

2022 WATER QUALITY REPORT FOR DRINKING WATER IN YOUR AREA with DATA AVERAGED OVER 12 MONTHS – Jan 2021 to Dec 2021

Name of water supply zone: *Z624 ROMFORD EAST*

Water source(s): *Ground and Surface (Mixed) Water*

Drinking Water Introduction:

Essex & Suffolk Water's supply area is divided into zones, and these are generally supplied by more than one water treatment works.

This means that the water you receive in your home or business is normally a mix or blend. It also means that where we extract the water from, known as the catchment, will have a variety of water sources. Sometimes the blend changes and this can also change the taste and appearance of the water.

But it is always provided to you in accordance with our country's regulations, specifically the Water Supply (Water Quality) Regulations. We do this by sampling and testing customer taps and reporting our findings to the Drinking Water Inspectorate (DWI).

Throughout the year, we preserve and clean our network of pipes that carry the water to your homes and businesses in order to maintain the high quality of water we supply. You can refer to our website here - <https://www.eswater.co.uk/>, for an up to-date record of where we are out working. Much of our work is programmed and planned, with our regulator (DWI) remaining informed and monitoring our progress. Other work may be due to bursts, new mains or supply changes, but all our water is tested and monitored throughout to ensure you continue to receive the best possible clean, clear and wholesome water.

What can your water contain?

Chlorine – Water is treated with a small amount of chlorine to keep it disinfected and stop any harmful organisms growing in it, as it travels to your tap. Your Water Supply Zone has a small amount of ammonia added and this means that the water supply is chloraminated .

Fluoride – Is naturally occurring in all water sources. Your Water Supply Zone does not have any additional Fluoride added by us.

Minerals/hardness – Water which has a lot of natural minerals dissolved in it is called hard water. It is measured using several different scales and the information can be seen in the table of results below. With blended water, hardness is given as a range. Hard water advice is available on our website - <https://www.eswater.co.uk/services/water/water-quality/hard-water/>

Lead – Some older properties, pre-1970, may have lead pipes or lead soldering and we are working to remove lead in your water zone. Please visit our website or call us and we can arrange a free water test.

Testing your water quality:

Essex & Suffolk Water work hard to bring you clean water. You can read more about our mission - <https://www.eswater.co.uk/services/water/water-quality/>

Every day, we carry out water sampling and testing to ISO 17025 certification. This is a general requirement used by testing and calibration laboratories to make sure that the highest quality water gets through to your taps. Our testing of your water supply shows that we met or exceeded the requirements of the regulations.

All sample tap failures are fully investigated to identify the source of the problem as soon as they occur. We then take action to correct the issues and make recommendations to our customers about their properties plumbing if this is the cause. During the investigation and following any changes we take further samples to ensure that we provide wholesome water, and we report all of these activities to the Regulator DWI.

Table of water test and water sample results:

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.

Total hardness:

The water in your area is hard.

Scale/units	Average	Maximum	Minimum
CaCO ₃ mg/l Calcium Carbonate	271.08	290.60	255.46
mg/l Ca	93.84	101.17	87.29
total hardness	108.43	116.24	102.18
Degrees Clarke	18.87	20.23	17.78
French Degrees	27.11	29.06	25.55
German Degrees	15.40	16.51	14.51

Brewers information:

Scale/units	Average	Maximum	Minimum
CaCO ₃ mg/l Calcium Carbonate	271.08	290.60	255.46
mg/l Chloride	66.58	75	60
mg/l alkalinity (HCO ₃)	200.00	210	180
mg/l Ca - Calcium	93.84	101.17	87.29
mg/l Mg -Magnesium	8.87	9.16	8.45
mg/l Sodium	40.69	43.23	37.43
mg/l Sulphate	74.87	83.5	61.51

Testing your water quality:

THE TEST	FURTHER INFORMATION	OFFICIAL STANDARD	UNITS
Alkalinity	Occurs naturally where water passes through chalk or limestone.	No standard	mg/l
Aluminium	Found naturally in all water sources and is used in the treatment process but is effectively removed and carefully monitored at the water treatment works.	200	µgAl/l
Ammonium	Is naturally present in some supplies.	0.5	mgNH ₄ /l
Antimony	Not normally found.	5	µgSb/l
Arsenic	Not normally present. Very low levels appear naturally.	10	µgAs/l
Boron	Occurs naturally.	1	mgB/l
Cadmium	Not normally present. Very low levels appear naturally.	5	µgCd/l
Calcium	Occurs naturally especially if water passes through limestone or chalk.	No standard	mgCa/l
Chloride	Occurs naturally.	250	mgCl/l
Chlorine	Small amounts of chlorine are added to our water to kill any harmful bacteria. Its use was responsible for helping eliminate diseases such as typhoid and cholera. Occasionally customers may notice a slight chlorine taste but this is completely harmless. (World Health Organisation guideline value - 5mg/l)	No standard	mgCl ₂ /l
Chromium	Not normally present. Very low levels appear naturally.	50	µgCr/l
<i>Clostridium perfringens</i>	Groups of bacteria indicating possible faecal contamination of water supplies. An occurrence of <i>Clostridium perfringens</i> is always investigated immediately.	0	per 100ml
Coliform bacteria (total coliforms)	These bacteria indicate that the supply may have been contaminated. In most cases this is from the tap itself and may be present because of normal domestic operations. We recommend that taps, including the inside of the spout, are cleaned regularly. An occurrence of coliform bacteria is always investigated immediately.	0	per 100ml
Colony counts 2 days at 37° C Colony counts	This is a measure of a number of groups of naturally occurring bacteria and is not indicative of any health hazard. However, unusually high numbers are investigated.	No abnormal change	per ml
Colour	Water may occasionally have a slight tint which is caused by natural colouring such as peat.	20	mg/1 Pt/Co scale
Conductivity	A measure of the dissolved mineral content of the water.	2500	µS/cm
Copper	Presence is largely due to the influence of domestic plumbing systems.	2	mgCu/l
Cyanide	Not normally present. Very low levels appear naturally.	50	µgCN/l
<i>E. coli</i> Enterococci	Groups of bacteria indicating possible faecal contamination of water supplies. An occurrence of <i>E. coli</i> or Enterococci is always investigated immediately.	0	per 100ml
Fluoride	Occurs naturally in some of our supplies. In other areas fluoride is added at the treatment works at the request of the Health Authority to protect the teeth of children.	1.5	mgF/l
pH (Hydrogen ion)	The pH of water is controlled at the treatment works to prevent corrosion of pipes and fittings.	>6.5, <9.5	pH value
Iron	Occurs naturally and is removed at the treatment works. However, some mains are made from cast iron and may corrode to give the water a rust coloured appearance which, while undesirable, is not a health hazard.	200	µgFe/l
Lead	Many homes still have lead pipes and it is normally in these properties where the standard is exceeded. Mains water contains little or no lead.	10	µgPb/l
Magnesium	Occurs naturally as a result of passage of water through the ground.	No standard	µg/l

THE TEST	FURTHER INFORMATION	OFFICIAL STANDARD	UNITS
Manganese	Occurs naturally, may build up on corrosion products within mains and is carefully monitored at treatment works.	50	ugMn/l
Mercury	Very low levels appear naturally.	1	µgHg/l
Nickel	Not normally present. Very low levels appear naturally.	20	µgNi/l
Nitrate	Occurs naturally from both mineral or soil processes and from agricultural activity.	50	mg/NO ₃ /l
Nitrite	May be associated with the presence of ammonia or nitrate in river water.	0.5	mg/NO ₂ /l
Odour (Quantitative)	As well as chemical tests, we also use a team of experienced testers, who compare the sample with one which is known to be free from taste or smell, any abnormal change detected in odour/taste will be investigated.	Any positive detection	Dilution No (at 25° C)
Odour (Qualitative)	Subjective assessment of the type and magnitude of such characteristics.	No standard	
PAH	Polycyclic Aromatic Hydrocarbons associated with fossil fuels and if found in water they often originate from coal tar linings in old mains.	0.1	µg/l
Benzo (a) pyrene	An individual Polycyclic Aromatic Hydrocarbon.	0.010	µg/l
Individual pesticides	The presence of these compounds is due to their use by farmers, industry and local authorities etc. The current standard is not health based and therefore minor incidents where the standard is exceeded are unlikely to represent a risk to health.	0.1	µg/l
Total pesticides	The sum of the above.	0.5	µg/l
Aldrin Dieldrin Heptachlor Heptachlorepoxide	These pesticides have a lower standard than the other pesticides detailed above.	0.03	µg/l
Phosphorus	Occurs naturally as well as in fertilisers and detergents but rarely proves a problem in our supply. Phosphorus is dosed to control lead concentrations from private plumbing.	No standard	mgP/l
Selenium	Not normally found.	10	µgSe/l
Sodium	Occurs naturally as a result of passage of water through the ground.	200	mgNa/l
Sulphate	Occurs naturally as a result of passage of water through the ground.	250	mgSO ₄ /l
Taste (Quantitative)	As well as chemical tests, we also use a team of experienced testers, who compare the sample with one which is known to be free from taste or smell. Any abnormal change detected in odour/taste will be investigated.	Any positive detection	Dilution No. (at 25° C)
Taste (Qualitative)	Subjective assessment of the type and magnitude of such characteristics.	No standard	
Temperature	During warm spells the temperature of tap water will increase, changing its familiar taste slightly but not its quality. If this occurs, you could chill drinking water in the fridge.	No standard	deg. C
Tetrachloroethane Trichloroethane Tetrachloromethane	Chlorinated solvents which are used in industry and dry-cleaning processes and should not usually be found in the water supply.	(Combined standard of 10) 3	µg/l µg/l
Total hardness	Occurs naturally where water passes through chalk or limestone.	No standards	mg/l
TOC	Total Organic Carbon content of the water and a measure of effectiveness of treatment in removing natural organic compounds from the supply.	No abnormal change	mg/l
Total Trihalomethanes	Formed when chlorine is added to water as a disinfectant and reacts with organic substances. The standard is set well below the level at which it might cause health problems.	100	µg/l
Turbidity	This is the clarity of the water which can be affected by minute air bubbles or finely suspended particles. If you allow a glass of water to stand for a few minutes, it will normally clear.	4	NTU
Zinc	Its presence is largely due to the influence of domestic plumbing systems.	No standard	µgZn/l

Table of sampling results showing parameters looked for in drinking water some are naturally occurring in the raw untreated water and other are checked as part of the the water treatment process.

Parameter	Units	No. of samples taken in year	PCV limit	No. samples above PCV	Min	Mean	Max
E.coli	/100ml	168	>0	0	0	0	0
residual disinfectant - total	mg/l	168		0	0.07	0.574	0.89
total coliforms	/100ml	168	>0	0	0	0	0
colony counts after 3 days at 22C	/ml	52		0	0	2.231	47
colour	mg/l Pt/Co scale	52	20	0	< 2.300	< 2.300	3.2
electrical conductivity	uS/cm 20C	52	2500	0	570	647.5	690
hydrogen ion (pH)	pH units	52	9.5	0	7.34	7.543462	7.71
odour (quantitative)	DN	52	>0	0	0	0	0
taste (quantitative)	DN	52	>0	0	0	0	0
turbidity	NTU	52	4	0	< 0.090	< 0.107	0.19
chloride	mg/l Cl	24	250	0	60	66.583	75
sulphate	mg/l SO4	24	250	0	61.513	74.874	83.439
total organic carbon	mg/l C	24		0	2.9	3.446	4.1
aluminium	ug/l Al	52	200	0	< 3.900	< 5.964	< 14.000
antimony	ug/l Sb	8	5	0	0.281	0.3	0.325
arsenic	ug/l As	8	10	0	0.401	0.719	1.094
benzene	ug/l	24	1	0	< 0.030	< 0.041	< 0.041
benzo(a)pyrene	ug/l	8	0.01	0	< 0.002	< 0.002	< 0.002
boron	mg/l B	24	1	0	0.046	0.055	0.065
bromate	ug BrO3/l	8	10	0	< 0.990	< 1.000	1.07
cadmium	ug/l Cd	8	5	0	< 0.018	< 0.024	0.063
chromium	ug/l Cr	8	50	0	< 0.170	< 0.170	< 0.170
copper	mg/l Cu	8	2	0	0.005	0.015	0.033
cyanide (total)	ug/l CN	24	50	0	< 5.500	< 5.500	< 5.500
1,2-dichloroethane	ug/l	24	3	0	< 0.079	< 0.084	< 0.200
enterococci (confirmed)	/100ml	8	>0	0	0	0	0
fluoride	mg/l F	24	1.5	0	0.26	0.29	0.32
iron	ug/l Fe	52	200	0	4.023	5.162	6.255
manganese	ug/l Mn	52	50	0	< 0.280	< 0.336	0.875
mercury	ug/l Hg	24	1	0	< 0.022	< 0.022	< 0.022
nickel	ug/l Ni	8	20	0	1.968	2.226	2.533
nitrate	mg/l NO3	52	50	0	8.3	19.633	32
nitrite	mg/l NO2	52	0.5	0	0.004	0.072	0.29
pesticides total (calculated)	ug/l	24	0.5	0	0.037	0.077	0.143
total PAH	ug/l	8	0.1	0	0	0	0
selenium	ug/l Se	8	10	0	< 0.830	< 0.830	< 0.830
sodium	mg/l Na	8	200	0	37.428	40.686	43.23
tetrachloromethane	ug/l	24	3	0	< 0.081	< 0.082	< 0.110
total THM	ug/l	8	100	0	15.4	29.413	40.6
dieldrin	ug/l	24	0.03	0	< 0.002	< 0.002	< 0.002
ethenes (total by calculation)	ug/l	24	10	0	0	0	0
clostridium perfringens	/100ml	52	>0	0	0	0	0
nitrite/nitrate formula		52	1	0	0.192	< 0.417	< 0.642

PCV = Prescribed Concentration or Value and '>' means greater than, '<' means less than

Parameter	Units	No. of samples taken in year	PCV limit	No. samples above PCV	Min	Mean	Max
carbetamide	ug/l	24	0.1	0	< 0.008	< 0.008	< 0.008
chlortoluron	ug/l	24	0.1	0	< 0.003	< 0.003	< 0.003
diuron	ug/l	24	0.1	0	< 0.006	< 0.006	< 0.006
isoproturon	ug/l	24	0.1	0	< 0.003	< 0.003	< 0.003
linuron	ug/l	24	0.1	0	< 0.003	< 0.003	< 0.003
metamitron	ug/l	24	0.1	0	< 0.007	< 0.007	< 0.007
2,4-DB	ug/l	24	0.1	0	< 0.012	< 0.012	< 0.012
2,4,5-T	ug/l	24	0.1	0	< 0.004	< 0.004	< 0.004
2,4-D	ug/l	24	0.1	0	< 0.004	< 0.004	0.004
bentazone	ug/l	24	0.1	0	< 0.003	< 0.003	0.007
clopyralid	ug/l	23	0.1	0	< 0.013	< 0.016	0.03
dicamba	ug/l	24	0.1	0	< 0.017	< 0.017	< 0.017
dichlorprop	ug/l	24	0.1	0	< 0.004	< 0.004	< 0.004
MCPA	ug/l	24	0.1	0	< 0.002	< 0.002	0.003
MCPP	ug/l	24	0.1	0	< 0.004	< 0.004	< 0.004
propyzamide	ug/l	24	0.1	0	0.017	0.029	0.049
chlorthalonil	ug/l	24	0.1	0	< 0.007	< 0.007	< 0.007
heptachlor	ug/l	24	0.03	0	< 0.003	< 0.003	< 0.003
oxamyl	ug/l	24	0.1	0	< 0.002	< 0.004	< 0.023
aldrin	ug/l	24	0.03	0	< 0.003	< 0.003	< 0.003
heptachlor epoxides	ug/l	24	0.03	0	0	0	0
AMPA	ug/l	24	0.1	0	< 0.009	< 0.011	< 0.012
hexachlorobenzene	ug/l	24	0.1	0	< 0.007	< 0.007	< 0.007
flufenacet	ug/l	24	0.1	0	< 0.005	< 0.011	0.043
lenacil	ug/l	24	0.1	0	< 0.006	< 0.006	< 0.006
fluroxypyr	ug/l	24	0.1	0	< 0.018	< 0.018	< 0.018
triclopyr	ug/l	24	0.1	0	< 0.012	< 0.012	< 0.012
metazachlor	ug/l	24	0.1	0	< 0.010	< 0.011	< 0.015
pendimethalin	ug/l	24	0.1	0	< 0.006	< 0.008	< 0.008
pentachlorophenol	ug/l	24	0.1	0	< 0.006	< 0.006	< 0.006
picloram	ug/l	24	0.1	0	< 0.012	< 0.012	< 0.012
quinmerac	ug/l	24	0.1	0	< 0.005	< 0.007	0.011
lead (total - 10)	ug/l Pb	8	10	0	< 0.065	< 0.305	0.778
gross alpha	Bq/l	0	0.1	0			
chloridazon	ug/l	24	0.1	0	< 0.005	< 0.005	< 0.005
terbutryn	ug/l	24	0.1	0	< 0.005	< 0.007	< 0.007
gross beta	Bq/l	0	1	0			
ethofumesate	ug/l	24	0.1	0	< 0.007	< 0.007	< 0.007
tebuconazole	ug/l	24	0.1	0	< 0.004	< 0.004	< 0.004
diflufenican	ug/l	24	0.1	0	< 0.007	< 0.008	< 0.009
ammonium	mg/l NH4	52	0.5	0	0.032	0.161	0.21
tritium	Bq/l	0	100	0			
radon	Bq/l	0	100	0			
asulam	ug/l	23	0.1	0	< 0.017	< 0.017	< 0.017
metaldehyde	ug/l	24	0.1	0	0.021	0.031	0.05
glyphosate	ug/l	24	0.1	0	< 0.008	< 0.008	< 0.008

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