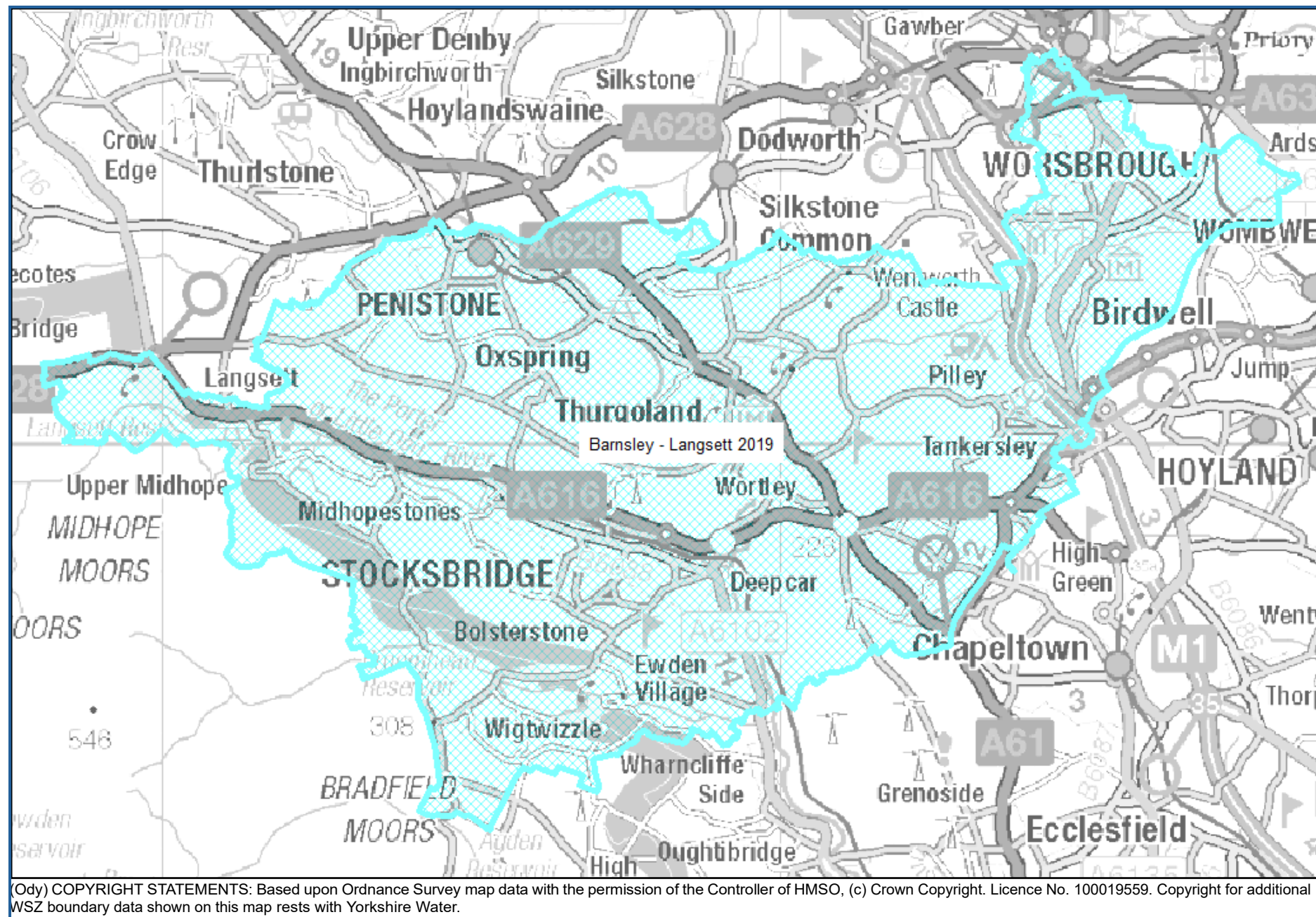


COMMENTARY ON WATER QUALITY

The water supplied to the zone is classified as being soft to 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 - Langsett 2019

ParameterName:	Std	Und Std	Units	No of Samples taken	No of Fails	% Fails	Population		Min	Mean	Max
							No of Fails (Und)	% Fails (Und)			
Colony Counts After 3 Days At 22øc	-		no/ml	52	0	0.00%	0	0.00%	0	1.7	78
E. coli	0		no'/100 ml	132	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	132	0	0.00%	0	0.00%	0.02	0.32	0.62
Residual Disinfectant - Total	-		mg/l	132	0	0.00%	0	0.00%	0.06	0.4	0.77
Total coliforms(Indicator)	0		no'/100 ml	132	2	1.52%	0	0.00%	0		2
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 <	11.957	50.3
Ammonium(ammonia and ammonium ions)	0.5		mg NH4/l	52	0	0.00%	0	0.00% <	0.008 <	0.0103	0.052
Antimony	5		µg Sb/l	8	0	0.00%	0	0.00% <	0.06 <	0.0775	0.1
Arsenic	10		µg As/l	8	0	0.00%	0	0.00% <	0.13 <	0.1687	0.21
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 <	0.275	0.4
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%	21.2	24.7125	31.4
Chromium	50		µg Cr/l	8	0	0.00%	0	0.00% <	0.07 <	0.1662	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%	18.3	186.01	346
Copper	2		mg Cu/l	8	0	0.00%	0	0.00%	0.0011	0.0039	0.0111
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%	0.05	0.068	0.08
Hydrogen Ion (pH)	6.5 - 9.5		pH value	52	0	0.00%	0	0.00%	7.05	7.61	8.03
Iron	200		µg Fe/l	52	1	1.92%	0	0.00% <	3.72 <	36.92	973
Lead	10		µg/l	8	0	0.00%	0	0.00% <	0.02 <	0.111	0.23
Manganese	50		µg Mn/l	52	0	0.00%	0	0.00% <	0.3 <	1.05	23
Mercury	1		µg Hg/l	8	0	0.00%	0	0.00% <	0.04 <	0.048 <	0.06
Nickel	20		µg Ni/l	8	0	0.00%	0	0.00%	0.63	1.015	1.43
Nitrate	50		mg NO3/l	8	0	0.00%	0	0.00% <	2.13 <	2.1312	2.14
Nitrite - Consumer's Taps	0.5		mg/l NO2	8	0	0.00%	0	0.00% <	0.002 <	0.0025 <	0.003

ParameterName:	Std	Und Std	Units	No of Samples	No of Fails	% Fails	Population		Min	Mean	Max
							No of Fails	% Fails			
				taken			(Und)	(Und)			
Nitrite/ Nitrate formula	1		mg/l	8	0	0.00%	0	0.00%	0	0.005	0.04
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 <	0.26 <	0.32
Sodium	200		mg Na/l	8	0	0.00%	0	0.00%	13.9	15.32	19.3
Sulphate	250		mg SO4/l	8	0	0.00%	0	0.00%	35.8	39.9	45.3
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%	1.07	1.389	1.64
Total Trihalomethanes (THM's)	100		µg/l	8	0	0.00%	0	0.00%	16.47	28.285	35.56
Turbidity	4		NTU	52	0	0.00%	0	0.00% <	0.07 <	0.178	1.19
Calcium	-		mg Ca/l	8	0	0.00%	0	0.00%	18.4	20.1375	22.3
Magnesium	-		mg Mg/l	8	0	0.00%	0	0.00%	1.42	1.5837	1.83
Total Hardness	-		mg Ca/l	8	0	0.00%	0	0.00%	20.9	22.725	25.2
2,4,5-T	0.1		µg/l	8	0	0.00%	0	0.00% <	0.013 <	0.0135 <	0.015
2,4-D	0.1		µg/l	8	0	0.00%	0	0.00% <	0.01 <	0.0102 <	0.011
2,4-DB	0.1		µg/l	8	0	0.00%	0	0.00% <	0.01 <	0.0115 <	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 <	0.0042 <	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 <	0.0078 <	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 <	0.008 <	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	No of Fails	% Fails	Population		Min	Mean	Max
							No of Fails	% Fails			
				taken			(Und)	(Und)			
Clopyralid	0.1		µg/l	8	0	0.00%	0	0.00% <	0.011 <	0.0117 <	0.012
Cyanazine	0.1		µg/l	8	0	0.00%	0	0.00% <	0.007 <	0.0079 <	0.014
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 <	0.0112 <	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 <	0.007 <	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 <	0.0102 <	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 <	0.0055 <	0.006
Ioxynil	0.1		µg/l	8	0	0.00%	0	0.00% <	0.004 <	0.0042 <	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 <	0.0075 <	0.008
Mecoprop-P	0.1		µg/l	8	0	0.00%	0	0.00% <	0.009 <	0.0098 <	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

Apply Zone:	Barnsley - Langsett 2019						Population		54785		
ParameterName:	Std	Und Std	Units	No of Samples taken	No of Fails	% Fails	No of Fails (Und)	% Fails (Und)	Min	Mean	Max
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	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 <	0.004 <	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 <	0.0045 <	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 <	0.0183 <	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](#)