



	Results	WHO Drinking Water limits	Limits Exceeded (Y/N)
Sample_ID	S1_2019		
Sampling date	14.03.2019		
Location ID	Birtley WWTP		
Sample description	Secondary clarifier effluent		
Sample Source	Wastewater (treated)		
Label	WW		
Latitude	54.90472		
Longitude	-1.6021		
Sea Level (mAOD)			
Depth below ground (m)	0		
pH	7.27		
Temp (degC)	11.7		
Salinity (ppm)	447		
TDS (mg/l)	634		
Conductivity (uS)	921		
Alkalinity (mg/L CaCO3)	35.5		
Faecal Coliforms (count/100ml)	30000	0	Y
Aluminium (mg/l)	0.017	0.2	N

Ammonium (mg/l)	2.494	<i>Not of health concerns at levels found in drinking water</i>	N
Antimony (mg/l)	0.005	0.02	N
Arsenic (mg/l)	0.005	0.01	N
Barium (mg/l)	0.018	1.3	N
Bromide (mg/l)		6	N
Cadmium (mg/l)	0.000	0.003	N
Calcium (mg/l)	58.232	100-300	N
Chloride (mg/l)	107.143	250	N
Chromium (mg/l)	0.001	0.05	N
Copper (mg/l)	0.005	2	N
Fluoride (mg/l)	0.304	1.5	N
Iron (mg/l)	0.164	2	N
Lead (mg/l)	0.001	0.01	N
Magnesium (mg/l)	9.232	<i>Not of health concerns at levels found in drinking water</i>	N
Manganese (mg/l)	0.054	0.4	N
Nickel (mg/l)	0.004	0.07	N
Nitrate (mg/l) (HACH)	168.075	50	Y
Nitrate.1 (mg/l) (Ion Chrom)	63.658	50	Y
Nitrite (mg/l) (HACH)	0.756	3	N
Nitrite.1 (mg/l) (Ion Chrom)		3	N
Phosphate (mg/l)	11.303	<i>Not of health concerns at levels found in drinking water</i>	N
Potassium (mg/l)	20.961	<i>Not of health concerns at levels found in drinking water</i>	N
Silicon (mg/l)	5.584	<i>Not of health concerns at levels found in drinking water</i>	N
Sodium (mg/l)	70.817	200	N
Strontium (mg/l)	0.212	4	N

Sulphate (mg/l)	84.660	500	N
Zinc (mg/l)	0.110	<i>Not of health concerns at levels found in drinking water</i>	N
TOC (mg/l)	52.475		
TIC (mg/l)	3.386		
UV abs 200 (cm-1)	3.125		
UV abs 210 (cm-1)	3.331		
UV abs 220 (cm-1)	3.318		
UV abs 230 (cm-1)	2.102		
UV abs 254 (cm-1)	0.266		
UV abs 260 (cm-1)	0.251		
UV abs 280 (cm-1)	0.209		
UV abs 300 (cm-1)	0.161		
Total Coliforms (total count)	30000		
Putative Pathogens - Human E.coli (total count)			
Putative Pathogens - Total E.coli (total count)			
Putative Pathogens - Total Coliform (total count)			
Total Bacteria (total count)			
Enterococci (count/100ml)			
Contaminants	High faecal coliform count; High nitrate level;		
Health Effects	Faecal contamination can lead to vomiting and diarrhoea. Pathogens such as E coli, hepatitis and salmonella can cause severe health effects ; High Nitrate levels can lead to cyanosis, asphyxia and blue-baby syndrome in infants;		

Treatments	Faecal treatment - Heat water to a rolling boil and then allow to cool naturally, chemical disinfection, coagulation, distillation, reverse osmosis, slow sand filtration or solar disinfection; Nitrate can be reduced through ion exchange;		
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