

COMMENTARY ON WATER QUALITY

The water supplied to the zone is classified as being soft water, which is reservoir derived. As we have a grid system in place whereby we can move water around the Yorkshire region as required, occasionally the hardness of your water may vary.

No fluoride is added to the water. Any fluoride that is there is naturally occurring.

Samples taken in the period showed that the water complied in most respects with the prescribed standards.

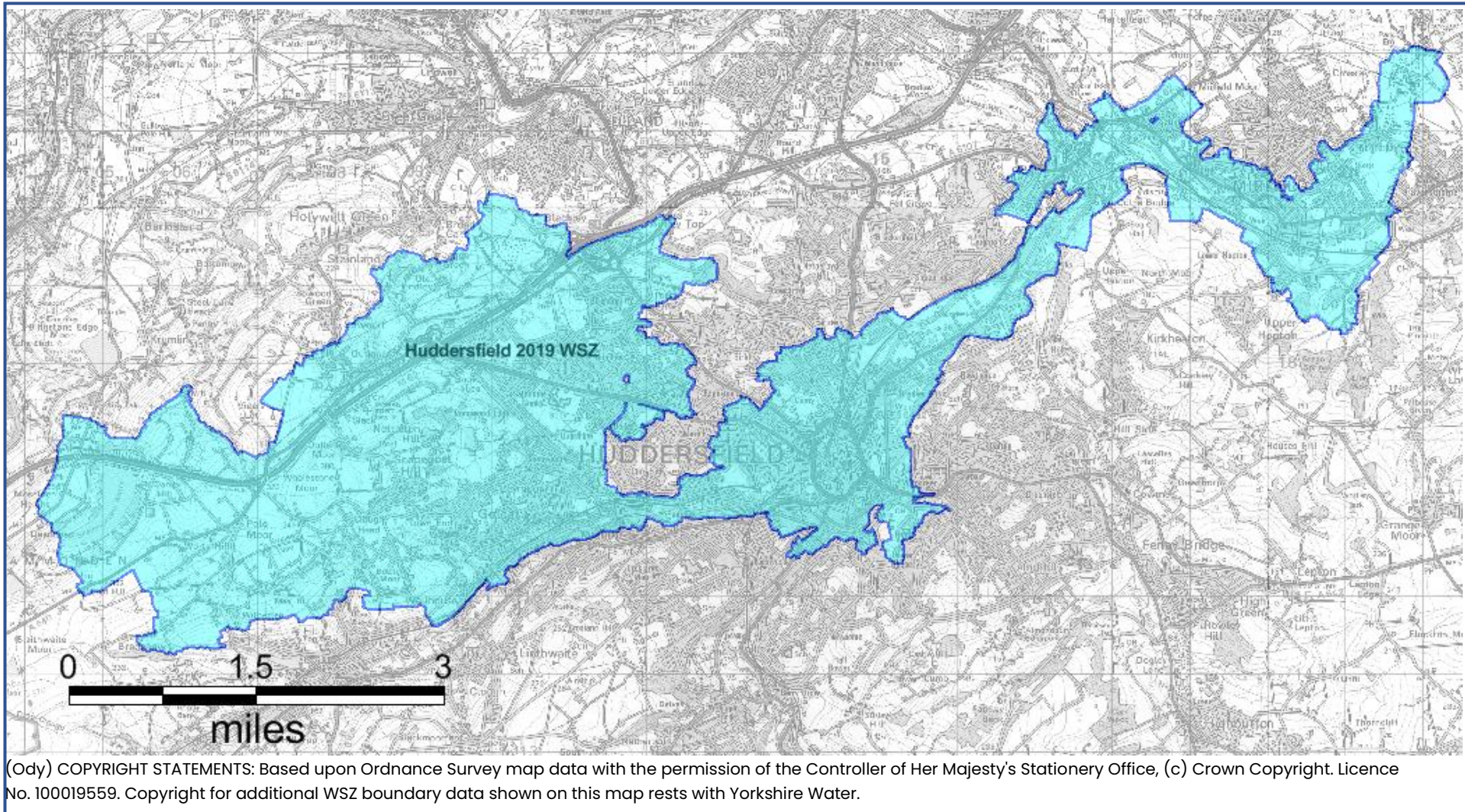
The infringement in respect of **Iron** was minor. Resamples met the prescribed standard.

The infringement noted presents no hazard to public health.

DETAILS OF UNDERTAKINGS AND NOTICES APPLICABLE

No Undertakings or Notices apply during the period.

The geographical area covered by this Water Supply Zone is shown below:



Yorkshire Water Services

Reporting Period: 01-01-2021 to 31-12-2021

Water Supply Zone: Huddersfield 2019 WSZ

Population 68698

ParameterName:	Std	Und Std	Units	No of Samples taken	No of Fails	% Fails	No of Fails (Und)	% Fails (Und)	Min	Mean	Max
Colony Counts After 3 Days At 22øc	-		no/ml	52	0	0.00%	0	0.00%	0	0	0
E. coli	0		no/100 ml	168	0	0.00%	0	0.00%	0	0	0
Enterococci	0		no/100 ml	8	0	0.00%	0	0.00%	0	0	0
Residual Disinfectant - Free	-		mg/l	168	0	0.00%	0	0.00%	0.02	0.34	0.77
Residual Disinfectant - Total	-		mg/l	168	0	0.00%	0	0.00%	0.06	0.42	0.81
Total coliforms(Indicator)	0		no/100 ml	168	0	0.00%	0	0.00%	0	0	0
1,2 Dichloroethane	3		µg/l	8	0	0.00%	0	0.00% <	0.16 <	0.2 <	0.16
Aluminium	200		µg Al/l	52	0	0.00%	0	0.00% <	6.9 <	13.767	52.4
Ammonium(ammonia and ammonium ions)	0.5		mg NH4/l	52	0	0.00%	0	0.00% <	0.008 <	0.008	0.008
Antimony	5		µg Sb/l	8	0	0.00%	0	0.00% <	0.06 <	0.0775	0.11
Arsenic	10		µg As/l	8	0	0.00%	0	0.00% <	0.06 <	0.14	0.16
Benzene	1		µg/l	8	0	0.00%	0	0.00% <	0.06 <	0.06 <	0.06
Benzo 3,4 pyrene	0.01		ug/l	8	0	0.00%	0	0.00% <	0.00057 <	0.0006 <	0.00057
Boron	1		mg B/l	8	0	0.00%	0	0.00% <	0.00983 <	0.0292	0.032
Bromate	10		µg BrO3/l	8	0	0.00%	0	0.00% <	0.2 <	0.4375	0.9
Cadmium	5		µg Cd/l	8	0	0.00%	0	0.00% <	0.01 <	0.0275 <	0.03
Chloride	250		mg Cl/l	8	0	0.00%	0	0.00%	8.6	12.475	15.8
Chromium	50		µg Cr/l	8	0	0.00%	0	0.00% <	0.05 <	0.1637	0.18
Colour	20		mg/l Pt/Co scale	52	0	0.00%	0	0.00% <	2.9 <	2.91 <	3
Conductivity	2500		µS/cm	52	0	0.00%	0	0.00%	114	136.54	155
Copper	2		mg Cu/l	8	0	0.00%	0	0.00%	0.001	0.0391	0.0964
Cyanide	50		µg CN/l	8	0	0.00%	0	0.00% <	1.2 <	4.96 <	5.5
Fluoride	1.5		mg F/l	8	0	0.00%	0	0.00%	0.05	0.061	0.08
Hydrogen Ion (pH)	6.5 - 9.5		pH value	52	0	0.00%	0	0.00%	7.22	7.56	8.25
Iron	200		µg Fe/l	52	1	1.92%	0	0.00% <	5.23 <	32.76	920
Lead	10		µg/l	8	0	0.00%	0	0.00% <	0.04 <	0.071	0.2
Manganese	50		µg Mn/l	52	0	0.00%	0	0.00% <	0.3 <	1.52	31.8
Mercury	1		µg Hg/l	8	0	0.00%	0	0.00% <	0.06 <	0.06 <	0.06
Nickel	20		µg Ni/l	8	0	0.00%	0	0.00%	0.66	1.461	2.72
Nitrate	50		mg NO3/l	8	0	0.00%	0	0.00% <	2.11 <	2.2038	2.64
Nitrite - Consumer's Taps	0.5		mg/l NO2	8	0	0.00%	0	0.00% <	0.002 <	0.002 <	0.002

Yorkshire Water Services

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Nitrite/ Nitrate formula	1		mg/l	8	0	0.00%	0	0.00%	0	0.0175	0.05
Odour	0		dilution number	52	0	0.00%	0	0.00%	0	0	0
Polycyclic Aromatic Hydrocarbons (PAHs)	0.1		µg/l	8	0	0.00%	0	0.00%	0	0	0
Selenium	10		µg Se/l	8	0	0.00%	0	0.00% <	0.08 <	0.29 <	0.32
Sodium	200		mg Na/l	8	0	0.00%	0	0.00%	6.5	8.86	10.2
Sulphate	250		mg SO4/l	8	0	0.00%	0	0.00%	26.8	31.1	35.7
Taste	0		dilution number	52	0	0.00%	0	0.00%	0	0	0
Tetrachloroethene/Trichlorethene - Sum	10		µg/l	8	0	0.00%	0	0.00%	0	0	0
Tetrachloromethane	3		µg/l	8	0	0.00%	0	0.00% <	0.16 <	0.16 <	0.16
Total organic carbon	-		mg C/l	8	0	0.00%	0	0.00%	0.9	1.354	1.9
Total Trihalomethanes (THM's)	100		µg/l	8	0	0.00%	0	0.00%	21.29	32.5088	53.23
Turbidity	4		NTU	52	0	0.00%	0	0.00% <	0.13 <	0.175	1.02
Calcium	-		mg Ca/l	8	0	0.00%	0	0.00%	13	15.2	16.9
Magnesium	-		mg Mg/l	8	0	0.00%	0	0.00%	1.34	1.845	2.15
Total Hardness	-		mg Ca/l	8	0	0.00%	0	0.00%	15.8	18.2375	20.2
2,4,5-T	0.1		µg/l	8	0	0.00%	0	0.00% <	0.011 <	0.0116 <	0.016
2,4-D	0.1		µg/l	8	0	0.00%	0	0.00% <	0.012 <	0.012 <	0.012
2,4-DB	0.1		µg/l	8	0	0.00%	0	0.00% <	0.017 <	0.0171 <	0.018
Aldrin	0.03		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.0065 <	0.008
Atrazine	0.1		µg/l	8	0	0.00%	0	0.00% <	0.004 <	0.0046 <	0.005
Bentazone	0.1		µg/l	8	0	0.00%	0	0.00% <	0.002 <	0.0023 <	0.004
Bromacil	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.0077 <	0.009
Bromoxynil	0.1		µg/l	8	0	0.00%	0	0.00% <	0.009 <	0.009 <	0.009
Carbetamide	0.1		µg/l	8	0	0.00%	0	0.00% <	0.008 <	0.0092 <	0.01
Chlormequat	0.1		µg/l	8	0	0.00%	0	0.00% <	0.003 <	0.003 <	0.003
Chlorpropham	0.1		µg/l	8	0	0.00%	0	0.00% <	0.012 <	0.0132 <	0.014
Chlorpyrifos	0.1		µg/l	8	0	0.00%	0	0.00% <	0.016 <	0.016 <	0.016
Chlortoluron	0.1		µg/l	8	0	0.00%	0	0.00% <	0.006 <	0.0064 <	0.007
Clomazone	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.0069 <	0.008
Clopyralid	0.1		µg/l	8	0	0.00%	0	0.00% <	0.011 <	0.0115 <	0.015
Cyanazine	0.1		µg/l	8	0	0.00%	0	0.00% <	0.006 <	0.0066 <	0.007
Cypermethrin	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.0065 <	0.008

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Cyproconazole	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.0076 <	0.008
Diazinon	0.1		µg/l	8	0	0.00%	0	0.00% <	0.006 <	0.0065 <	0.007
Dicamba	0.1		µg/l	8	0	0.00%	0	0.00% <	0.012 <	0.0138 <	0.014
Dichlobenil	0.1		µg/l	8	0	0.00%	0	0.00% <	0.004 <	0.0045 <	0.005
Dichlorprop	0.1		µg/l	8	0	0.00%	0	0.00% <	0.011 <	0.0117 <	0.017
Dieldrin	0.03		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.007 <	0.009
Difenconazole	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.0077 <	0.009
Diflufenican	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.008 <	0.009
Diuron	0.1		µg/l	8	0	0.00%	0	0.00% <	0.009 <	0.0096 <	0.01
Epoxiconazole	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.0056 <	0.006
EPTC	0.1		µg/l	8	0	0.00%	0	0.00% <	0.01 <	0.0119 <	0.013
Flufenacet	0.1		µg/l	8	0	0.00%	0	0.00% <	0.008 <	0.0086 <	0.009
Fluroxypyr	0.1		µg/l	8	0	0.00%	0	0.00% <	0.009 <	0.0116 <	0.012
Flurtamone	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.007 <	0.007
Flusilazole	0.1		µg/l	8	0	0.00%	0	0.00% <	0.006 <	0.0066 <	0.007
Flutriafol	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.005 <	0.005
Gamma-HCH (Lindane)	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.0055 <	0.006
Heptachlor	0.03		µg/l	8	0	0.00%	0	0.00% <	0.004 <	0.0045 <	0.005
Heptachlor epoxide	0.03		µg/l	8	0	0.00%	0	0.00% <	0.006 <	0.0065 <	0.007
Imazapyr	0.1		µg/l	8	0	0.00%	0	0.00% <	0.004 <	0.0046 <	0.009
Ioxynil	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.0072 <	0.009
Isoproturon	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.0056 <	0.006
Linuron	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.0089 <	0.012
MCPA	0.1		µg/l	8	0	0.00%	0	0.00% <	0.008 <	0.0085 <	0.012
Mecoprop-P	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.0072 <	0.009
Mepiquat chloride	0.1		µg/l	8	0	0.00%	0	0.00% <	0.004 <	0.004 <	0.004
Metalddehyde	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.007 <	0.007
Metazachlor	0.1		µg/l	8	0	0.00%	0	0.00% <	0.006 <	0.0066 <	0.007
Monuron	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.007 <	0.007
op'-DDD (TDE)	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.005 <	0.005
op'-DDE	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.005 <	0.005
op'-DDT	0.1		µg/l	8	0	0.00%	0	0.00% <	0.004 <	0.0045 <	0.005
Oxadixyl	0.1		µg/l	8	0	0.00%	0	0.00% <	0.01 <	0.0107 <	0.012
Pendimethalin	0.1		µg/l	8	0	0.00%	0	0.00% <	0.009 <	0.0131 <	0.02

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							No of Fails (Und)	% Fails (Und)	Min	Mean	Max
Pesticides - Total Substances	0.5		µg/l	8	0	0.00%	0	0.00%	0	0	0
pp'-DDD (TDE)	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.005 <	0.005
pp'-DDE	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.005 <	0.005
pp'-DDT	0.1		µg/l	8	0	0.00%	0	0.00% <	0.004 <	0.0045 <	0.005
Propachlor	0.1		µg/l	8	0	0.00%	0	0.00% <	0.006 <	0.0072 <	0.008
Propham	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.0082 <	0.009
Propiconazole	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.007 <	0.007
Propyzamide	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.0077 <	0.009
Prosulfocarb	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.0077 <	0.009
Quinmerac	0.1		µg/l	8	0	0.00%	0	0.00% <	0.006 <	0.0066 <	0.007
Simazine	0.1		µg/l	8	0	0.00%	0	0.00% <	0.004 <	0.0046 <	0.005
Tebuconazole	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.0075 <	0.009
Tri-allate	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.0055 <	0.006
Trichlopyr	0.1		µg/l	8	0	0.00%	0	0.00% <	0.015 <	0.0166 <	0.028
Trietazine	0.1		µg/l	8	0	0.00%	0	0.00% <	0.004 <	0.0052 <	0.006

Notes:

1) Qualified values are taken at face value in all calculations.