2064 WATER QUALITY REPORT FOR DRINKING WATER IN YOUR AREA with DATA AVERAGED OVER 12 MONTHS – Jan 2025 to Dec 2025

Name of water supply zone: *N224 Carrshield Zone*

Water source(s): *Groundwater (Upland Spring)*

Drinking Water Introduction:

Northumbrian 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.nwl.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. In your water supply zone, we do not add a small amount of ammonia during treatment, so the water is not 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.nwl.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:

Northumbrian Water work hard to bring you clean water. You can read more about our mission - https://www.nwl.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 ranges from moderately hard - soft.

Scale/units	Average	Maximum	Minimum
CaCO3 mg/l Calcium Carbonate	31.86	162.44	8.48
mg/l Ca	9.14	54.51	1.34
total hardness	12.74	64.98	3.39
Degrees Clarke	2.22	11.31	0.59
French Degrees	3.19	16.24	0.85
German Degrees	1.81	9.23	0.48
Millimoles mmol/l	0.32	1.64	0.086

Brewers information:

Scale/units	Average	Maximum	Minimum
CaCO3 mg/l Calcium Carbonate	31.86	162.44	8.48
mg/l Chloride	<9.40	<9.40	<9.40
mg/l alkalinity (HCO3)	74.31	133.79	50.68
mg/l Ca - Calcium	9.14	54.51	1.34
mg/l Mg -Magnesium	2.19	6.37	1.19
mg/l Sodium	23.97	23.97	23.97
mg/l Sulphate	30.06	30.06	30.06

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
Clostridium perfringens	Groups of bacteria indicating possible faecal contamination of water supplies. An occurrence of *Clostridium perfringens* 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 3 days at 22° C	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
E. coli Enterococci	Groups of bacteria indicating possible faecal contamination of water supplies. An occurrence of *E. coli* 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 Diedrin 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 occuring in the raw untreated water and others are checked as part of the the water treatment process.

Parameter **N224ZON**	Units	No. of samples taken in year	PCV Limit	No. samples above PCV	Min	Mean	Max
1,2-dichloroethane	ug/l	1	3	0	<0.20	<0.2	<0.20
2,4-D	ug/l	1	0.1	0	<0.012	<0.012	<0.012
aldrin	ug/l	1	0.03	0	<0.0025	<0.0025	<0.0025
aluminium	ug/l Al	2	200	0	27	27	27
ammonium	mg/l NH4	1	0.5	0	<0.020	<0.02	<0.020
AMPA	ug/l	1	0.1	0	<0.012	<0.012	<0.012
antimony	ug/l Sb	1	5	0	<0.16	<0.16	<0.16
arsenic	ug/l As	1	10	0	0.070	0.07	0.070
asulam	ug/l	1	0.1	0	<0.016	<0.016	<0.016
benazolin	ug/l	1	0.1	0	<0.020	<0.02	<0.020
bentazone	ug/l	1	0.1	0	<0.0044	<0.0044	<0.0044
benzene	ug/l	1	10	0	<0.030	<0.03	<0.030
benzo(a)pyrene	ug/l	1	0.01	0	<0.0021	<0.0021	<0.0021
boron	mg/l B	1	1	0	0.011	0.011	0.011
bromate	ug BrO3/l	1	10	0	<0.50	<0.5	<0.50
cadmium	ug/l Cd	1	5	0	<0.018	<0.018	<0.018
carbetamide	ug/l	1	0.1	0	<0.0083	<0.0083	<0.0083
chloride	mg/l Cl	1	250	0	<9.4	<9.4	<9.4
chlorine (free) (on-site)	mg/l Cl2	4	N/A	N/A	0.20	0.44	0.66
chlorine (total) (on-site)	mg/l Cl2	4	N/A	N/A	0.27	0.54	0.76
chlormequat	ug/l	1	0.1	0	<0.0034	<0.0034	<0.0034
chlortoluron	ug/l	1	0.1	0	<0.0031	<0.0031	<0.0031
chromium	ug/l Cr	1	50	0	0.82	0.82	0.82
clopyralid	ug/l	1	0.1	0	<0.0097	<0.0097	<0.0097
clostridium perfringens (confirmed)	/100ml	1	>0	0	0	0	0
colony counts after 3 days at 22C	/ml	2	299	0	0.0	0	0.0
colour	mg/l Pt/Co scale	2	20	0	0.95	0.96	0.96
copper	mg/l Cu	1	2	0	0.076	0.076	0.076
cyanide (total)	ug/l CN	1	50	0	<5.5	<5.5	<5.5
cypermethrin	ug/l	1	0.1	0	<0.012	<0.012	<0.012
diazinon	ug/l	1	0.1	0	<0.0074	<0.0074	<0.0074
dieldrin	ug/l	1	0.03	0	<0.0019	<0.0019	<0.0019
diflufenican	ug/l	1	0.1	0	<0.0072	<0.0072	<0.0072
diuron	ug/l	1	0.1	0	<0.0055	<0.0055	<0.0055
E.coli (confirmed)	/100ml	4	>0	0	0	0	0
electrical conductivity	uS/cm 20C	2	2500	0	210	220	220
enterococci (confirmed)	/100ml	1	>0	0	0	0	0
ethenes (total by calculation)	ug/l	1	10	0	0.00	0	0.00
ethofumesate	ug/l	1	0.1	0	<0.0070	<0.007	<0.0070
fenpropimorph	ug/l	1	0.1	0	<0.0083	<0.0083	<0.0083

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

Parameter **N224ZON**	Units	No. of samples taken in year	PCV Limit	No. samples above PCV	Min	Mean	Max
fluoride	mg/l F	1	1.5	0	0.40	0.4	0.40
fluroxypyr	ug/l	1	0.1	0	<0.0063	<0.0063	<0.0063
glyphosate	ug/l	1	0.1	0	<0.0077	<0.0077	<0.0077
heptachlor	ug/l	1	0.03	0	<0.0026	<0.0026	<0.0026
heptachlor epoxides	ug/l	1	0.03	0	0.0	0	0.0
hydrogen ion (pH)	pH units	2	9.5	0	7.5	7.7	7.9
iron	ug/l Fe	2	200	0	<5.2	6.2	7.1
isoproturon	ug/l	1	0.1	0	<0.0025	<0.0025	<0.0025
lead (total - 10)	ug/l Pb	1	10	0	0.084	0.084	0.084
manganese	ug/l Mn	2	50	0	2.1	2.7	3.3
MCPA	ug/l	1	0.1	0	<0.0093	<0.0093	<0.0093
MCPB	ug/l	1	0.1	0	<0.015	<0.015	<0.015
MCPP	ug/l	1	0.1	0	<0.011	<0.011	<0.011
mercury	ug/l Hg	1	1	0	<0.022	<0.022	<0.022
metaldehyde	ug/l	1	0.1	0	<0.0071	<0.0071	<0.0071
metamitron	ug/l	1	0.1	0	<0.0074	<0.0074	<0.0074
metazachlor	ug/l	1	0.1	0	<0.015	<0.015	<0.015
nickel	ug/l Ni	1	20	0	5.5	5.5	5.5
nitrate	mg/l NO3	1	50	0	2.1	2.1	2.1
nitrite	mg/l NO2	1	0.5000	0	<0.0061	<0.0061	<0.0061
nitrite/nitrate formula	mg/l NO2	1	1	0	<0.044	<0.044	<0.044
odour (quantitative)	DN	2	>0	0	0.0	0	0.0
pendimethalin	ug/l	1	0.1	0	<0.0064	<0.0064	<0.0064
pesticides total (calculated)	ug/l	1	0.5	0	0.00	0	0.00
picloram	ug/l	1	0.1	0	<0.026	<0.026	<0.026
propyzamide	ug/l	1	0.1	0	<0.012	<0.012	<0.012
quinmerac	ug/l	1	0.1	0	<0.0089	<0.0089	<0.0089
selenium	ug/l Se	1	10	0	<0.83	<0.83	<0.83
sodium	mg/l Na	1	200	0	24	24	24
sulphate	mg/l SO4	1	250	0	30	30	30
taste (quantitative)	DN	2	>0	0	0.0	0	0.0
tetrachloromethane	ug/l	1	3	0	<0.11	<0.11	<0.11
total PAH	ug/l	1	0.1	0	0.00	0	0.00
total coliforms (confirmed)	/100ml	4	>0	0	0	0	0
total organic carbon	mg/l C	1	25	0	0.34	0.34	0.34
total THM	ug/l	1	100	0	29	29	29
triclopyr	ug/l	1	0.1	0	<0.012	<0.012	<0.012
turbidity	NTU	2	4	0	0.23	0.27	0.30

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