to their strong carbon-fluorine bond, and as a result these PFAS compounds were thought to be very inert and stable. Unfortunately, that also means that they do not break down in the environment and can stick around for decades. Therefore, PFAS have become pervasive and present throughout ecosystems and our daily lives. PFAS testing methods, like EPA methods for chemical analysis of water and wastes, are needed for quantification and screening of PFAS in the environment, for example, for water and soil quality.

Affinity Water have plans for continual improvement and will continue to replace old and defective pipes and fittings as necessary across the Tendring district.

Oyster Bed Water Quality

Officers from the Food & Safety Team are responsible for the sampling of Oysters and the associated water to ensure any shellfish on sale for public consumption is fit and safe to eat. Below is a breakdown of what Environmental Health staff complete as apart of their shellfish sampling program:

- Classification of 3 oyster beds, all are situated in the Walton Backwaters.

- 2 sets of samples are taken per month. 1 set goes to the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) and a further sample goes to the Food Standards Agency (FSA).
- CEFAS samples are sent in one oyster sample bag and are tested for biotoxins. This sample is from the Twizzle.
- There is also a water sample which is tested for Phytoplankton taken from the site. Water tests are taken from 1st April to 30th September fortnightly.
- FSA samples - 1 sample taken from each bed (Twizzle, Kirby Creek and The Wade) monthly for classification purposes. We must take at least 8-10 samples to ensure they do not lose their classification.
- The harvesters have to sign an agreement to say they agree to collect the sample, give us the time, date, location of exactly where the sample has been collected from including a photograph. They then provide us this information when back onshore.
- Each batch of oysters going to market, or to be sold have to have a Shellfish Record Document (SRD). One is kept by the harvester, one goes with the shellfish being sold and the other goes to the Local Authority (TDC) where we keep hold of it. This is for traceability of that particular shellfish batch.
- We currently have an ongoing application for the waters in Brightlingsea to be reclassified. We are waiting on further direction from the FSA regarding further steps we may need to take.

Water samples taken them from Walton back waters for the past two years have indicated no failings . We collect these every 2 weeks in the summer, and once a month in winter . They are taken by Titchmarsh Marina which is near the backwater beds that are fished. These are submitted to CEFAS and they will only let us know if there are high readings, or they are above allowed parameters.

Sanitary Reviews for the Colne (2021) and the Walton Backwaters (2023) are included at **Appendix D**.

Emergency Planning (EPS)

Coastal Pollution is one of the risks the Emergency Planning team consider.

Risk Assessment

The National Security Risk Assessment has maritime pollution as one of its considered risks. This risk also appears on the Essex Resilience Forum (ERF) Community Risk Register, and again on the TDC Emergency Planning Risk Register.

Plans

Along with our Generic Emergency Plan, TDC has a Coastal Pollution Plan (currently under review, following a review of the ERF Strategic and Tactical Coastal Pollution Plan review).

Liaison

Part of EPS' work is our very close liaison with the Maritime and Coastguard Agency (MCA) Counter Pollution and Salvage Team (CP&S) and our Local Ports and Harbour Authorities.

TDC is a member of the Haven Oil Working Group (HOWG), a multi-agency group whose membership includes the ports and harbours within the Harwich Haven area and up to Ipswich, MCA, Emergency Services, Local Authorities and others. The group meets 6 monthly and provides an opportunity to share learning from incidents, participating in training and exercising events and much more.

Tiers

Coastal pollution is scaled in 3 levels:

- Tier 1 : Small spill local response
- Tier 2: Larger spill may require regional response
- Tier 3: Major spill requires national resources

Training and Exercising

TDC's Emergency Planning team approx. every 3 years host the MCA Beach Supervisors course. This is a two day event aimed at the operational (BRONZE) response to an incident. The members of the Emergency Planning team have also attended the MCA four day strategic local authority course and hope to bid for this to be hosted in Essex in the near future.

TDC also participate in Local Port and Harbour three yearly Tier 2 responses or Iccident Management Exercise (IME) exercises. Under the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC), Ports and Harbours are required to have Oil Spill Response Plans. These are audited by the MCA and must be exercised every three years.

Response arrangements

Notification of a coastal pollution incident should be received by the Emergency Planning team 24/7, from one or more of the following:

- A member of HOWG in the form of a Pollution Report (POLREP)
- MCA in the form of POLREP
- Essex County Council, forwarding an MCA POLREP
- Picked up on social media by TDC PR and Commucations Team

TDC's Preparations Include

- Tier 1 : Small spill local response – liaison with MCA and Environment Agency(EA) and others, Engineering services trained as Beach Supervisors – Generic response for TDC strategic, tactical and operational personnel

- Tier 2: Larger spill may require regional response – Tier 2 Oil spill response Contract with Adler and Allen – liaison with MCA and Environment Agency(EA), Food Standards Agency (FSA) Centre for Environment, Fisheries and Aquaculture Science (CEFAS), UK Health Security Agency (UKHSA) and others - Engineering services trained as Beach Supervisors – Generic response for TDC strategic, tactical and operational personnel

- Tier 3: Major spill requires national resources - Unlikely TDC would be the lead organisation - Tier 2 Oil spill response contract with Adler and Allen – liaison with MCA, EA, FSA, CEFAS, UKHSA and others - Engineering services trained as

Beach Supervisors – Generic response for TDC strategic, tactical and operational personnel

- Recovery – This may last for months, maybe even years, depending on the scale, location and type of pollution. A robust monitoring strategy would be implemented, which may be multi-agency.

Respones to Incidents

TDC has a Generic Emergency Plan, which details the structure of our response to emergencies – our Command and Control (strategic, tactical, operational).

On notification of an incident our 24/7 Duty Officer will inform a strategic officer who will decide the course of action TDC needs to take. This is cascaded to a tactical officer or team (depending on the scale of the incident) who co-ordinates the deployment of our Operational resources (Liaison Officer to scene / activation of Rest Centre for example). The Operational element is a Liaison Officer who attends the scene, liaising with partners there ie emergency services and feeds back to the TDC tactical and strategic groups. Operational may also be those TDC personnel running a rest centre.

In the last 6 months (up to and including 20 Jan 25) the Emergency Planning team has responded to incidents involving :

- Severe Weather incidents (16 incidents)
- Flood Alerts (10 incidents)
- Fires (2 incidents)
- Pollution reports – maritime (1 incident)
- Human health (1 incident)
- National issues (3 incidents)

During each of these our command and control structure will have been activated to greater and lesser extents, depending on the nature and scale of the incident.

TDC Emergency Planning Team also has very close relationship with Anglian Waters Emergency Planning Team and Affinity Waters Emergency Planning Team. This enables excellent two way liaison for those organisations to provide an early notification of a problem or potential problem and also for TDC to report a problem or request advice / information.

RECOMMENDATION

That the Committee determines whether it has any comments or recommendations it wishes to put forward to the relevant Portfolio Holder or Cabinet.

Appendix A - Quality of Bathing Waters in Tendring

Brightlingsea

2024 Bathing Water Profile for Brightlingsea

No pollution incidents reported.

The most recent classification is **Excellent**, based on samples taken from 2021 through to 2024.

Fifteen samples taken between 1st May 24 – 30th September 2024 (Most recent 99 days ago)

Previous 5 years have achieved the same classifciation

Pollution Risk Forecast – None

Visible Pollution – No sewage, tar, minor litter at 44% of visits

Sewage Impact - Brighlingsea Sewage Treatment Works discharges to the Colne estuary 2.5 km to the north and does not impact upon bathing water quality. Brightlingsea and Colchester Sewage Treatment Works had further upgrades in 2013 when disinfection was added. This was put in place to protect Shellfish waters but also protects the quality of the bathing water.

Seaweed (macroalgae) - For the four year (2020-2023) assessment period where data is available, seaweed (macroalgae) was assessed as being sufficient to be objectionable for 81% of visits, with 17% of visits noting the presence of seaweed (macroalgae). This bathing water does not have a history of large amounts of seaweed (macro algae). However groynes and rocks, platforms or other fixed objects may develop a covering of seaweed which can be slippery.

Phytoplankton (microscopic algae) - For the four year (2020-2023) assessment period where data is available, phytoplankton (microscopic algae) was not noted at this site. Phytoplankton (microscopic algae) naturally increase in number at certain times of the year. This process is known as a phytoplankton bloom. This bathing water does not have a history of phytoplankton blooms. The risks to human health from contact, ingestion or inhalation with marine algae that currently occur in UK coastal waters are considered to be low. However, some individuals may be more sensitive and display some reactions. A common marine algae found in UK coastal waters is Phaeocystis, which is often mistaken for sewage as it forms foam and a brown scum, but it is non-toxic.

2024 Bathing Water Profile for Manningtree Beach, Stour Estuary

No pollution incidents reported.

Sufficient bathing water quality

The most recent classification is **Sufficient**, based on samples taken from 2024 .

Water Samples taken weekly between May 1st 2024 and Sep 30th 2024 (most recent 87 days ago)

Pollution Risk Forecast - There are no active pollution risk forecasts made at this bathing water. However any bathing water has the potential to be affected by a pollution incident and if this occurs a pollution risk warning with associated advice against bathing will be issued on this website.

Visible Pollution - Environment Agency samplers make observations of litter present on the beach at every visit, this includes assessments of sewage debris, litter and tar.

Sewage Impact - Discharges from sewage treatment works have improved substantially in England since the 1980s. Manningtree (Lawford) sewage treatment works outfall is less than 1km upstream of the bathing water. There are a number of other sewage treatment works in the upstream catchment.

Seaweed (macroalgae) and phytoplankton (microscopic algae) - are a natural part of the marine and freshwater environment. Below we note whether these have been recorded in quantities sufficient to be a nuisance

2024 Bathing Water Profile for Clacton Beach Martello Tower

No pollution incidents reported.

The most recent classification is **Good**, based on samples taken from 2021 through to 2024.

Water Samples taken weekly between May 1st 2024 and Sep 30th 2024 (most recent 90 days ago)

Previous 5 years have achieved the same classifciation

Pollution Risk Forecast - This bathing water is subject to short term pollution procedures. The Environment Agency makes a daily pollution risk forecast at this site based on the effects of rain, tide, wind and seasonality on bathing water quality. These factors affect the levels of bacteria that get washed into the sea from livestock, sewage and urban drainage via rivers and streams and how they disperse. When these factors combine to make short term pollution likely we issue a pollution risk warning on the website and the beach manager will display a sign advising against bathing at the bathing water. After a short term pollution event, levels of bacteria typically return to normal after a day or so but it's possible to have several warning days in a row. In 2023, 8 pollution risk warnings were issued for this bathing water. All bathing waters have the potential to be affected by a pollution incident and if this occurs a pollution risk warning will be issued with associated advice against bathing on the website.

Visible pollution - Environment Agency samplers make observations of litter present on the beach at every visit, this includes assessments of sewage debris, litter and tar. At Clacton Beach Martello Tower for the four year (2020-2023) assessment period where data is available, sewage debris was not noted at this site. Litter was assessed as being sufficient to be objectionable for 3% of visits, with 75% of visits noting the presence of litter. Tarry residue was not noted at this site.

Previously, the bathing waters on the Tendring Peninsula were heavily influenced by a number of sea outfalls. Improved treatment is now in place at the long sea outfall at Holland-on-Sea and the outfall off Jaywick. Most of the storm overflows have also been eliminated. This has resulted in a significant improvement in water quality under normal conditions. Between 1988 and 2000 the town's sewage infrastructure was significantly upgraded as was the treatment works at both Holland-on-Sea and Jaywick. There were a number of storm overflows that operated via short sea outfalls along the coast. A large tunnel was constructed under the promenade between Clacton Pier and Holland Sewage Treatment Works. Most of the storm overflows on the sewer network now are directed to the tunnel rather than to the sea.

Sewage Treatment Works Outfalls

Discharges from sewage treatment works have improved substantially in England since the 1980s.

The Sewage Treatment Works serving the Clacton area discharge a considerable distance from the beach and do not affect bathing water compliance.

Emergency or Storm Overflows - The majority of sewers in England are "combined sewers" and carry both sewage and surface water from roofs and drains. A storm overflow operates during heavy rainfall when the sewerage system becomes overwhelmed by the amount of surface water. The overflow prevents sewage from backing up pipes and flooding properties and gardens. An emergency overflow will only operate infrequently, for example due to pump failure or blockage in the sewerage system.

Recently improvements have been made to storm overflows at from West Road pumping station. Pumps have been upgraded, the capacity of the rising main has been increased andfurther improvements are being considered.

Seaweed (macroalgae) - For the four year (2020-2023) assessment period where data is available, seaweed (macroalgae) was assessed as being sufficient to be objectionable for 3% of visits, with 85% of visits noting the presence of seaweed (macroalgae). This bathing water does not have a history of large amounts of seaweed (macro algae). However groynes and rocks, platforms or other fixed objects may develop a covering of seaweed which can be slippery.

Phytoplankton (microscopic algae) - For the four year (2020-2023) assessment period where data is available, phytoplankton (microscopic algae) was not assessed as being sufficient to be objectionable, but was observed as being present on 2% of visits. Phytoplankton (microscopic algae) naturally increase in number at certain times of the year. This process is known as a phytoplankton bloom. This bathing water does not have a history of phytoplankton blooms. The risks to human health from contact, ingestion or inhalation with marine algae that currently occur in UK coastal waters are considered to be low. However, some individuals may be more sensitive and display some reactions. A common marine algae found in UK coastal waters is Phaeocystis, which is often mistaken for sewage as it forms foam and a brown scum, but it is non-toxic.

2024 Bathing Water Profile for Walton

Essex, England

No pollution incidents reported.

The most recent classification is **Excellent**, based on samples taken from 2021 through to 2024.
Water Samples taken weekly between May 1st 2024 and Sep 30th 2024 (most recent 90 days ago)

Previous 5 years have achieved the same classification

Pollution Risk Forecasts - In 2023, 7 pollution risk warnings were issued for this bathing water. All bathing waters have the potential to be affected by a pollution incident and if this occurs a pollution risk warning will be issued with associated advice against bathing on this website.

Visible pollution - Environment Agency samplers make observations of litter present on the beach at every visit, this includes assessments of sewage debris, litter and tar. At Walton for the four year (2020-2023) assessment period where data is available, sewage debris was not noted at this site. Litter was not assessed as being sufficient to be objectionable, but was observed as being present on 27% of visits. Tarry residue was not noted at this site.

Sewage Impact - Anglian Water is working with the Environment Agency to help identify improvements in their sewage infrastructure in and around Walton. The sewage from the town is pumped from a pumping station in the town to the nearby sewage works for treatment and discharge. Improvements to the sewage treatment works and storm and surface water outfalls in the area have been undertaken at Walton and Frinton. Anglian Water have modelled the sewage system and a number of sea outfalls in Walton to assess their impact on bathing water quality.

Sewage Treatment Works Outfalls - Discharges from sewage treatment works have improved substantially in England since the 1980s. Walton Sewage Treatment Works discharges to the sea 4 km to the north of the town. In 2005, a reed bed was installed at the works to reduce the number of bacteria entering the sea from the works. Assessments carried out by Anglian Water show that this Works should not significantly affect the quality of the bathing water at Walton.

Algae - Seaweed (macroalgae) and phytoplankton (microscopic algae) are a natural part of the marine and freshwater environment.

Seaweed (macroalgae) - For the four year (2020-2023) assessment period where data is available, seaweed (macroalgae) was assessed as being sufficient to be objectionable for 8% of visits, with 68% of visits noting the presence of seaweed (macroalgae). Whilst seaweed (macro algae) is regularly recorded as present, it is not observed in large quantities on the beach and in the bathing water.

Phytoplankton (microscopic algae) - For the four year (2020-2023) assessment period where data is available, phytoplankton (microscopic algae) was not assessed as being sufficient to be objectionable, but was observed as being present on 2% of visits. Phytoplankton (microscopic algae) naturally increase in number at certain times of the year. This process is known as a phytoplankton bloom. This bathing water does not have a history of phytoplankton blooms. The risks to human health from contact, ingestion or inhalation with marine algae that currently occur in UK coastal waters are considered to be low. However, some individuals may be more sensitive and display some reactions. A common marine algae found in UK coastal waters is Phaeocystis, which is often mistaken for sewage as it forms foam and a brown scum, but it is non-toxic.

2024 Bathing Water Profile for Clacton

Essex, England

No pollution incidents reported.

The most recent classification is **Excellent**, based on samples taken from 2021 through to 2024.

The most recent classification is **Excellent**, based on samples taken from 2021 through to 2024.
Water Samples taken weekly between May 1st 2024 and Sep 30th 2024 (most recent 91 days ago)

Previous 5 years have achieved the same classification

Pollution Risk Forecasts - In 2023, 3 pollution risk warnings were issued for this bathing water. All bathing waters have the potential to be affected by a pollution incident and if this occurs a pollution risk warning will be issued with associated advice against bathing on this website.

Visible Pollution - Environment Agency samplers make observations of litter present on the beach at every visit, this includes assessments of sewage debris, litter and tar. At Clacton for the four year (2020-2023) assessment period where data is available, sewage debris was not assessed as being sufficient to be objectionable, but was observed as being present on 2% of visits. Litter was not assessed as being sufficient to be objectionable, but was observed as being present on 73% of visits. Tarry residue was not noted at this site.

Sewage Impact - Anglian Water, has worked with the Environment Agency over a long period to help make improvements to their sewerage infrastructure in and around Clacton. This has contributed towards improvements in bathing water quality at this beach. Previously, the bathing waters on the Tendring Peninsula were heavily influenced by a number of sea outfalls. Improved treatment is now in place at the long sea outfall at Holland-on-Sea, and most of the storm overflows have been eliminated. This has resulted in a significant improvement in water quality under normal conditions. Between 1988 and 2000 significant parts of the sewage infrastructure was upgraded and the treatment works at Holland-on-Sea was improved. There were a number of storm overflows with sea outfalls along the coast. A large tunnel was constructed under the promenade between Clacton Pier and Holland Sewage Treatment Works and most of the storm overflows now go to this tunnel rather than to the sea.

Sewage Treatment Works Outfalls - Discharges from sewage treatment works have improved substantially in England since the 1980s. The Sewage Treatment Works serving the Clacton catchment discharges to the North Sea via a 1 km long sea outfall from north east of Holland on Sea. This outfall does not affect bathing water compliance at this beach.

Algae - Seaweed (macroalgae) and phytoplankton (microscopic algae) are a natural part of the marine and freshwater environment. Below we note whether these have been recorded in quantities sufficient to be a nuisance.

Seaweed (macroalgae) - For the four year (2020-2023) assessment period where data is available, seaweed (macroalgae) was not assessed as being sufficient to be objectionable, but was observed as being present on 82% of visits. This bathing water does not have a history of large amounts of seaweed (macro algae). However groynes and rocks, platforms or other fixed objects may develop a covering of seaweed which can be slippery.

Phytoplankton (microscopic algae) - For the four year (2020-2023) assessment period where data is available, phytoplankton (microscopic algae) was not assessed as being sufficient to be objectionable, but was observed as being present on 2% of visits. Phytoplankton (microscopic algae) naturally increase in number at certain times of the year. This process is known as a phytoplankton bloom. This bathing water does not have a history of phytoplankton blooms. The risks to human health from contact, ingestion or inhalation with marine algae that currently occur in UK coastal waters are considered to be low. However, some individuals may be more sensitive and display some reactions. A common marine algae found in UK coastal waters is Phaeocystis, which is often mistaken for sewage as it forms foam and a brown scum, but it is non-toxic.

2024 Bathing Water Profile for Dovercourt

Essex, England

No pollution incidents reported.

The most recent classification is **Excellent**, based on samples taken from 2021 through to 2024.

The most recent classification is **Excellent**, based on samples taken from 2021 through to 2024.

Water Samples taken weekly between May 1st 2024 and Sep 30th 2024 (most recent 100 days ago)

Previous 5 years have achieved the same classification

Pollution Risk Forecasts - There are no active pollution risk forecasts made at this bathing water. However any bathing water has the potential to be affected by a pollution incident and if this occurs a pollution risk warning with associated advice against bathing will be issued on this website.

Visible Pollution - Environment Agency samplers make observations of litter present on the beach at every visit, this includes assessments of sewage debris, litter and tar. At Dovercourt for the four year (2020-2023) assessment period where data is available, sewage debris was not noted at this site. Litter was not assessed as being sufficient to be objectionable, but was observed as being present on 25% of visits. Tarry residue was not noted at this site.

Pollution Management - It is the Environment Agency role to drive improvement of water quality at bathing waters that are at risk of failing higher standards. It is natural for water to run off the land to the sea. Water quality at a bathing water is dependent upon the type and area of land (the catchment) draining to the water and the activities undertaken in that catchment.

Sewage Impact - A new sewage treatment works was built at Harwich in 1997 to protect bathing water quality. Improvements have been carried out to storm, emergency and surface water outfalls in the area. Low Road pumping station storm overflow which discharged to Harwich beach was also improved in 1998. Harwich Guard sewage outfall was diverted to the new sewage works in 1997.

Sewage Treatment Works Outfalls

Discharges from sewage treatment works have improved substantially in England since the 1980s. A new sewage treatment plant, which discharges to the Stour Estuary at Parkeston, was built at Harwich in 1997. This sewage treatment works does not affect bathing water compliance.

Algae - Seaweed (macroalgae) and phytoplankton (microscopic algae) are a natural part of the marine and freshwater environment. Below we note whether these have been recorded in quantities sufficient to be a nuisance.

Seaweed (macroalgae) - For the four year (2020-2023) assessment period where data is available, seaweed (macroalgae) was not assessed as being sufficient to be objectionable, but was observed as being present on 85% of visits. This bathing water does not have a history of large amounts of seaweed (macro algae). However groynes and rocks, platforms or other fixed objects may develop a covering of seaweed which can be slippery.

Phytoplankton (microscopic algae) - For the four year (2020-2023) assessment period where data is available, phytoplankton (microscopic algae) was not noted at this site. Phytoplankton (microscopic algae) naturally increase in number at certain times of the year. This process is known as a phytoplankton bloom. This bathing water does not have a history of phytoplankton blooms. The risks to human health from contact, ingestion or inhalation with marine algae that currently occur in UK coastal waters are considered to be low. However, some individuals may be more sensitive and display some reactions. A common marine algae found in UK coastal waters is Phaeocystis, which is often mistaken for sewage as it forms foam and a brown scum, but it is non-toxic.

024 Bathing Water Profile for Frinton

Essex, England

No pollution incidents reported.

The most recent classification is **Excellent**, based on samples taken from 2021 through to 2024.

Water Samples taken 10 times between May 1st 2024 and Sep 30th 2024 (most recent 99 days ago)

Previous 5 years have achieved the same classification

Pollution Risk Forecasts - In 2023, 2 pollution risk warnings were issued for this bathing water. All bathing waters have the potential to be affected by a pollution incident and if this occurs a pollution risk warning will be issued with associated advice against bathing on this website.

Visible Pollution - Environment Agency samplers make observations of litter present on the beach at every visit, this includes assessments of sewage debris, litter and tar. At Frinton for the four year (2020-2023) assessment period where data is available, sewage debris was not noted at this site. Litter was not assessed as being sufficient to be objectionable, but was observed as being present on 25% of visits. Tarry residue was not noted at this site.

Pollution Management - It is the Environment Agency role to drive improvement of water quality at bathing waters that are at risk of failing higher standards. It is natural for water to run off the land to the sea. Water quality at a bathing water is dependent upon the type and area of land (the catchment) draining to the water and the activities undertaken in that catchment.

History - Anglian Water has worked with the Environment Agency over a long period to help make improvements to their sewerage infrastructure in and around Frinton. This has contributed towards improvements in bathing water quality. Walton Sewage Treatment Works was upgraded by Anglian Water in 2005 to protect bathing water quality. Improvements to sewage works and storm and surface water outfalls in the area have been undertaken at Walton and Frinton. Anglian Water have assessed the impact of the sewage system in Frinton and Walton and the long and short sea outfalls have on bathing water quality. These studies indicate these outfalls do not significantly affect the quality of the Bathing Waters at Frinton. An improvement scheme has been included in Anglian Water's next investmant programme (2020-2025)

Sewage Treatment Works Outfalls - Discharges from sewage treatment works have improved substantially in England since the 1980s. Clacton (Holland Haven) Sewage Treatment Works discharges via a 1 km long sea outfall to the sea 4 km to the southwest of Frinton beach. A reed bed was added at Walton Sewage Treatment Works in 2005, to reduce the numbers of bacteria entering the sea. These sewage treatment works do not affect the compliance of the bathing water.

Emergency or Storm Overflows - Two sewer discharges, one either side of the bathing water, may operate when heavy rainfall overwhelms the sewerage system and could cause a temporary reduction in bathing water quality. Improvements to sewage works have been carried out at Walton and Frinton to improve storm and surface water outfalls in the area. Prior to March 2025 Anglian Water propose to increase the storm tank capacity at the Walton sewage pumping station to reduce the frequency of a storm discharge to the sea.

Algae - Seaweed (macroalgae) and phytoplankton (microscopic algae) are a natural part of the marine and freshwater environment. Below we note whether these have been recorded in quantities sufficient to be a nuisance.

Seaweed (macroalgae) - For the four year (2020-2023) assessment period where data is available, seaweed (macroalgae) was assessed as being sufficient to be objectionable for 3% of visits, with 81% of visits noting the presence of seaweed (macroalgae). This bathing water does not have a history of large amounts of seaweed (macro algae). However groynes and rocks, platforms or other fixed objects may develop a covering of seaweed which can be slippery.

Phytoplankton (microscopic algae) - This bathing water does not have a history of phytoplankton blooms. The risks to human health from contact, ingestion or inhalation with marine algae that currently occur in UK coastal waters are considered to be low. However, some individuals may be more sensitive and display some reactions. A common marine algae found in UK coastal waters is Phaeocystis, which is often mistaken for sewage as it forms foam and a brown scum, but it is non-toxic.

2024 Bathing Water Profile for Holland

Essex, England

No pollution incidents reported.

The most recent classification is **Good**, based on samples taken from 2021 through to 2024.

Water Samples taken weekly between May 1st 2024 and Sep 30th 2024 (most recent 90 days ago)

Previous 5 years have achieved the same classification

Pollution Risk Forecasts- In 2023, 3 pollution risk warnings were issued for this bathing water. All bathing waters have the potential to be affected by a pollution incident and if this occurs a pollution risk warning will be issued with associated advice against bathing on this website.

Visible Pollution - Environment Agency samplers make observations of litter present on the beach at every visit, this includes assessments of sewage debris, litter and tar. At Holland for the four year (2020-2023) assessment period where data is available, sewage debris was not assessed as being sufficient to be objectionable, but was observed as being present on 2% of visits. Litter was not assessed as being sufficient to be objectionable, but was observed as being present on 15% of visits. Tarry residue was not noted at this site.

Pollution management - It is the Environment Agency role to drive improvement of water quality at bathing waters that are at risk of failing higher standards. It is natural for water to run off the land to the sea. Water quality at a bathing water is dependent upon the type and area of land (the catchment) draining to the water and the activities undertaken in that catchment.

History - No specific investigations have been required at this beach but it has benefited from studies at Clacton and Frinton/Walton. Clacton (Holland Haven) Sewage Treatment Works was upgraded by Anglian Water in 2001 which helped to protect bathing water quality.

Sewage treatment works outfalls - Discharges from sewage treatment works have improved substantially in England since the 1980s. Clacton discharges to the North Sea via a 1 km long sea outfall next to the beach. However, this discharge does not affect bathing water compliance at Holland.

Emergency or Storm Overflows - There is a short storm and emergency sewer outfall to south west of the beach which may operate in exceptionally heavy rainfall or under emergency conditions. This bathing water is included in the Surfers Against Sewage “Safer Seas Service”. This service can alert you to Combined Storm Sewer Overflow discharges via a phone App and in addition, it includes the Environment Agency Pollution Risk Forecast warnings where they are available.

Algae - Seaweed (macroalgae) and phytoplankton (microscopic algae) are a natural part of the marine and freshwater environment.

Seaweed (macroalgae) - For the four year (2020-2023) assessment period where data is available, seaweed (macroalgae) was assessed as being sufficient to be objectionable for 2% of visits, with 82% of visits noting the presence of seaweed (macroalgae). This bathing water does not have a history of large amounts of seaweed (macro algae). However groynes and rocks, platforms or other fixed objects may develop a covering of seaweed which can be slippery.

Phytoplankton (microscopic algae) - For the four year (2020-2023) assessment period where data is available, phytoplankton (microscopic algae) was not assessed as being sufficient to be objectionable, but was observed as being present on 2% of visits. Phytoplankton (microscopic algae) naturally increase in number at certain times of the year. This process is known as a phytoplankton bloom. This bathing water does not have a history of phytoplankton blooms. The risks to human health from contact, ingestion or inhalation with marine algae that currently occur in UK coastal waters are considered to be low. However, some individuals may be more sensitive and display some reactions. A common marine algae found in UK coastal waters is Phaeocystis, which is often mistaken for sewage as it forms foam and a brown scum, but it is non-toxic.

2024 Bathing Water Profile for Jaywick

Essex, England

No pollution incidents reported.

The most recent classification is **Good**, based on samples taken from 2021 through to 2024.

Water Samples taken weekly between May 1st 2024 and Sep 30th 2024 (most recent 91days ago)

Previous 5 years have achieved the same classification

Pollution Risk Forecasts - There are no active pollution risk forecasts made at this bathing water. However any bathing water has the potential to be affected by a pollution incident and if this occurs a pollution risk warning with associated advice against bathing will be issued on this website.

Visible pollution - Environment Agency samplers make observations of litter present on the beach at every visit, this includes assessments of sewage debris, litter and tar. At Jaywick for the four year (2020-2023) assessment period where data is available, sewage debris was not assessed as being sufficient to be objectionable, but was observed as being present on 2% of visits. Litter was not assessed as being sufficient to be objectionable, but was observed as being present on 81% of visits. Tarry residue was not noted at this site.

Pollution Management - It is the Environment Agency role to drive improvement of water quality at bathing waters that are at risk of failing higher standards. It is natural for water to run off the land to the sea. Water quality at a bathing water is dependent upon the type and area of land (the catchment) draining to the water and the activities undertaken in that catchment.

The treatment works at Jaywick was improved in 2001 and this has helped protect bathing water quality An Anglian Water improvement scheme will be completed by March 2022.

Sewage treatment works outfalls - Discharges from sewage treatment works have improved substantially in England since the 1980s. Jaywick Sewage Treatment Works discharges to the North Sea via a 500m outfall off the Martello Tower.

Emergency or Storm Overflows - This bathing water is included in the Surfers Against Sewage “Safer Seas Service”. This service can alert you to Combined Storm Sewer Overflow discharges via a phone App and in addition, it includes the Environment Agency Pollution Risk Forecast warnings where they are available.

Algae - Seaweed (macroalgae) and phytoplankton (microscopic algae) are a natural part of the marine and freshwater environment.

Seaweed (macroalgae) - For the four year (2020-2023) assessment period where data is available, seaweed (macroalgae) was not assessed as being sufficient to be objectionable, but was observed as being present on 90% of visits. This bathing water does not have a history of large amounts of seaweed (macro algae). However groynes and rocks, platforms or other fixed objects may develop a covering of seaweed which can be slippery.

Phytoplankton (microscopic algae) - For the four year (2020-2023) assessment period where data is available, phytoplankton (microscopic algae) was not assessed as being sufficient to be objectionable, but was observed as being present on 2% of visits. Phytoplankton (microscopic algae) naturally increase in number at certain times of the year. This process is known as a phytoplankton bloom. This bathing water does not have a history of phytoplankton blooms. The risks to human health from contact, ingestion or inhalation with marine algae that currently occur in UK coastal waters are considered to be low. However, some individuals may be more sensitive and display some reactions. A common marine algae found in UK coastal waters is Phaeocystis, which is often mistaken for sewage as it forms foam and a brown scum, but it is non-toxic.

Appendix B – Surfers against Sewage Spills Forecasting (Based on Spills per Asset)

Water Company	2030	2035
Anglian Water	16.5	11.6
Dwr Cymru	49.65	60
Northumbrian Water	47.49	59.22
Severn Water	23.27	20.69
South West Water	69.87	85.37
Southern Water	72.86	101.11
Thames Water	27.25	25.43
United Utilities	59.68	68.18
Wessex Water	74.53	103.51
Yorkshire Water	48.25	55.2

Appendix C – Drinking Water Quality in Tendring 2024

(The data includes all samples collected for drinking water compliance purposes, for all water quality zones within Tendring (4 Supply Zones) for the period 2020 to date)

Parameter	Units	Number of Samples	Minimum Result	Mean Value	Maximum Result
1_2-Dichloroethane	ug/l	154	0.00	0.00	0.00
2_4_D	ug/l	79	0.00	0.00	0.00
3 day plate count 22C	count/ml	714	0.00	5.05	430.00
Alpha Radioactivity	Bq/l	16	0.00	0.00	0.05
Aluminium as Al	ug/l	304	0.00	1.53	100.00
Ammonium as NH4	mg/l	220	0.00	0.00	0.00
Antimony as Sb	ug/l	154	0.31	0.43	0.55
Arsenic as As	ug/l	154	0.00	0.04	0.35
Atrazine	ug/l	160	0.00	0.00	0.00
Benzene	ug/l	154	0.00	0.00	0.00
Benzo (a) Pyrene	ug/l	161	0.00	0.00	0.00
Beta Radioactivity	Bq/l	16	0.15	0.20	0.28
Boron as B	mg/l	154	0.00	0.02	0.17
Bromate as BrO3	ug/l	154	0.00	0.72	3.20
Cadmium as Cd	ug/l	154	0.00	0.00	0.00
Carbetamide	ug/l	82	0.00	0.00	0.00
Chloride as Cl	mg/l	148	68.00	78.70	120.00
Chromium as Cr	ug/l	154	0.00	0.00	0.33
Clopyralid	ug/l	79	0.00	0.01	0.06
Clostridium perfringens	cfu/100ml	373	0.00	0.00	0.00
Colour	mg/l Pt/Co	721	0.00	0.02	4.60
Copper as Cu	mg/l	154	0.00	0.10	1.18
Desethyl Atrazine	ug/l	160	0.00	0.00	0.00
E coli	cfu/100ml	2021	0.00	0.00	0.00
Electrical Conductivity @ 20 deg C	uS/cm	714	561.00	755.81	889.00
Enterococci	cfu/100ml	153	0.00	0.00	0.00
Fluoride as F	mg/l	154	0.00	0.50	0.73
Glyphosate	ug/l	78	0.00	0.00	0.01
Hydrogen Ion	pH value	714	6.90	7.20	7.60
Iron as Fe	ug/l	303	0.00	1.18	54.50
Lead as Pb	ug/l	154	0.00	0.39	6.02
Manganese as Mn	ug/l	303	0.00	0.12	3.07
Mecoprop	ug/l	79	0.00	0.00	0.00
Mercury as Hg	ug/l	154	0.00	0.00	0.00
Metaldehyde	ug/l	77	0.00	0.00	0.04
Metazachlor	ug/l	82	0.00	0.00	0.00
Nickel as Ni	ug/l	154	0.00	4.84	9.79
Nitrate as NO3	mg/l	148	0.00	7.82	33.30
Nitrite as NO2	mg/l	148	0.00	0.00	0.00

Nitrite Nitrate Formula	mg/l	148	0.00	0.00	0.00
Propyzamide	ug/l	82	0.00	0.00	0.00
Quantitative Odour	Diln No.	720	0.00	0.00	0.00
Quantitative Taste	Diln No.	719	0.00	0.00	0.00
Selenium as Se	ug/l	154	0.00	1.41	3.11
Simazine	ug/l	82	0.00	0.00	0.00
Sodium as Na	mg/l	154	36.80	47.42	89.60
Sulphate as SO4	mg/l	148	72.00	86.25	113.00
Sum of Tri & Tetrachloroethene	ug/l	154	0.00	0.01	1.61
Tetrachloromethane	ug/l	154	0.00	0.00	0.00
Total Chlorine	mg/l	2023	0.03	0.20	1.50
Total coliforms	cfu/100ml	2021	0.00	0.00	1.00
Total Cyanide as CN	ug/l	90	0.00	0.00	0.00
Total Organic Carbon	mg/l	154	0.90	1.93	4.90
Total Pesticide	ug/l	153	0.00	0.00	0.06
Total Polycyclic Aromatic Hydrocarbons	ug/l	154	0.00	0.00	0.00
Total Trihalomethanes	ug/l	154	0.00	27.72	63.10
Turbidity	NTU	714	0.00	0.09	0.49

Any samples which don't meet the regulatory limits are fully investigated, with corrective actions put in place and are reported to the DWI.

µg - micrograms or one part per billion = one drop in an Olympic sized swimming pool. mg - milligrams or one part per million = one drop in 100 litres

Appendix D – Sanitary Reviews for the Colne (2021) and the Walton Backwaters (2023)

Appendix E – Tendring District Council (Water Cycle Study-2017)

Appendix F – Brightlingsea Harbour Commisioners (BHC) - Managing the Environmental Impact of Antifouling Biocides in Recreational Marinas