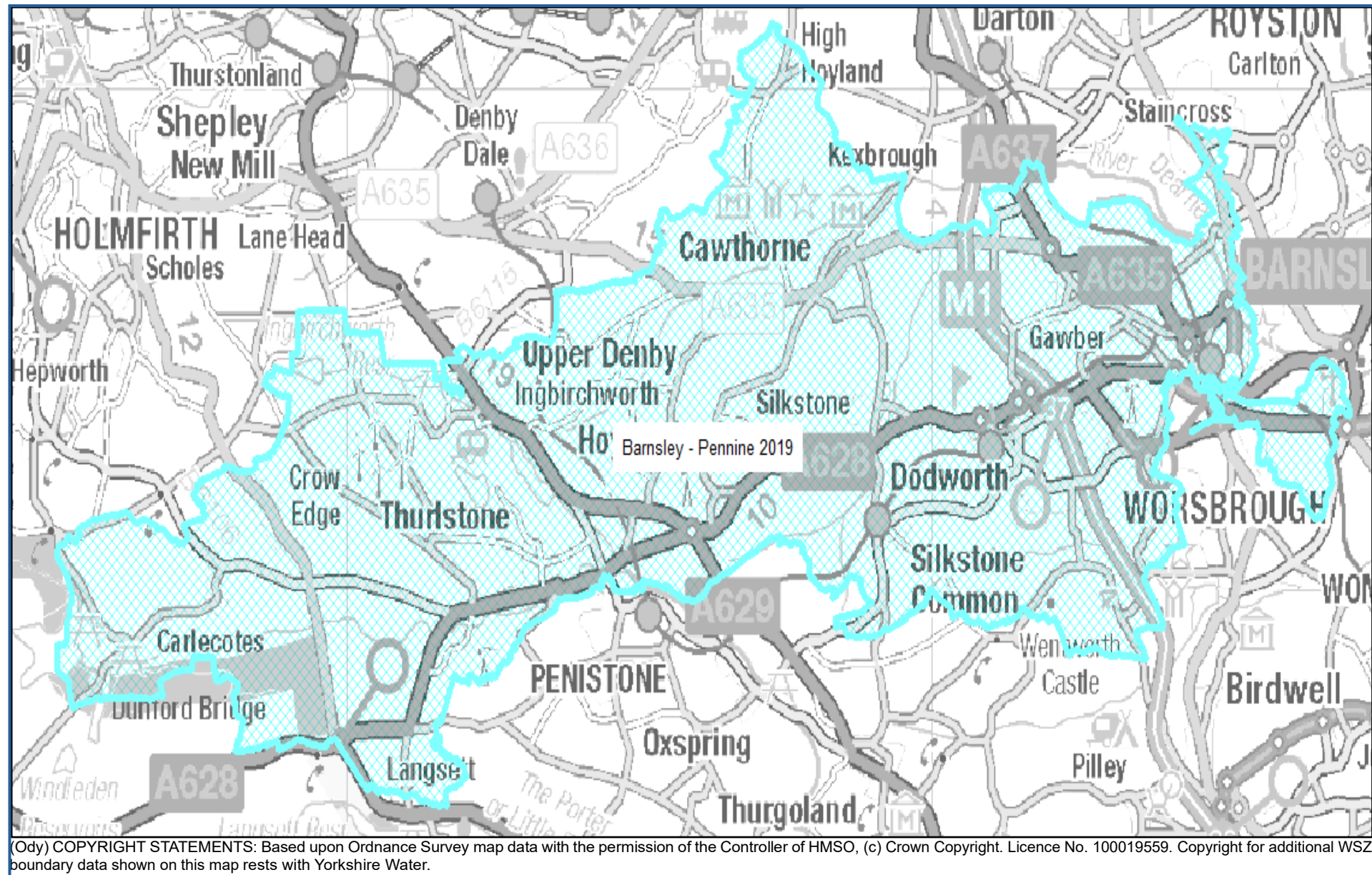


COMMENTARY ON WATER QUALITY

The water supplied to the zone is classified as being moderately soft water, which is river/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.

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



Water Supply Zone: Barnsley - Pennine 2019

ParameterName:	Std	Und Std	Units	No of Samples	No of Fails	% Fails	Population		Min	Mean	Max
							No of Fails	% Fails			
				taken			(Und)	(Und)			
Colony Counts After 3 Days At 22øc	-		no/ml	52	0	0.00%	0	0.00%	0	0.2	6
E. coli	0		no'/100 ml	156	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	156	0	0.00%	0	0.00%	0.01	0.27	0.67
Residual Disinfectant - Total	-		mg/l	156	0	0.00%	0	0.00%	0.03	0.38	0.91
Total coliforms(Indicator)	0		no'/100 ml	156	2	1.28%	0	0.00%	0		3
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 <	10.911	15.9
Ammonium(ammonia and ammonium ions)	0.5		mg NH4/l	52	0	0.00%	0	0.00% <	0.008 <	0.0092	0.022
Antimony	5		µg Sb/l	8	0	0.00%	0	0.00% <	0.05 <	0.0763	0.1
Arsenic	10		µg As/l	8	0	0.00%	0	0.00% <	0.11 <	0.145	0.17
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% <	0.00042 <	0.0004 <	0.00042
Boron	1		mg B/l	8	0	0.00%	0	0.00% <	0.032 <	0.032 <	0.032
Bromate	10		µg BrO3/l	8	0	0.00%	0	0.00% <	0.2 <	0.2875	0.5
Cadmium	5		µg Cd/l	8	0	0.00%	0	0.00% <	0.01 <	0.0225	0.03
Chloride	250		mg Cl/l	8	0	0.00%	0	0.00%	12.8	21.675	30.9
Chromium	50		µg Cr/l	8	0	0.00%	0	0.00% <	0.04 <	0.1287	0.18
Colour	20		mg/l Pt/Co scale	52	0	0.00%	0	0.00% <	3 <	3 <	3
Conductivity	2500		µS/cm	52	0	0.00%	0	0.00%	147	244.9	610
Copper	2		mg Cu/l	8	0	0.00%	0	0.00%	0.0012	0.0162	0.0553
Cyanide	50		µg CN/l	8	0	0.00%	0	0.00% <	1.2 <	1.2 <	1.2
Fluoride	1.5		mg F/l	8	0	0.00%	0	0.00%	0.07	0.078	0.09
Hydrogen Ion (pH)	6.5 - 9.5		pH value	52	0	0.00%	0	0.00%	6.96	7.55	8.27
Iron	200		µg Fe/l	52	0	0.00%	0	0.00% <	3.72 <	12.31	56.8
Lead	10		µg/l	8	0	0.00%	0	0.00% <	0.04 <	0.156	0.55
Manganese	50		µg Mn/l	52	0	0.00%	0	0.00% <	0.3 <	0.6	1.09
Mercury	1		µg Hg/l	8	0	0.00%	0	0.00% <	0.022 <	0.043 <	0.06
Nickel	20		µg Ni/l	8	1	12.50%	0	0.00%	0.56	9.282	66.3
Nitrate	50		mg NO3/l	8	0	0.00%	0	0.00% <	2.13 <	4.8162	8.58
Nitrite - Consumer's Taps	0.5		mg/l NO2	8	0	0.00%	0	0.00% <	0.002 <	0.0023 <	0.003

pply Zone:	Barnsley - Pennine 2019					Population			63551		
ParameterName:	Std	Und Std	Units	No of Samples	No of Fails	% Fails	No of Fails	% Fails	Min	Mean	Max
				taken			(Und)	(Und)			
Nitrite/ Nitrate formula	1		mg/l	8	0	0.00%	0	0.00%	0	0.0862	0.17
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 <	0.23 <	0.32
Sodium	200		mg Na/l	8	0	0.00%	0	0.00%	9.78	13.61	17.7
Sulphate	250		mg SO4/l	8	0	0.00%	0	0.00%	37.1	47.475	56.1
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%	1.09	1.456	1.83
Total Trihalomethanes (THM's)	100		µg/l	8	0	0.00%	0	0.00%	19.55	28.77	35.1
Turbidity	4		NTU	52	0	0.00%	0	0.00% <	0.07 <	0.149	0.31
Calcium	-		mg Ca/l	8	0	0.00%	0	0.00%	19.6	27.2125	35.5
Magnesium	-		mg Mg/l	8	0	0.00%	0	0.00%	1.59	2.3475	3.02
Total Hardness	-		mg Ca/l	8	0	0.00%	0	0.00%	22.3	31.075	39.4
2,4,5-T	0.1		µg/l	8	0	0.00%	0	0.00% <	0.013 <	0.0137 <	0.015
2,4-D	0.1		µg/l	8	0	0.00%	0	0.00% <	0.01 <	0.0104 <	0.011
2,4-DB	0.1		µg/l	8	0	0.00%	0	0.00% <	0.01 <	0.0112 <	0.012
Aldrin	0.03		µg/l	8	0	0.00%	0	0.00% <	0.008 <	0.008 <	0.008
Atrazine	0.1		µg/l	8	0	0.00%	0	0.00% <	0.006 <	0.006 <	0.006
Azoxystrobin	0.1		µg/l	8	0	0.00%	0	0.00% <	0.006 <	0.006 <	0.006
Bentazone	0.1		µg/l	8	0	0.00%	0	0.00% <	0.004 <	0.0044 <	0.005
Bixafen	0.1		µg/l	8	0	0.00%	0	0.00% <	0.012 <	0.012 <	0.012
Boscalid	0.1		µg/l	8	0	0.00%	0	0.00% <	0.008 <	0.008 <	0.008
Bromacil	0.1		µg/l	8	0	0.00%	0	0.00% <	0.011 <	0.011 <	0.011
Bromoxynil	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.0081 <	0.01
Carbetamide	0.1		µg/l	8	0	0.00%	0	0.00% <	0.009 <	0.009 <	0.009
Chlormequat	0.1		µg/l	8	0	0.00%	0	0.00% <	0.008 <	0.008 <	0.008
Chlorpropham	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.0075 <	0.009
Chlorpyrifos	0.1		µg/l	8	0	0.00%	0	0.00% <	0.008 <	0.008 <	0.008
Chlortoluron	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.005 <	0.005
Clomazone	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.007 <	0.007

ParameterName:	Std	Und Std	Units	No of Samples taken	No of Fails	% Fails	Population		Min	Mean	Max
							No of Fails (Und)	% Fails (Und)			
Clopyralid	0.1		µg/l	8	0	0.00%	0	0.00% <	0.011 <	0.0116 <	0.012
Cyanazine	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.007 <	0.007
Cypermethrin	0.1		µg/l	8	0	0.00%	0	0.00% <	0.008 <	0.008 <	0.008
Cyproconazole	0.1		µg/l	8	0	0.00%	0	0.00% <	0.006 <	0.006 <	0.006
Diazinon	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.007 <	0.007
Dicamba	0.1		µg/l	8	0	0.00%	0	0.00% <	0.011 <	0.0114 <	0.012
Dichlobenil	0.1		µg/l	8	0	0.00%	0	0.00% <	0.004 <	0.004 <	0.004
Dichlorprop	0.1		µg/l	8	0	0.00%	0	0.00% <	0.006 <	0.0075 <	0.01
Dieldrin	0.03		µg/l	8	0	0.00%	0	0.00% <	0.009 <	0.009 <	0.009
Difenconazole	0.1		µg/l	8	0	0.00%	0	0.00% <	0.009 <	0.009 <	0.009
Diffenican	0.1		µg/l	8	0	0.00%	0	0.00% <	0.009 <	0.009 <	0.009
Diuron	0.1		µg/l	8	0	0.00%	0	0.00% <	0.009 <	0.009 <	0.009
Epoxiconazole	0.1		µg/l	8	0	0.00%	0	0.00% <	0.006 <	0.006 <	0.006
EPTC	0.1		µg/l	8	0	0.00%	0	0.00% <	0.022 <	0.022 <	0.022
Flufenacet	0.1		µg/l	8	0	0.00%	0	0.00% <	0.008 <	0.008 <	0.008
Fluroxypyr	0.1		µg/l	8	0	0.00%	0	0.00% <	0.008 <	0.0099 <	0.011
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% <	0.009 <	0.009 <	0.009
Flutriafol	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.005 <	0.005
Fluxapyroxad	0.1		µg/l	8	0	0.00%	0	0.00% <	0.01 <	0.01 <	0.01
Gamma-HCH (Lindane)	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.005 <	0.005
Heptachlor	0.03		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.005 <	0.005
Heptachlor epoxide	0.03		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.007 <	0.007
Imazapyr	0.1		µg/l	8	0	0.00%	0	0.00% <	0.004 <	0.0052 <	0.006
Ioxynil	0.1		µg/l	8	0	0.00%	0	0.00% <	0.004 <	0.0044 <	0.005
Isoproturon	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.005 <	0.005
Linuron	0.1		µg/l	8	0	0.00%	0	0.00% <	0.009 <	0.009 <	0.009
MCPA	0.1		µg/l	8	0	0.00%	0	0.00% <	0.006 <	0.0072 <	0.008
Mecoprop-P	0.1		µg/l	8	0	0.00%	0	0.00% <	0.009 <	0.0096 <	0.01
Mepiquat chloride	0.1		µg/l	8	0	0.00%	0	0.00% <	0.008 <	0.008 <	0.008
Metaldehyde	0.1		µg/l	8	0	0.00%	0	0.00% <	0.006 <	0.006 <	0.006
Metamitron	0.1		µg/l	8	0	0.00%	0	0.00% <	0.008 <	0.008 <	0.008
Metazachlor	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.005 <	0.005
Metobromuron	0.1		µg/l	8	0	0.00%	0	0.00% <	0.01 <	0.01 <	0.01

Water Supply Zone: Barnsley - Pennine 2019

ParameterName:	Std	Und Std	Units	No of Samples taken	No of Fails	% Fails	Population		Min	Mean	Max
							No of Fails (Und)	% Fails (Und)			
Monuron	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.005 <	0.005
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 <	0.004 <	0.004
Oxadixyl	0.1		µg/l	8	0	0.00%	0	0.00% <	0.012 <	0.012 <	0.012
Pendimethalin	0.1		µg/l	8	0	0.00%	0	0.00% <	0.009 <	0.009 <	0.009
Pesticides - Total Substances	0.5		µg/l	8	0	0.00%	0	0.00%	0	0.001	0.008
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 <	0.004 <	0.004
Propachlor	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.007 <	0.007
Propamocarb	0.1		µg/l	8	0	0.00%	0	0.00% <	0.004 <	0.0048 <	0.006
Propham	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.005 <	0.005
Propiconazole	0.1		µg/l	8	0	0.00%	0	0.00% <	0.009 <	0.009 <	0.009
Propyzamide	0.1		µg/l	8	0	0.00%	0	0.00% <	0.009 <	0.009 <	0.009
Prosulfocarb	0.1		µg/l	8	0	0.00%	0	0.00% <	0.006 <	0.006 <	0.006
Prothioconazole-desthio	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.007 <	0.007
Quinmerac	0.1		µg/l	8	0	0.00%	0	0.00% <	0.006 <	0.006 <	0.006
Simazine	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.005 <	0.005
Tebuconazole	0.1		µg/l	8	0	0.00%	0	0.00% <	0.006 <	0.006 <	0.006
Tri-allate	0.1		µg/l	8	0	0.00%	0	0.00% <	0.006 <	0.006 <	0.006
Trichlopyr	0.1		µg/l	8	0	0.00%	0	0.00% <	0.016 <	0.0179 <	0.019
Trietazine	0.1		µg/l	8	0	0.00%	0	0.00% <	0.005 <	0.005 <	0.005

Notes:

- 1) Qualified values are taken at face value in all calculations.
- 2) Any infringements of the regulatory standard are thoroughly investigated and are reported to the Drinking Water Inspectorate (DWI), with remedial actions put in place where necessary.
- 3) Details of undertakings and notices (Improvement programmes) applicable can be obtained from the DWI website: [Yorkshire Water Improvement Programmes - Drinking Water Inspectorate](#)