### **Portsmouth Water Ltd**

# **Public Record - Water Quality Summary**



### 01/01/2023 to 31/12/2023

## **Hoads Hill North Supply Zone**

Parameter (Units)	Ann. Sar Freque		Comment	PCV		Samples Contravening PCV		Concentration or Value (all samples)		
	Required	Taken			No.	%	Min	Mean	Max	
Colony Count 72h at 22C(No/ml)	36	37		N/A	0	0.00	0	0.5	11	
Colony Count 48h at 37C(No/ml)	0	38		N/A	0	0.00	0	0.1	1	
Coliform Bacteria (Indicator)(No/100ml)	108	110		0	1	0.91	0	0	2	
E-Coli (Faecal Coliforms - Confirmed)(No/100ml)	108	110		0	1	0.91	0	0	1	
Clostridium Perfringens (Confirmed)(No/100ml)	8	8		0	0	0.00	0	0	0	
Enterococci (Confirmed)(No/100ml)	8	8		0	0	0.00	0	0	0	
Residual Disinfectant - Total(mg/l)	108	110		N/A	0	0.00	0.16	0.47	0.82	
Residual Disinfectant - Free(mg/l)	108	110		N/A	0	0.00	0.13	0.4	0.61	
Nitrate(mg/l NO3)	8	8		50	0	0.00	31.8	33.7	36	
Ammonium (Total)(mg/l NH4)	36	36		0.5	0	0.00	<0.073	<0.073	<0.073	
Bromate(ug/I BrO3)	8	8		10	0	0.00	<0.8	<0.8	<0.8	
Chloride(mg/l CI)	8	8		250	0	0.00	19.8	21.9	24.3	
Colour(mg/l Pt/Co)	36	36		20	0	0.00	<1.23	<1.45	<2	
Cyanide-Total(ug/I CN)	8	8		50	0	0.00	<4.1	<4.1	<4.1	
Conductivity(uS/cm @20C)	36	36		2500	0	0.00	523	551.3	577	
Fluoride (Total)(mg/l F)	8	8		1.5	0	0.00	0.073	0.101	0.122	
Hydrogen Ion (pH) - Indicator(pH Value)	36	36		6.5 - 9.5	0	0.00	7.12	7.32	7.52	
Nitrite (Consumers Taps)(mg/l NO2)	8	8		0.5	0	0.00	<0.011	<0.011	<0.011	
Nitrate/Nitrite Formula(mg/l)	8	8		1	0	0.00	0.64	0.68	0.72	
Sulphate(mg/l SO4)	8	8		250	0	0.00	17.2	21.9	27.9	
Odour (Quantitative)(Dil Num)	36	36		0	0	0.00	0	0	0	
Taste (Quantitative)(Dil Num)	36	36		0	0	0.00	0	0	0	
Turbidity(NTU)	36	36		4	0	0.00	0.047	0.127	1.4	
Total Organic Carbon(mg/l C)	8	8		N/A	0	0.00	0.4	0.6	0.9	
Aluminium (Total)(ug/l Al)	36	36		200	0	0.00	<8.1	8.6	19.1	
Antimony(ug/I Sb)	8	8		5	0	0.00	<0.2	<0.2	<0.2	
Arsenic (Total)(ug/l As)	8	8		10	0	0.00	<1	<1	<1	
Boron (Total)(mg/I B)	8	8		1	0	0.00	<0.14	<0.14	<0.14	
Cadmium (Total)(ug/l Cd)	8	8		5	0	0.00	<0.22	<0.22	<0.22	

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	Required	Taken			No.	%	Min	Mean	Max
Chromium (Total)(ug/l Cr)	8	8		50	0	0.00	<2.3	<2.3	<2.3
Copper (Total)(mg/l Cu)	8	9		2	0	0.00	<0.172	<0.172	<0.172
Iron (Total)(ug/l Fe)	36	36		200	0	0.00	<13.8	<13.8	<13.8
Lead (10 ug/l)(ug/l Pb)	8	8		10	1	12.50	<0.5	2.1	13.1
Manganese (Total)(ug/l Mn)	36	36		50	0	0.00	<2.5	<2.5	<2.5
Mercury(ug/I Hg)	8	8		1	0	0.00	<0.04	<0.04	<0.04
Nickel(ug/l Ni)	8	9		20	0	0.00	<1.3	<1.3	<1.3
Selenium(ug/I Se)	8	8		10	0	0.00	<0.8	<0.8	<0.8
Sodium (Total)(mg/l Na)	8	8		200	0	0.00	<9.1	9.5	10.7
Benzo[a]Pyrene(ug/I)	8	8		0.01	0	0.00	<0.003	<0.003	<0.003
Polycyclic Aromatic Hydrocarbons (4)(ug/l)	8	8		0.1	0	0.00	0	0	0
1,2 Dichloroethane(ug/I)	8	9		3	0	0.00	<0.12	<0.12	<0.12
Tetrachloromethane(ug/I)	8	9		3	0	0.00	<0.11	<0.11	<0.11
Tetra+Trich(ug/l)	8	9		10	0	0.00	0	0.02	0.16
Trihalomethanes(ug/l)	8	8		100	0	0.00	9.31	20.22	38.85
2,4 - D(ug/l)	8	8		0.1	0	0.00	<0.007	<0.007	<0.007
Atrazine(ug/l)	8	8		0.1	0	0.00	0.002	0.003	0.003
Bentazone(ug/l)	8	8		0.1	0	0.00	<0.007	<0.007	<0.007
Benzene(ug/I)	8	9		1	0	0.00	<0.02	<0.02	<0.02
Dieldrin(ug/l)	8	8		0.03	0	0.00	<0.007	<0.007	<0.007
Diuron(ug/l)	8	8		0.1	0	0.00	<0.004	<0.004	<0.004
Fluroxypyr(ug/l)	8	8		0.1	0	0.00	<0.008	<0.008	<0.008
Glyphosate(ug/l)	8	8		0.1	0	0.00	<0.005	<0.005	<0.005
Metazachlor(ug/l)	8	8		0.1	0	0.00	<0.003	0.005	0.016
Pendimethalin(ug/l)	8	8		0.1	0	0.00	<0.007	<0.007	<0.007
MCPA(ug/I)	8	8		0.1	0	0.00	<0.008	<0.008	<0.008
Mecoprop (MCPP)(ug/I)	8	8		0.1	0	0.00	<0.005	<0.005	<0.005
Metaldehyde(ug/I)	8	8		0.1	0	0.00	<0.008	<0.008	<0.008
Propazyamide(ug/l)	8	8		0.1	0	0.00	<0.005	<0.005	<0.005

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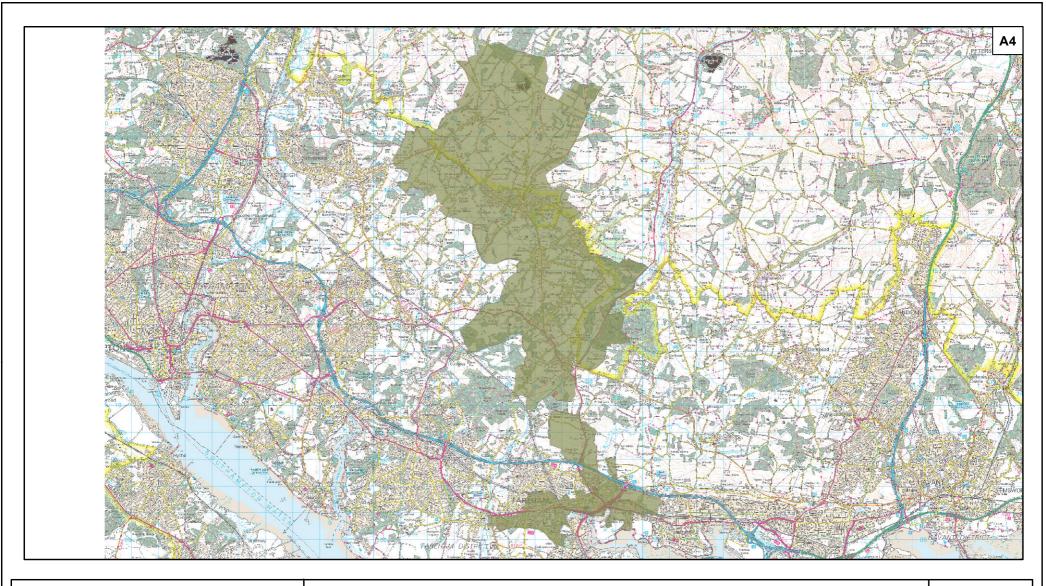


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Parameter (U	Jnits)	Ann. Sar Freque		Comment	PCV	Sam Contrave			entration o	
		Required	Taken			No.	%	Min	Mean	Max
Simazine(ug/	1)	8	8		0.1	0	0.00	0.004	0.005	0.006
Triclopyr(ug/l)	)	8	8		0.1	0	0.00	<0.015	<0.015	<0.015
Total Pesticid	es(ug/l)	8	8		0.5	0	0.00	0.007	0.012	0.029
61	Total No.Tests	s 124	11	Failures	= 3 =	0.242 %	. Pa	ass Rat	e = 99	.76 %

Hoads Hill North Zone Population 2023 = 40,726



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# Water Supply Zones - ZHH1

The information supplied is given in good faith as a guide to locating underground appararus. Its accuracy cannot be guaranteed, nor does it include comprehensive information about the existence or location of service pipes or cables to individual premises. The responsibility for locating and avoiding damage to apparatus on site shall be that of the person proposing to excavate in the street who shall be liable to the apparatus owner and any third party who may be affected in any way for the loss or damage caused by their failure to do so.

Drg No:

Job No:

OS Ref: SU6804SW

Scale: 1:140,737

Date: 27/02/2024

#### PORTSMOUTH WATER LTD

#### **Comments on Water Quality:**

#### E.coli and Coliforms

A random tap sample taken from a property in Wickham within the Hoads Hill North Water Quality Zone (ZHH1) exceeded the regulatory level for E.coli (0/cfu per 100ml) and Coliforms (0cfu per 100ml) with a confirmed E.coli count of 1cfu/100ml and a confirmed Coliform count of 2cfu/100ml. Resamples taken from the original location gave satisfactory results once the tap had been cleaned. Samples taken from neighbouring properties gave satisfactory results with no detection of any E.coli or Coliforms. The water fittings inspection confirmed the root cause of the exceedance is likely to be attributable to the kitchen tap and surrounding environment. All other E.coli and Coliform samples collected from the zone in 2023 have been satisfactory.

#### Lead

A random tap sample taken from a property in Fareham within Hoads Hill North Water Quality Zone (ZHH1) exceeded the regulatory level for lead (10  $\mu$ g/l) with a result 13.1  $\mu$ g/l. Resamples taken from the property gave satisfactory results below the regulatory limit for lead. During a water fittings inspection, there was evidence of lead pipe being present within the property. Findings of the investigation undertaken have identified that the main cause of the lead exceedance was attributable to the presence of a remaining lead supply pipe from the main to within the customer's property, combined with a drop in phosphate dose in January 2023. All other lead samples collected from the zone in 2023 have been satisfactory.

In all other respects this water meets the chemical and microbiological requirements of the Water Supply (Water Quality) Regulations 2016 (as amended).

#### Action taken to comply with Section 19 undertakings

Phosphate is dosed in the water to reduce pick-up of lead from lead pipework.



# **Determinands Analysed**

METALS SUBSTANCE TESTED	WHAT IT MEANS	REGULATORY STANDARD
Antimony		5.0 μg /l
Cadmium		5.0 μg/l
Chromium	These metals can occur naturally in source water at low levels. Some may also come from plumbing systems and	50 μg /l
Nickel	industrial processes. The standards provide wide safety	20 μg/l
Mercury	margins on known levels of toxicity.	1.0 µg /l
Selenium		10 μg /l
Aluminium	Aluminium occurs naturally and is also used during treatment to remove impurities. Concerns have been expressed about a link between aluminium and Alzheimer's disease, but there is no proven connection, although research on this is ongoing.	200 μg/l
Arsenic	This occurs naturally in water at low levels.	10 μg /l
Boron	Low levels of boron can be found in some waters due to its use in detergents.	1.0 mg/l
Copper	Traces of copper can sometimes be found in water, usually as a result of old, corroding plumbing or new plastic pipes. This can cause a metallic taste.	2.0 mg/l
Lead	Lead is rarely present in water sources but many properties built before the mid-1960's have a lead supply pipe or some lead plumbing. Portsmouth Water adds phosphate to most of the water supplied to reduce the amount of lead dissolved from pipes.	10 μg /l
Iron	Iron can naturally occur in some water sources and is removed during treatment. Iron in the water supplies may also be derived from old iron mains or domestic pipe work. This is not a health hazard, but can cause the water to become discoloured.	200 μg/l
Manganese	This can naturally occur in some water sources and is removed during treatment. Disruption to water mains can stir up sediment, containing manganese.	50 μg/l
Sodium	Sodium is a naturally occurring substance that can increase as an effect of softening the water. If you use a water softener you should retain an un-softened supply for drinking.	200 mg/l



NON-METALS		
SUBSTANCE TESTED	WHAT IT MEANS	REGULATORY STANDARD
Ammonium	Ammonia occurs naturally in many water sources. It is not harmful and is normally removed by treatment.	0.5 mg/l
Bromate	Bromate can potentially form when hypochlorite or ozone are used in water treatment. We control the treatment process tightly to minimize this.	10 μg/l
Chloride	Chloride occurs naturally in water but may give a salty taste to the water and contribute to corrosion.	250 mg/l
Cyanide	Cyanide is rarely found in water. When it is detected it is normally in areas of heavy industry.	50 μg/l
Fluoride	Fluoride occurs naturally at low levels in some of Portsmouth Water's supplies. None of our supplies are artificially fluoridated.	1.5 mg/l
Nitrate	Nitrate arises from the use of fertilizer on agricultural land.	50 mg/l
Nitrite	Nitrite occurs at much lower levels than nitrate and conversion from one form to another occurs readily. The regulations also require that the Nitrate:Nitrite ratio [nitrate]/50 + [nitrite]/3 is $\leq$ 1.0.	0.5 mg/l at Customers tap 0.1 mg/l at Water Treatment Works
Sulphate	Sulphate occurs naturally in water and comes from mineral deposits.	250 mg/l

BACTERIA		
SUBSTANCE TESTED	WHAT IT MEANS	REGULATORY STANDARD
Faecal Coliforms (E.coli)	These bacteria are specific inhabitants of the digestive systems of warm blooded animals. They are an indication of possible contamination (with other harmful bacteria possibly being present). Any detection in treated waters is investigated as a matter of urgency.	0 per 100ml
Total Coliforms	These are bacteria that provide a general and very sensitive measure of microbiological quality. They are removed by water treatment processes, but where they are detected it is often because they can grow within taps in the home. Any detection in treated waters is investigated as a matter of urgency.	0 per 100ml
Enterococci	As with coliforms, the presence of these organisms can indicate possible contamination in the water supply so they are investigated as a matter of urgency.	0 per 100ml
Colony Count at 37°C	Small numbers of bacteria can be present in treated water. The information obtained from these tests is used to maintain the efficiency of the water treatment processes and the	Number per 1ml
Colony Count at 22°C	cleanliness of water mains. Any unusually high levels are investigated.	No abnormal change from a long term average.
Clostridium Perfringens	As with coliforms, the presence of these organisms can indicate contamination in the water supply so they are investigated as a matter of urgency.	0 per 100ml



ORGANIC CHEMICALS: PESTICIDES						
SUBSTANCE TESTED	WHAT IT MEANS	REGULATORY STANDARD				
Aldrin		0.03 µg/l				
Dieldrin	Pesticides consist of chemicals used by farmers, local authorities and gardeners. The traces of these found in	0.03 μg/l				
Heptachlor	untreated water are typically far less than the maximum advised to protect public health.	0.03 μg/l				
Heptachlor epoxide	The pesticides tested for will vary from area to area, depending on the usage of pesticides in the surrounding area	0.03 μg/l				
Other individual Pesticides	of each water source.	0.1 μg/l				
Total Pesticides	This is the total amount of each individual pesticide detected in the water sample tested.	0.5 μg/l				

ORGANIC CHE	MICALS: OTHERS	
SUBSTANCE TESTED	WHAT IT MEANS	REGULATORY STANDARD
Benzene	Benzene is rarely found naturally in water but is removed in treatment processes. It arises from petroleum products and industries.	1.0 μg/l
Trichloromethane A		100 //
Dichlorobromomethane A	These compounds are known as Trihalomethanes (THM's).	100 ug/l (▲For the total amount
Dibromochloromethane A	They are formed when chlorine comes into contact with organic compounds in the raw untreated water.	of these four
Tribromomethane		compounds)
Tetrachloromethane		3.0 µg/l
1,2 Dichloroethane	These substances are known as solvents. They arise from industrial processes and are removed from the water during	3.0 µg/l
Trichloroethene × and Tetrachloroethene ×	the treatment stage.	10 μg/l (*For the total amount of these two compounds)
Benzo-a-pyrene		0.01 μg/l
Benzo-b-fluoranthene *	These compounds are known as Polycyclic aromatic	
Benzo-k-fluoranthene *	hydrocarbons (PAH's). They are rare substances and are seldom found in water. Where they do occur, the cause is	0.1 µg/l
Benzo-ghi-perylene *	usually the coal tar pitch lining from iron mains.	(*For the total amount of these four compounds)
Indeno-123-cd-pyrene *		



OTHER PARAM	<b>TETERS</b>		
SUBSTANCE TESTED	WHAT IT MEANS	REGULATORY STANDARD	
Colour	Chemical changes in the water source or pressure changes in the distribution main can give the water a tinge of colour.	20 mg/l Pt/Co	
Conductivity	This is a measure of the level of natural mineral salts contained in the water. This is measured by passing an electrical current through the water.	2500 μS per cm at 20°C	
pH (Hydrogen Ion)	This is a measure of the acidity or alkalinity of the water. A pH of 7 is neutral.	Between 6.5 and 9.5 pH units	
Taste Dilution Number  This is to check if the water has any unpleasant taste or sme  It is measured using trained panellists to taste and smell the		Acceptable to consumers	
Odour Dilution Number	water in strictly controlled conditions.	and no abnormal change	
Temperature	Temperature is checked to monitor changes in the water system.	No legal limit	
Total Chlorine	Total Chlorine  Sufficient chlorine is added to all our supplies to ensure the absence of harmful bacteria. Portsmouth Water also aims to		
Free Chlorine	keep the levels at customer's taps low to minimize associated taste and odour issues.	No legal limit	
Total Organic Carbon	TOC is a measure of the organic material present in the water. It varies naturally depending on the source of the water and is monitored for any unusual changes (which could be caused by oil spills or other pollutants).	No abnormal change	
Turbidity	This is a measure of suspended material in the water.	4.0 NTU at Customers tap 1.0 NTU at Water Treatment Works	