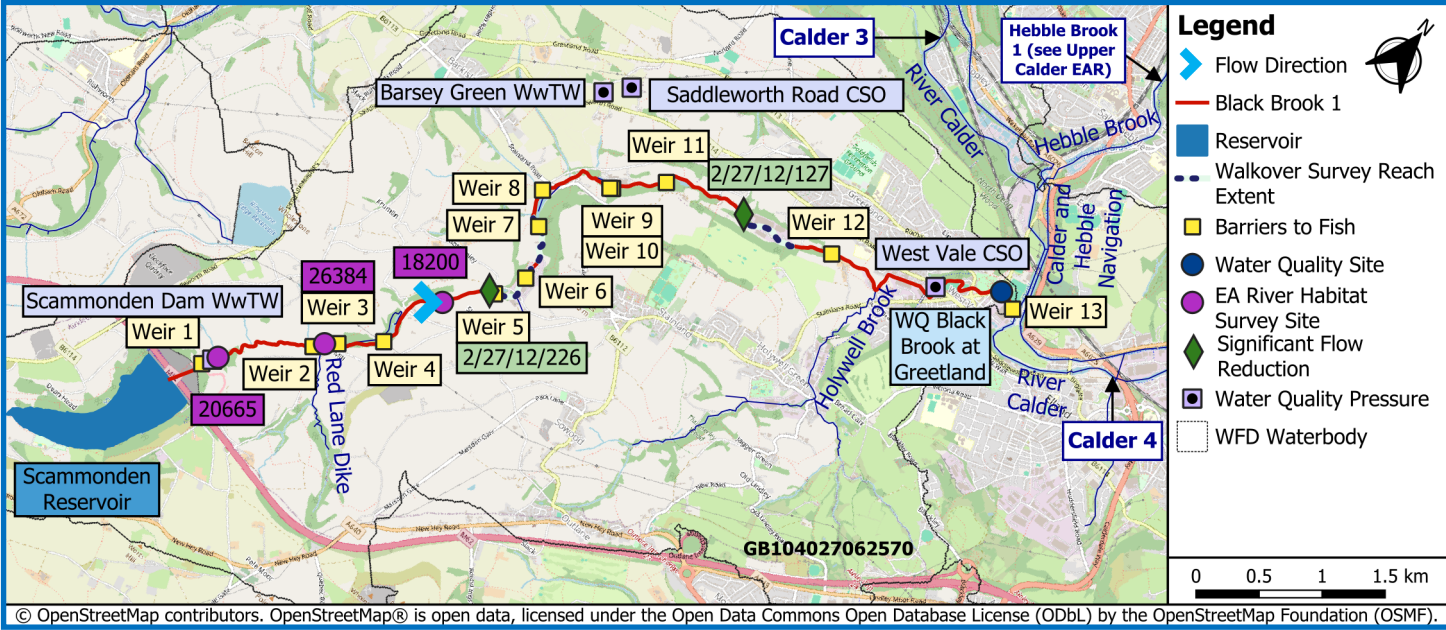


Reach Setting

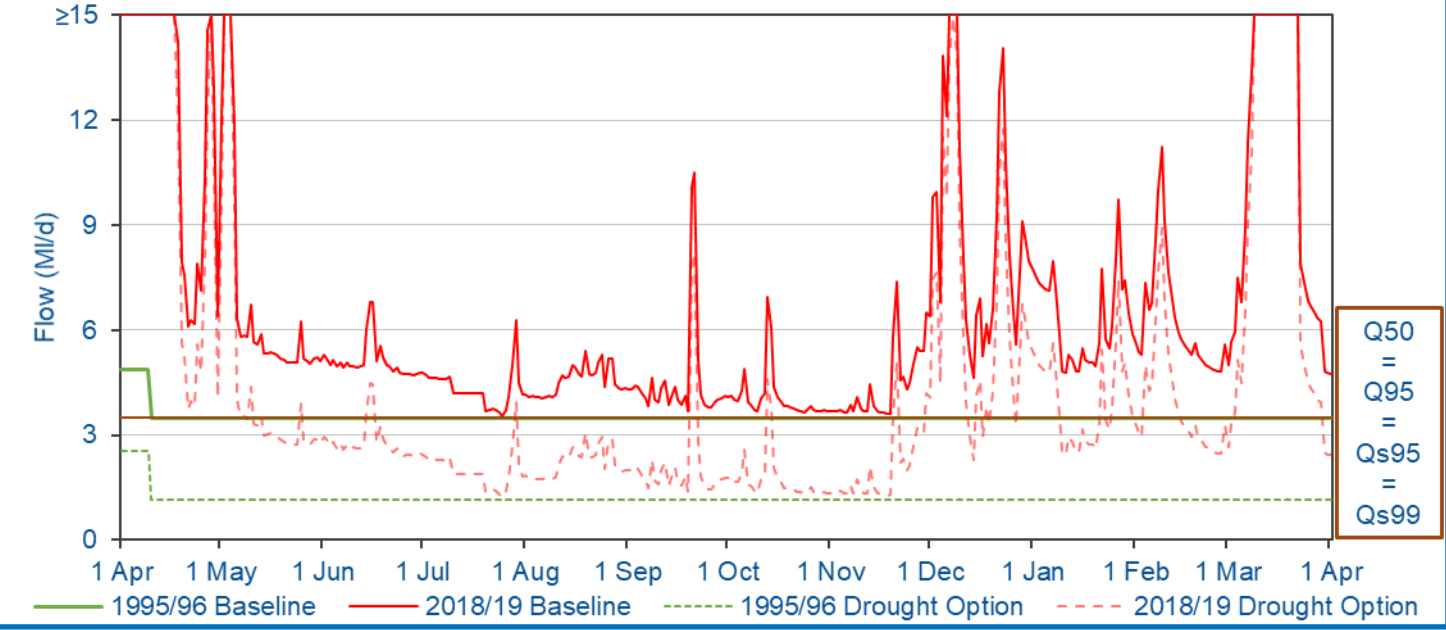


Reach Setting Information:

The bedrock geology is dominated by lithologies of the Millstone Grit Group and superficial geology is limited to deposits of alluvium beneath the channel. Soil types along the reach are composed predominantly of freely draining, slightly acid loamy soils. Suburban/urban land use is generally very low in the upper reaches but increases towards the bottom of the reach, particularly when the reach passes through Greetland and West Vale.

	Supplementary Information
Catchment Area at Assessment Point	4.9km <sup>2</sup>
Mean Slope Gradient	0.8°
Length of Reach	8.9km
Additional Catchment Area	24.5km <sup>2</sup>
Upstream Reach	N/A
Downstream Reach	River Calder 4

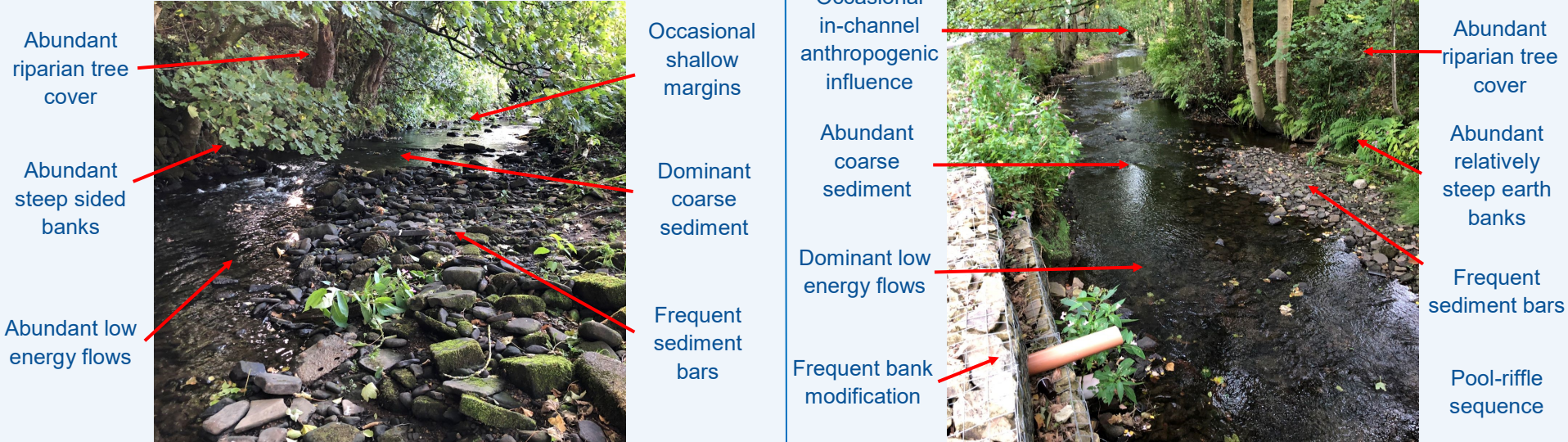
River Flow Regime



	Reference Conditions (ML/d)	Drought Plan Conditions (ML/d)	% Reduction	Impact
Q <sub>s</sub> 95	3.49	1.15	67	Summer Major
Q <sub>s</sub> 99	3.49	1.15	67	
Q95	3.49	1.15	67	Winter Major
Q50	3.49	1.15	67	

Significant Flow Additions/Reductions	Flow Rate (ML/d)	Abstraction / Discharge
BLACK BROOK 2/27/12/127	0.682	Abstraction
BLACK BURN BROOK-STAINLAND 2/27/12/226	3.1823	Abstraction

River Habitats



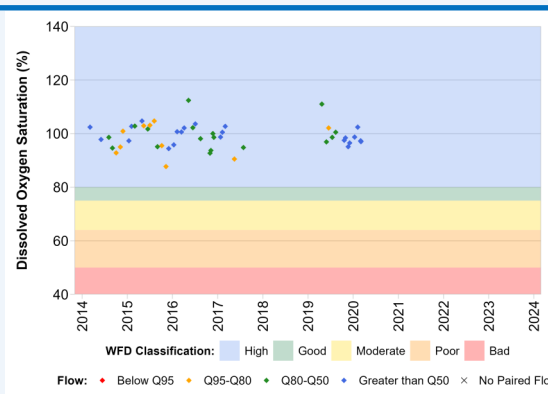
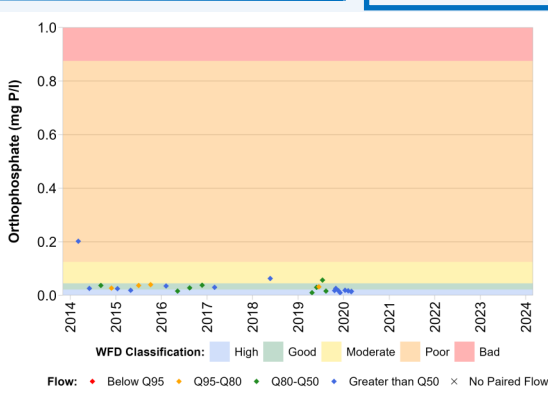
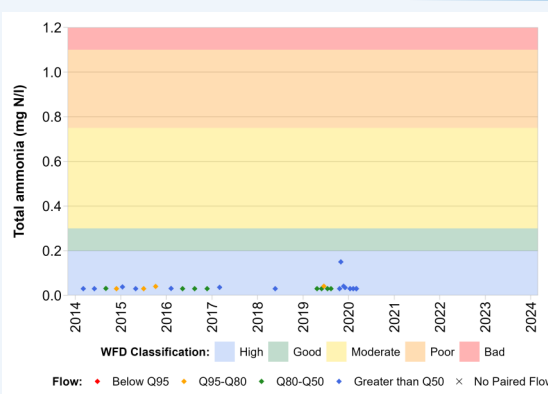
River Water Quality

Significant Water Quality	Permit Conditions
Scammonden Dam WwTW 2747	Descriptive Consent (>250 population equivalent)
Barsey Green WwTW 1433	Descriptive consent
Saddleworth Road/ CSO 2515 1	Intermittent Discharge
West Vale/ CSO 2515 3	Intermittent Discharge

At the Black Brook At Greetland (NE-49500035) the average pH between 2014-2024 was 7.8 with a maximum temperature of 16.2°C for the same period.

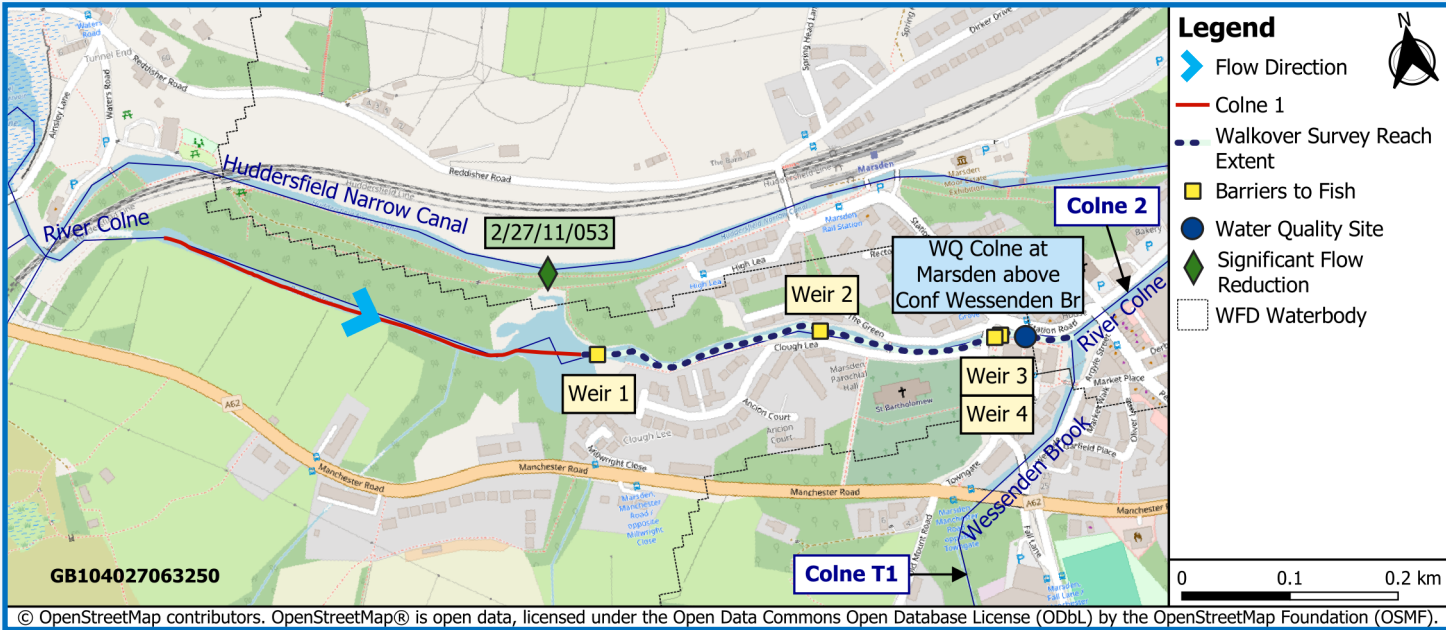


Figure A4.1  
Black Brook 1  
Physical Environment Information





Reach Setting

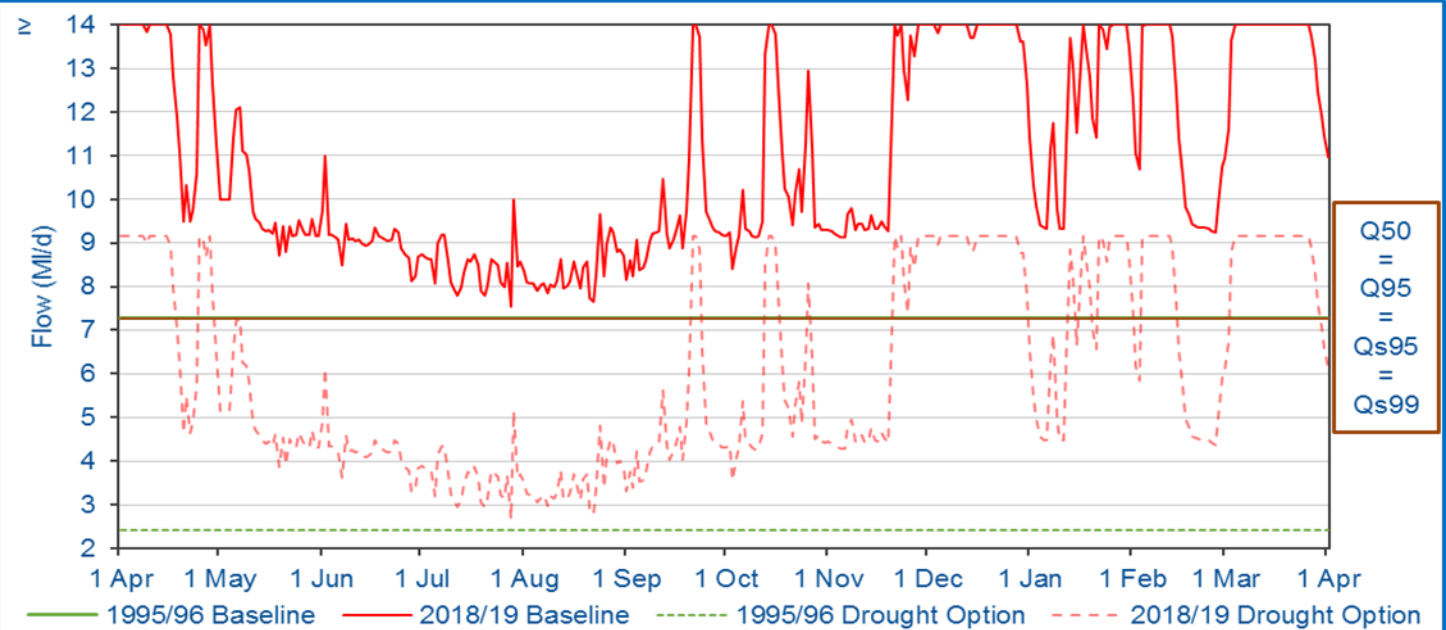


Reach Setting Information:

The bedrock geology is dominated by lithologies of the Millstone Grit Group (sandstone, siltstone and sandstone) and superficial geology is limited with no significant deposits identified along the reach. Soil types along the reach are composed of freely draining, slightly acid loamy soils. Surrounding land use is predominantly broadleaf woodland to 0.3km downstream to suburban/urban land use thereafter.

	Supplementary Information
Catchment Area at Assessment Point	12.9km <sup>2</sup>
Mean Slope Gradient	1.01°
Length of Reach	0.9km
Additional Catchment Area	1.5km <sup>2</sup>
Upstream Reach	N/A
Downstream Reach	River Colne 2

River Flow Regime



	Reference Conditions (Ml/d)	Drought Plan Conditions (Ml/d)	% Reduction	Impact	Significant Flow Additions/Reductions	Flow Rate (Ml/d)	Abstraction / Discharge
Q <sub>s</sub> 95	7.27	2.40	67	Summer Major	River Colne 2/27/11/053	0.6	Abstraction
Q <sub>s</sub> 99	7.27	2.40	67				
Q95	7.27	2.40	67	Winter Major			
Q50	7.27	2.40	67				

River Habitats



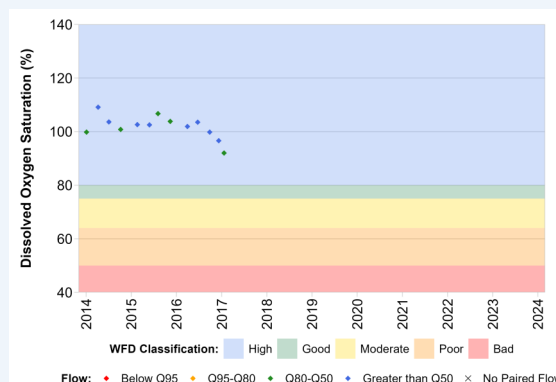
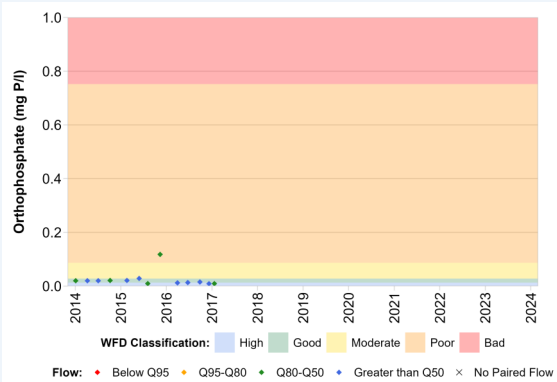
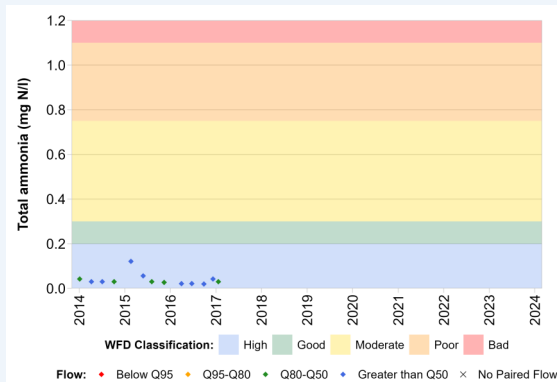
River Water Quality

There are no significant water quality pressures associated with this reach

At the Colne at Marsden above Conf. Wessenden Brook (NE-49500639) the average pH was 7.7 with a maximum temperature of 15.8°C

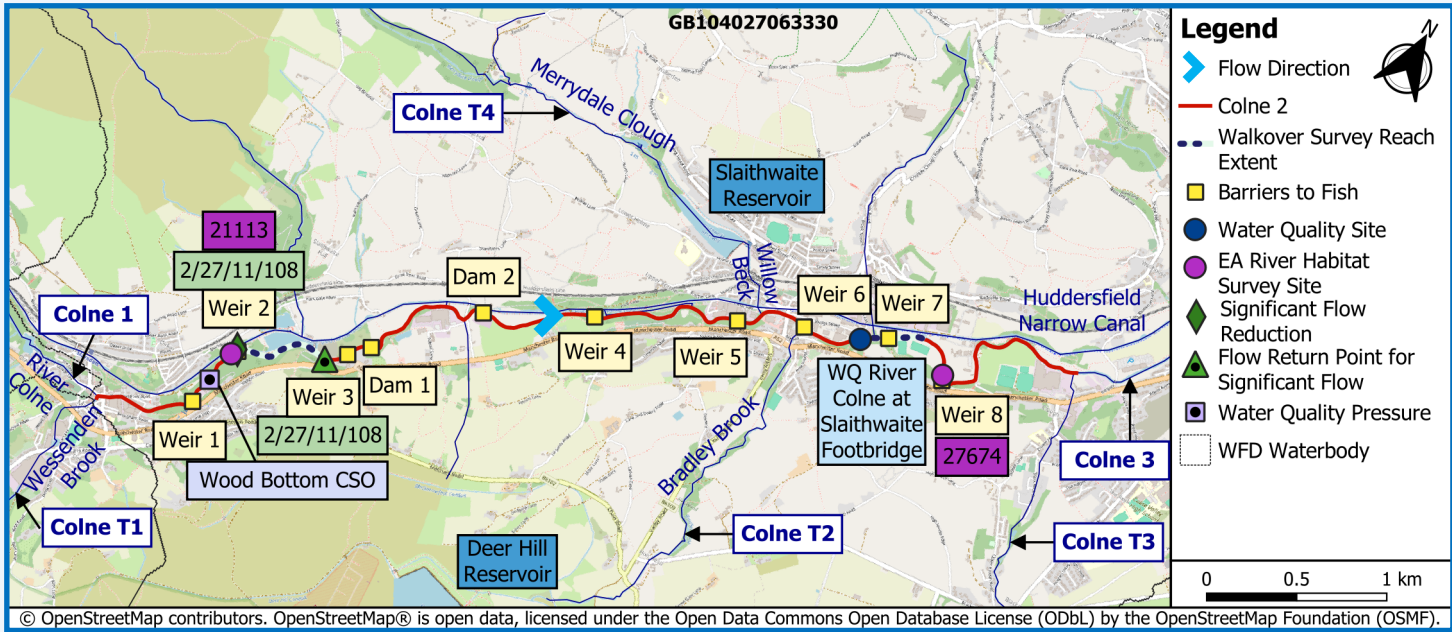


Figure A4.2  
River Colne 1  
Physical Environment Information





Reach Setting

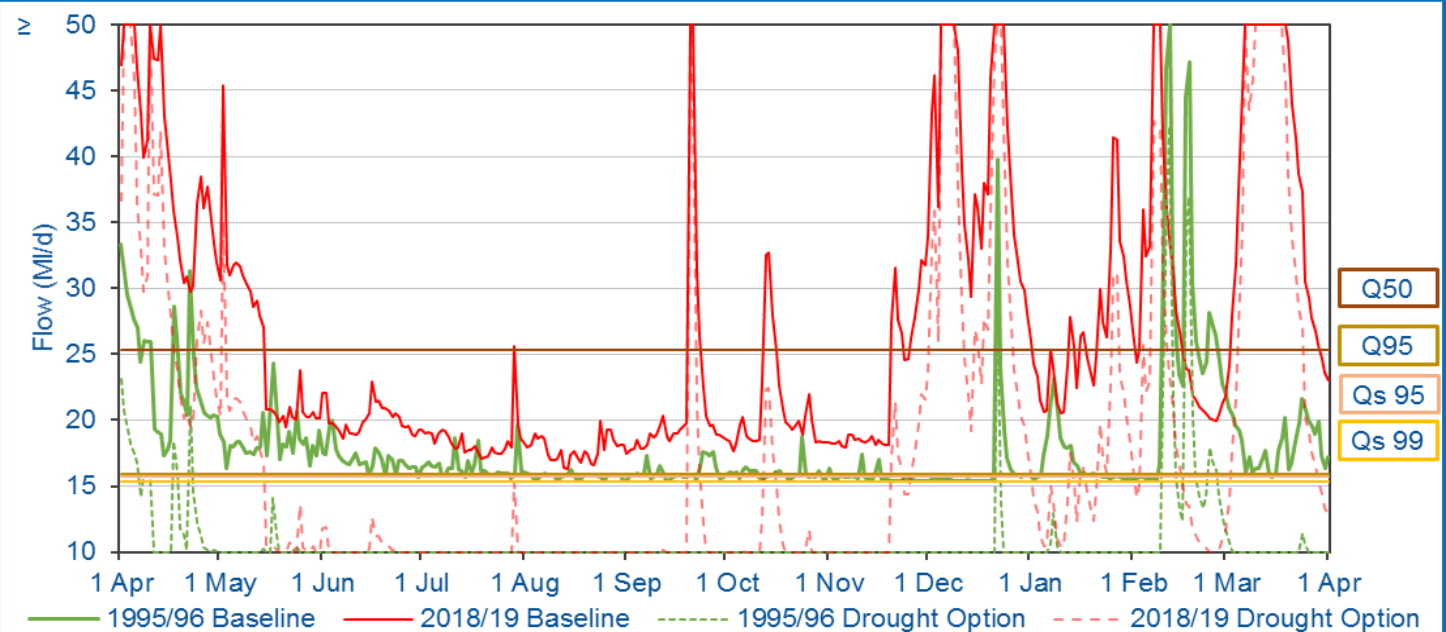


Reach Setting Information:

The bedrock geology is dominated by lithologies of the Millstone Grit Group (sandstone, siltstone and sandstone) and superficial geology is limited to alluvium beneath the channel with scattered head deposits. Soil types along the reach are composed of freely draining, slightly acid loamy soils. There is the presence of urbanisation at the start of the reach as it passes through Marsden and at the end of the reach as it enters Slaithwaite.

	Supplementary Information
Catchment Area at Assessment Point	31.28km <sup>2</sup>
Mean Slope Gradient	0.6°
Length of Reach	6.5km
Additional Catchment Area	18.5km <sup>2</sup>
Upstream Reach	Colne 1/Colne T1
Downstream Reach	Colne 3

River Flow Regime



	Reference Conditions (Ml/d)	Drought Plan Conditions (Ml/d)	% Reduction	Impact	Significant Flow Additions/Reductions	Flow Rate (Ml/d)	Abstraction / Discharge
-					RIVER COLNE- MARSDEN 2/27/11/108	23.87	Abstraction
Q <sub>s</sub> 95	15.80	5.52	65	Summer Major			
Q <sub>s</sub> 99	15.40	5.12	67	Summer Major			
Q95	16.07	5.79	64	Winter Major			
Q50	25.91	15.63	40	Winter Major			

River Habitats



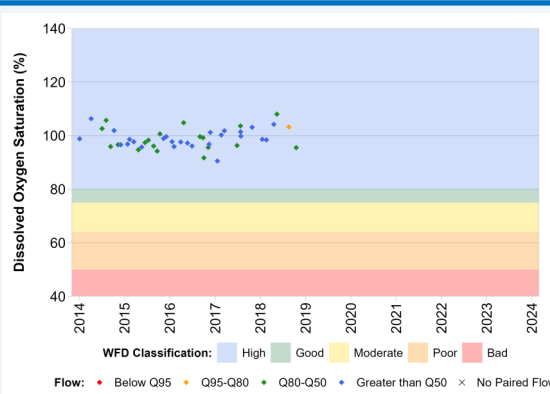
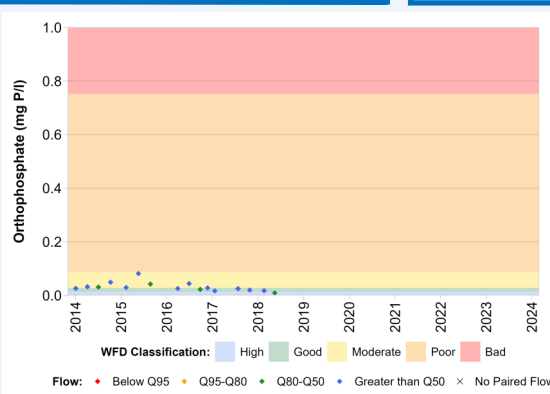
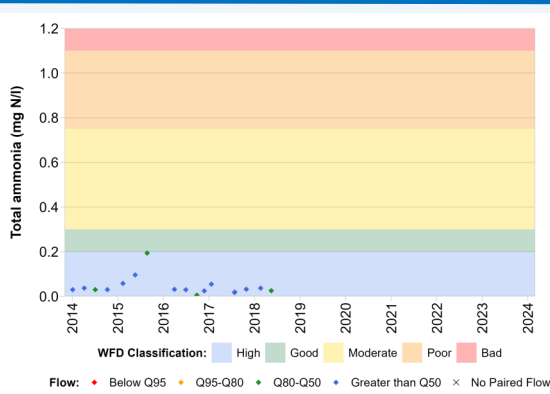
River Water Quality

Significant Water Quality Pressures	Permit Conditions
Wood Bottom CSO YWS01401	Intermittent Discharge

At the River Colne At Slaithwaite Footbridge (NE-49500641) the average pH is 7.8 with a maximum temperature of 17.5°C



Figure A4.3  
River Colne 2  
Physical Environment Information





GB104027063330

NE/027/0011/011

Weir 1

Weir 2

Weir 3

Weir 4

Weir 5

Weir 6

Weir 7

Weir 8

Weir 9

Weir 10

Weir 11

Weir 12

Weir 13

Weir 14

Weir 15

WQ Colne at Market Street, Milnsbridge

Colne 2

Colne T3

Colne 4

Holme 4

Longwood Brook

Gledholt Beck

River Colne

River Holme

Huddersfield Narrow Canal

13543

Legend

- Flow Direction
- Colne 3
- Walkover Survey Reach Extent
- Barriers to Fish
- Water Quality Site
- WSL Baseline Monitoring Site
- Significant Flow Reduction
- Water Quality Pressure
- WFD Waterbody

0 0.5 1 km

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The bedrock geology is dominated by lithologies of the Millstone Grit Group (sandstone, siltstone and sandstone) and superficial geology is limited to alluvium beneath the channel with scattered head deposits. Soil types along the reach are composed of freely draining, slightly acid loamy soils. Suburban/urban development is present throughout the reach as the channel enters Huddersfield.

	Supplementary Information
Catchment Area at Assessment Point	52.9km <sup>2</sup>
Mean Slope Gradient	0.5°
Length of Reach	6.0km
Additional Catchment Area	17.2km <sup>2</sup>
Upstream Reach	Colne 2/Colne T3
Downstream Reach	Colne 4

	Reference Conditions (MI/d)	Drought Plan Conditions (MI/d)	% Reduction	Impact
Q <sub>s95</sub>	22.26	10.63	52	Summer Major
Q <sub>s99</sub>	18.14	6.51	64	
Q <sub>95</sub>	23.75	12.12	49	Winter Major
Q <sub>50</sub>	57.29	45.66	20	

Significant Flow Additions/Reductions	Flow Rate (MI/d)	Abstraction / Discharge
<b>HUDDERSFIELD NARROW CANAL</b> <b>NE/027/0011/011</b>	7.56MI/d	Abstraction

Occasional in-channel barriers

Occasional bank modification

Abundant low energy flow

Abundant coarse substrate

Occasional bars

Frequent riparian shading

Frequent anthropogenic debris

Frequent  
riparian  
shading

Occasional protruding boulders

Abundant  
coarse  
sediment

Dominant steep banks

Dominant low energy flows

Occasional  
fine substrate

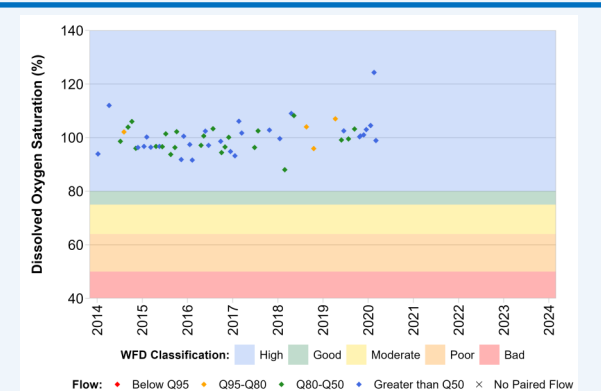
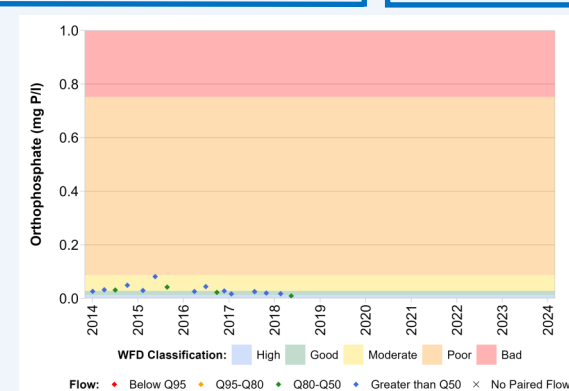
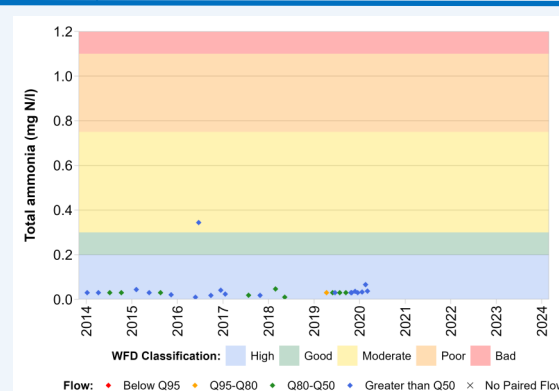
Rifle-pool  
sequence

<p><b>Significant Water Quality Pressures</b></p>	<p>Permit Conditions</p>
<p>There are 10 CSOs that could be considered intermittent water quality pressures in this reach, each with descriptive consents.</p>	<p>Intermittent Discharge</p>

At the Colne at Market Street, Milnsbridge (NE-49500638) the average pH was 7.8 with a maximum temperature of 19.0°C.

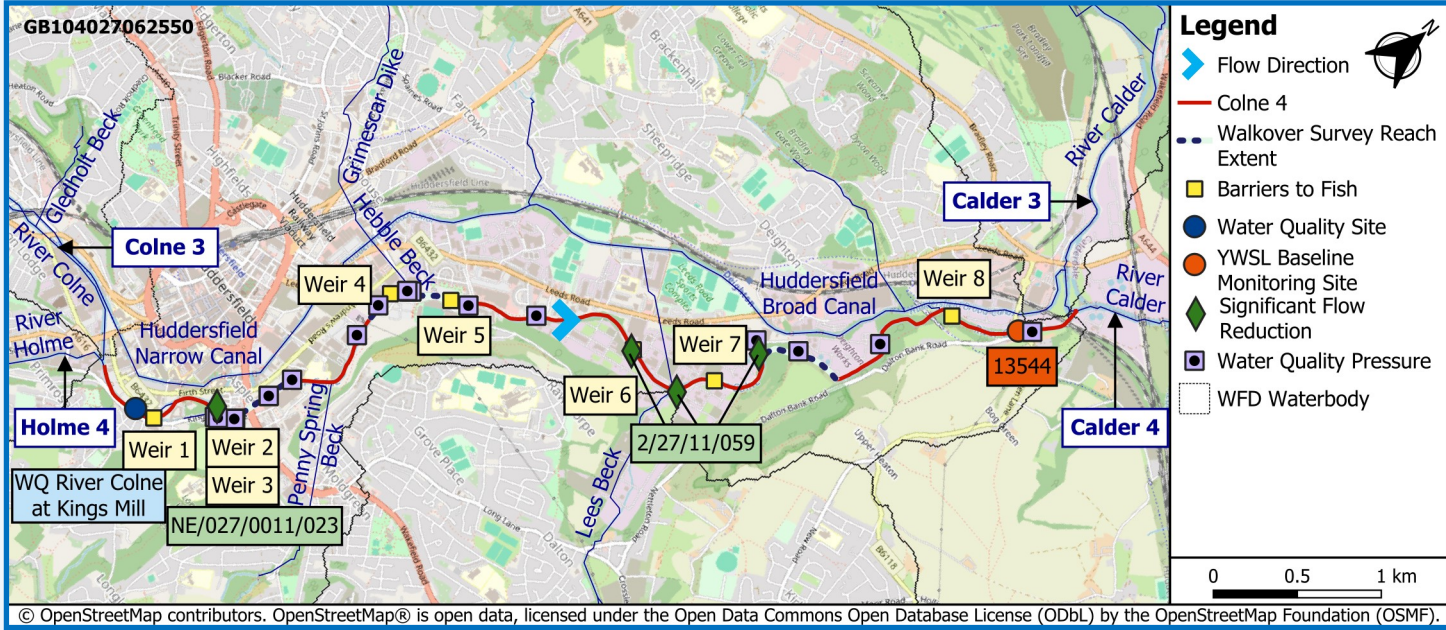


**Figure A4.4**  
**River Colne 3**  
**Physical Environment Information**





Reach Setting

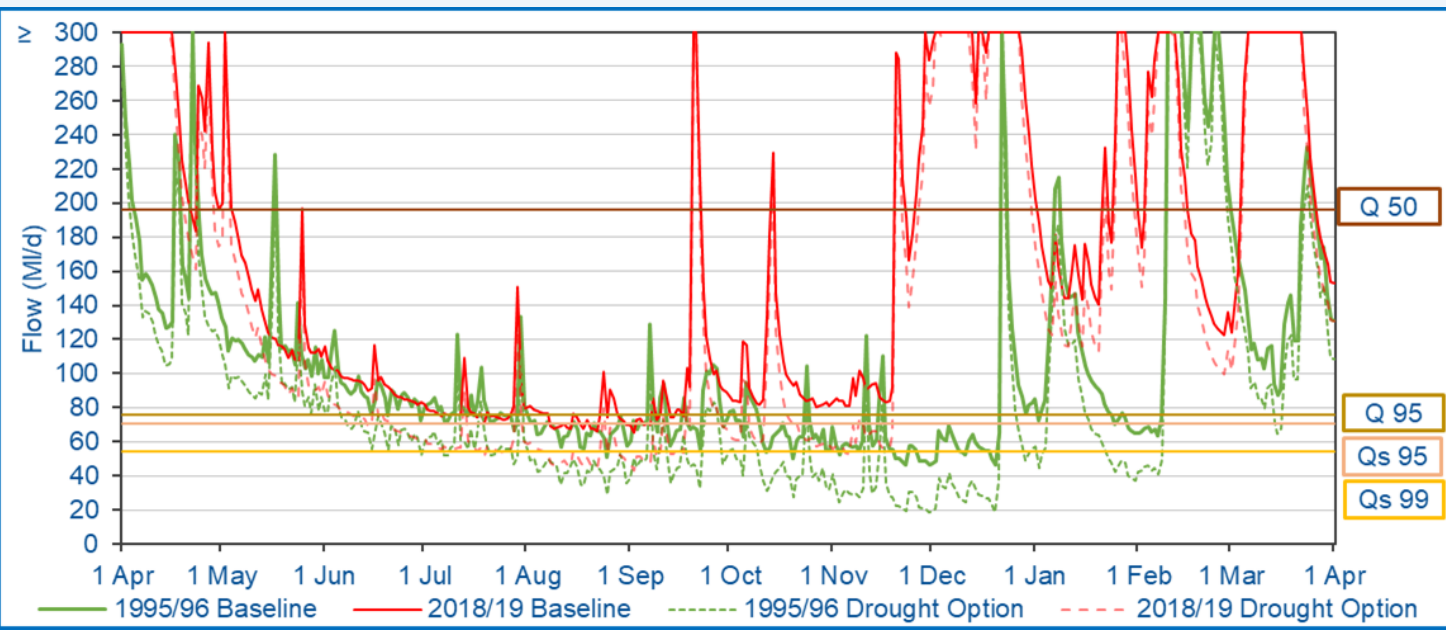


Reach Setting Information:

The superficial geology of the reach is dominated by alluvium beneath the channel with scattered head deposits around reach start. Soils in the reservoir catchment are predominantly composed of loamy and clayey floodplain soils directly beneath and around the reach with freely draining, slightly acid loamy soils and slowly permeable, seasonally wet acid loamy and clayey soils further out from the reach. Surrounding land-use is a mixture of suburban/urban land use as the reach flows through Huddersfield.

	Supplementary Information
Catchment Area at Assessment Point	170.9km <sup>2</sup>
Mean Slope Gradient	0.2°
Length of Reach	7.2km
Additional Catchment Area	75km <sup>2</sup>
Upstream Reach	Colne 3/ Holme 4
Downstream Reach	Calder 4

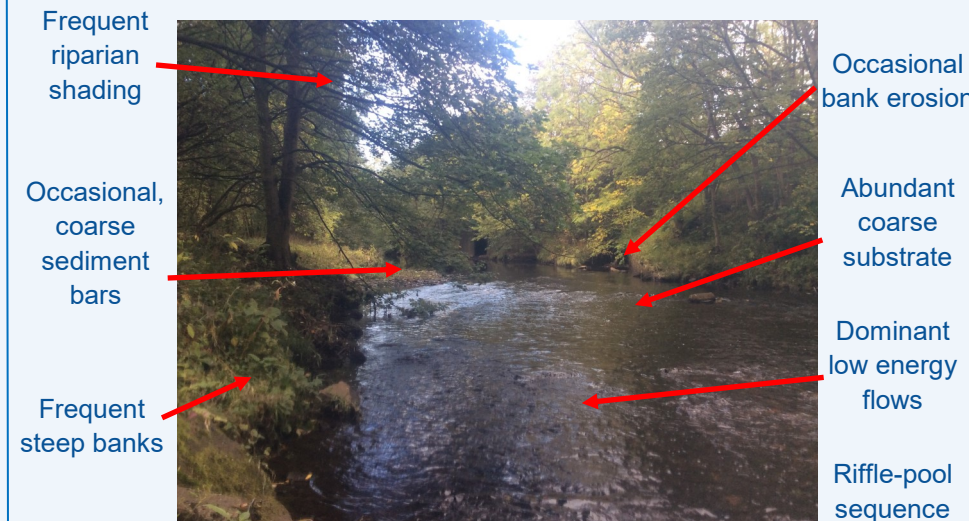
River Flow Regime



	Reference Conditions (MI/d)	Drought Plan Conditions (MI/d)	% Reduction	Impact
Qs95	70.85	49.93	30	Summer Major
Qs99	54.47	33.55	38	
Q95	75.77	50.64	33	Winter Major
Q50	196.28	171.15	13	

Significant Flow Additions/Reductions	Flow Rate (MI/d)	Abstraction / Discharge
RIVER COLNE AND TRIBUTARIES - DALTON WORKS 2/27/11/059	67.2	Abstraction
RIVER COLNE AT ASPLEY, HUDDERSFIELD NE/027/0011/023	10-15	Abstraction
Supply To A Canal For Throughflow NE/027/0011/023	No value	Abstraction

River Habitats



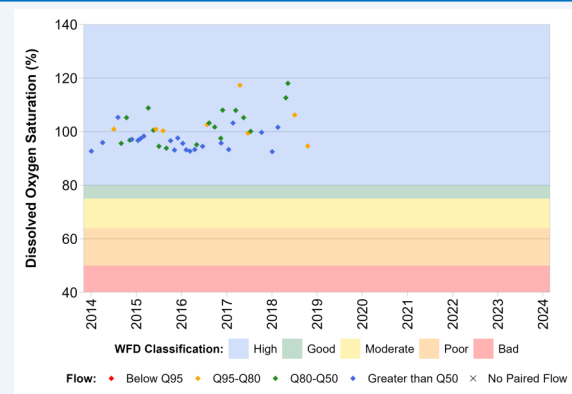
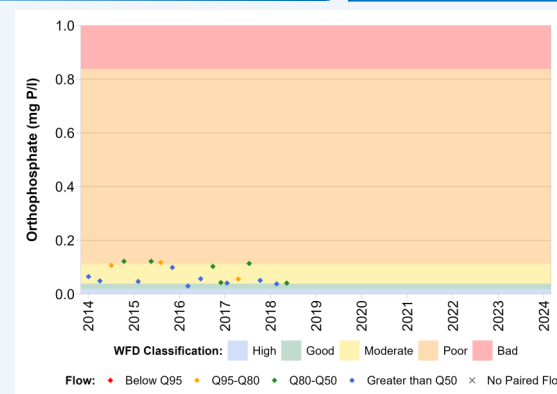
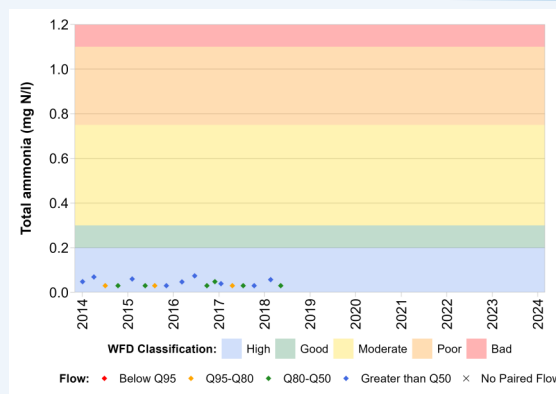
River Water Quality

Significant Water Quality Pressures	Permit Conditions
There are 22 CSOs that could be considered intermittent water quality pressures in this reach, each with descriptive consents.	Intermittent discharges

In the River Colne At Kings Bridge Road (NE-49500633) the average pH was 7.8 with a maximum temperature of 18.5°C

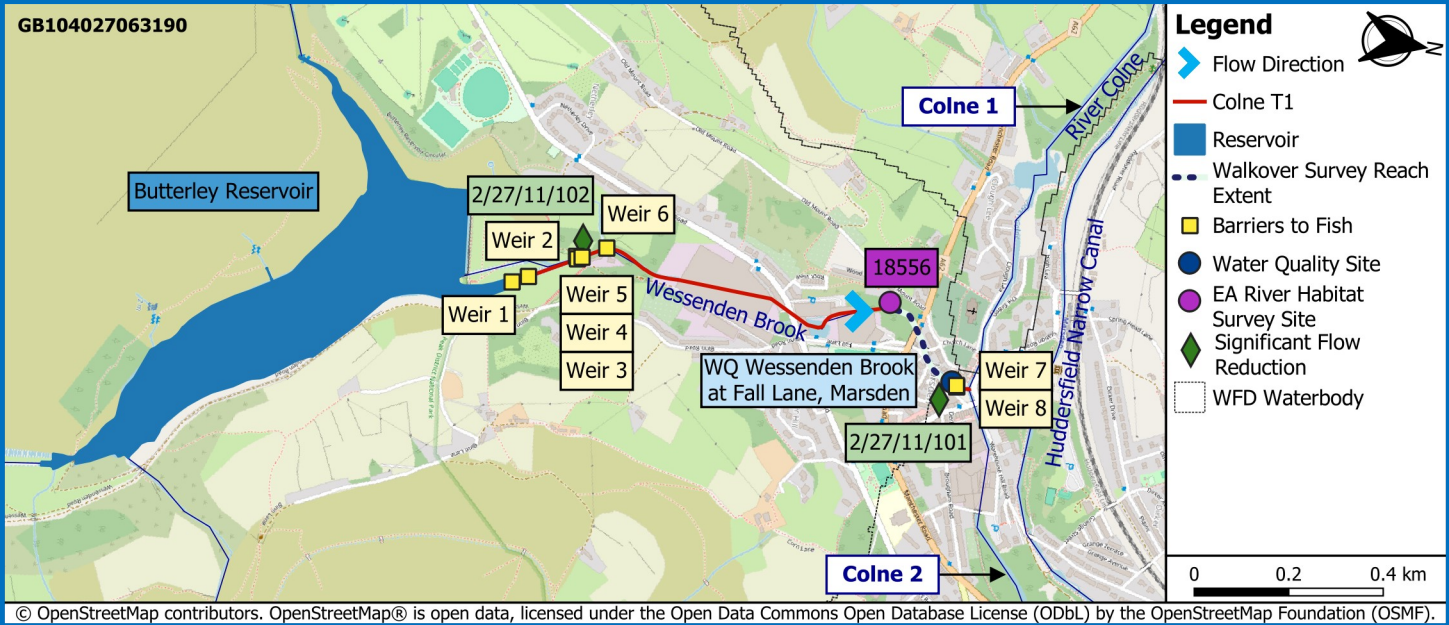


Figure A4.5  
River Colne 4  
Physical Environment Information





Reach Setting

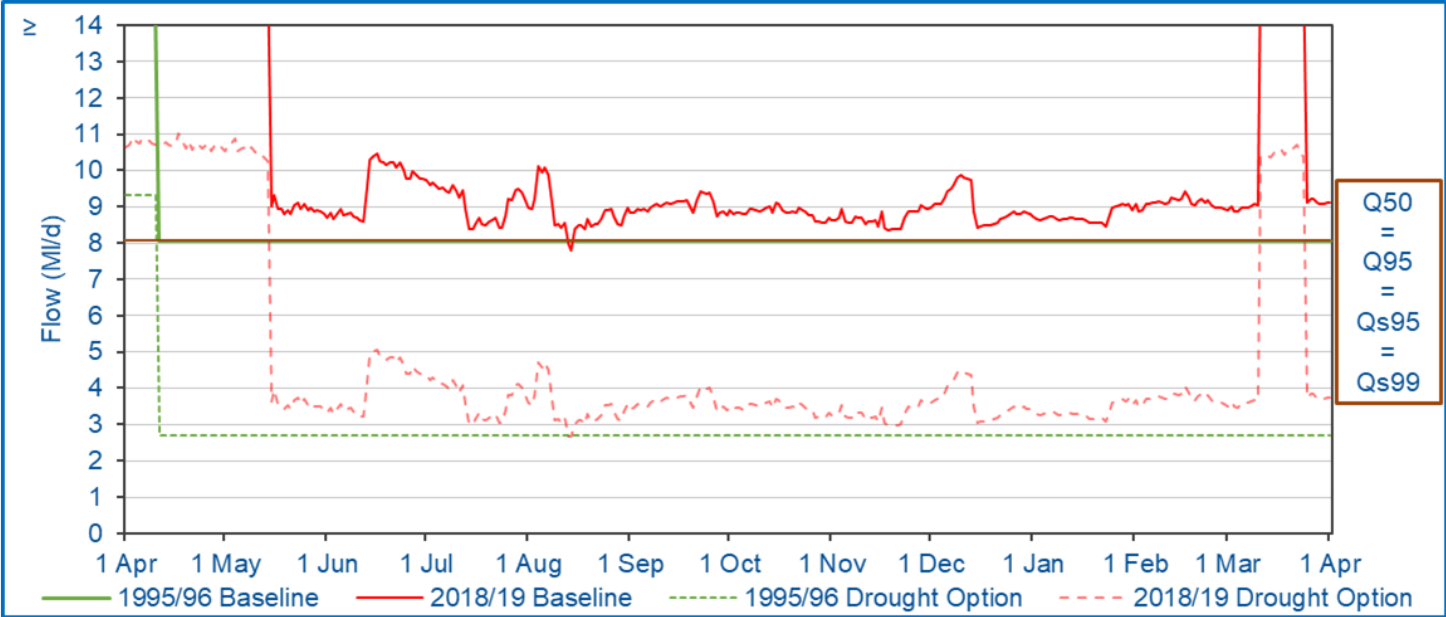


Reach Setting Information:

The bedrock geology is dominated by Millstone Grit Group (sandstone, siltstone and mudstone) and superficial geology is limited with no significant deposits identified along the reach. Soil types along the reach are composed of very acid loamy upland soils. Surrounding land use is predominantly broadleaf woodland to 0.2km downstream to suburban/urban land use thereafter.

	Supplementary Information
Catchment Area at Assessment Point	15.8km <sup>2</sup>
Mean Slope Gradient	2.7°
Length of Reach	1.2km
Additional Catchment Area	1.1km <sup>2</sup>
Upstream Reach	N/A
Downstream Reach	River Colne 2

River Flow Regime



	Reference Conditions (MI/d)	Drought Plan Conditions (MI/d)	% Reduction	Impact
Qs95	8.07	2.66	67	Summer Major
Qs99	8.07	2.66	67	
Q95	8.07	2.66	67	Winter Major
Q50	8.07	2.66	67	

Significant Flow Additions/Reductions	Flow Rate (MI/d)	Abstraction / Discharge
WESSENDEN BROOK - MARSDEN 2/27/11/101	0.54552	Abstraction
WESSENDEN BROOK 2/27/11/102	6.78732	Abstraction

River Habitats

No walkover survey was carried out during the onset of drought in 2018 along this reach. This will be included in the EMP.

River Water Quality

There are no significant water quality pressures associated with this reach

At the Wessenden Brook at Fall Lane, Marsden (NE-49500726) the average pH was 7.6 with a maximum temperature of 17.4°C

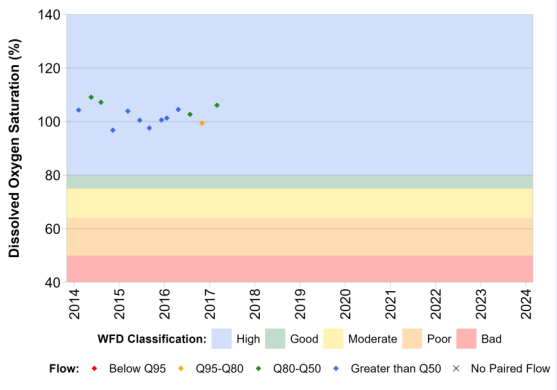
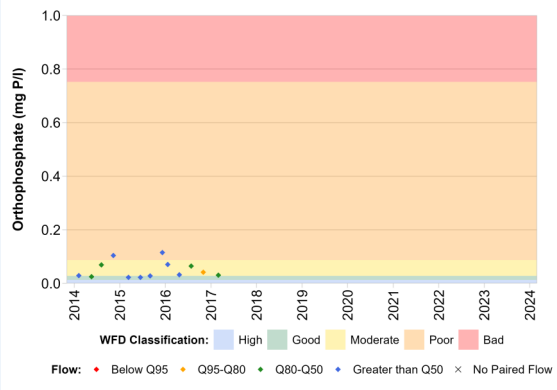
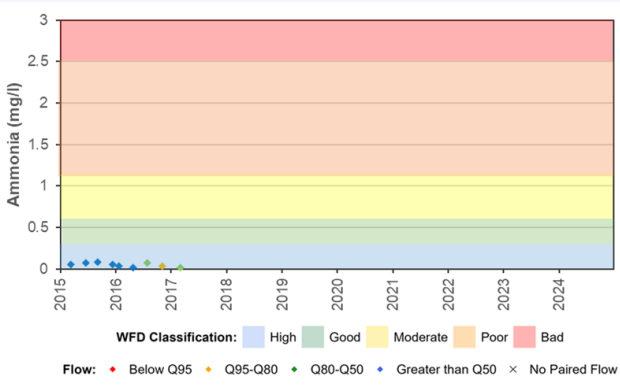
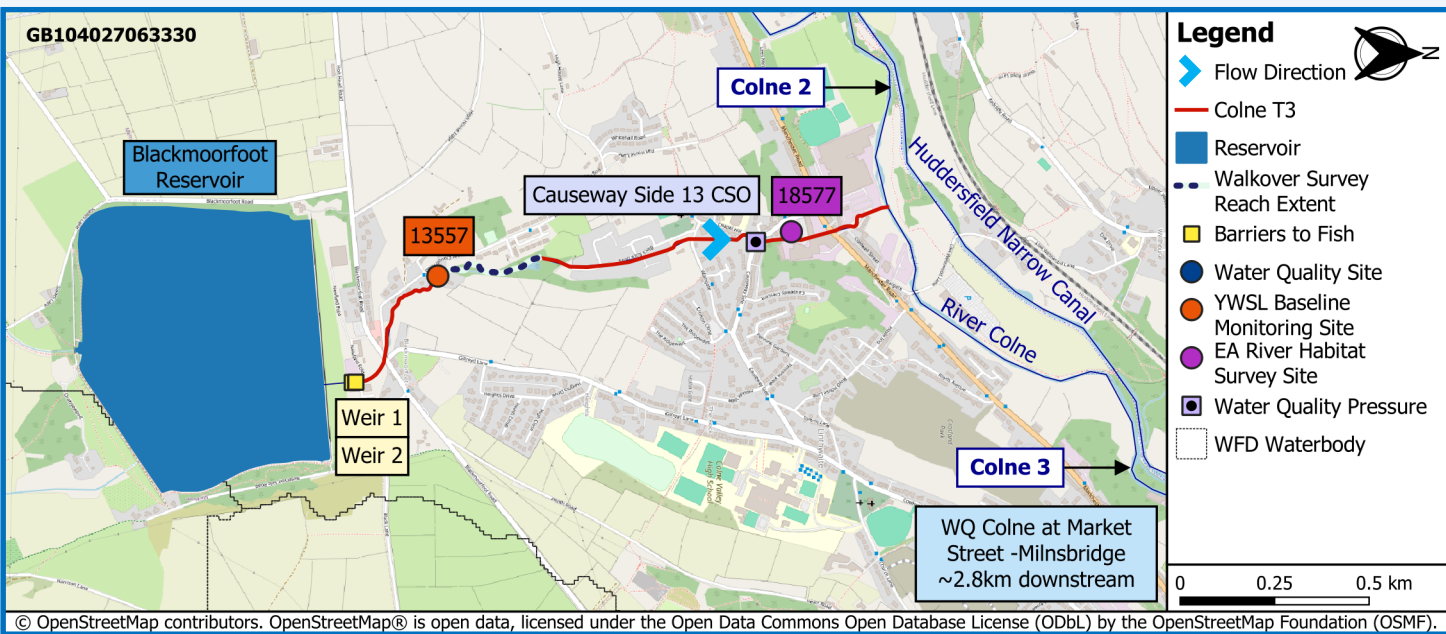


Figure A4.6  
River Colne T1  
Physical Environment Information



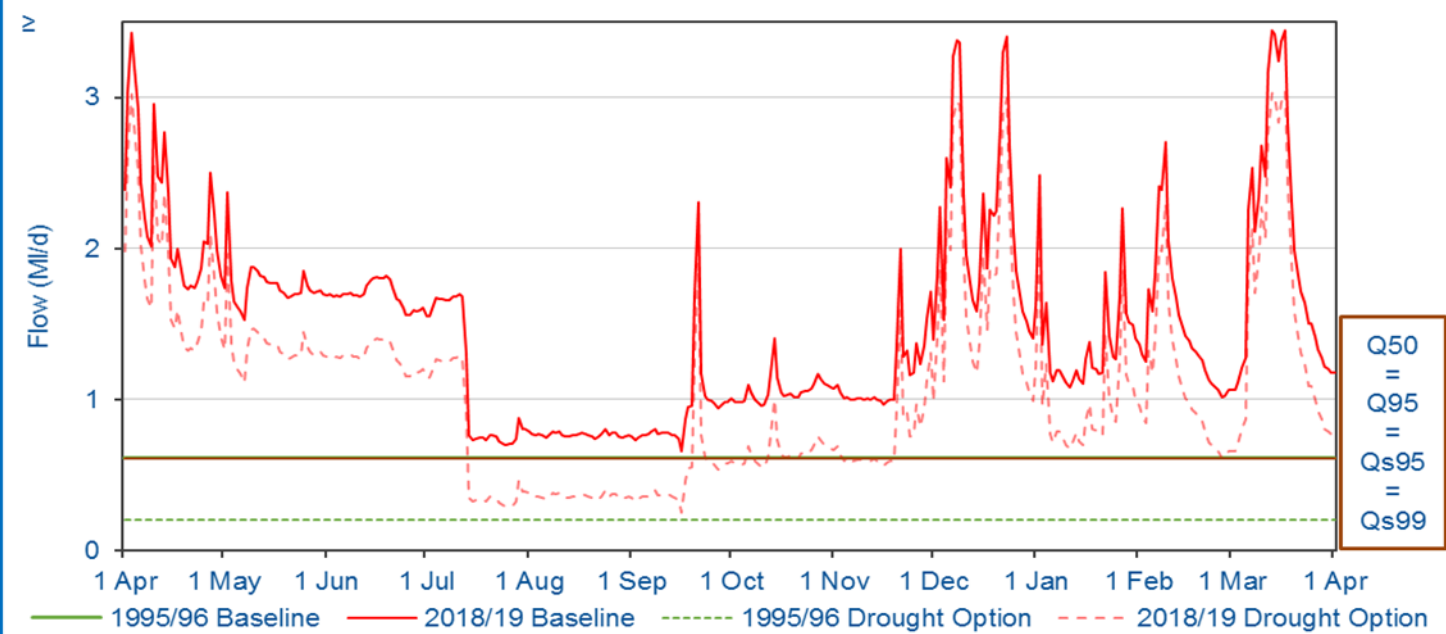
Reach Setting



**Reach Setting Information:**  
The bedrock geology is dominated by lithologies of the Millstone Grit Group (mudstone, sandstone, siltstone) and superficial geology is limited with only a small alluvial fan deposits identified at the end of the reach. Soil types along the reach are composed of freely draining, slightly acid loamy soils. Surrounding land-use is mixture of suburban/urban land use on the left bank with rough pasture on the right until ~1km downstream where land use is predominantly suburban/urban.

	Supplementary Information
Catchment Area at Assessment Point	1.3km <sup>2</sup>
Mean Slope Gradient	4.3°
Length of Reach	1.7km
Additional Catchment Area	1.5km <sup>2</sup>
Upstream Reach	N/A
Downstream Reach	River Colne 3

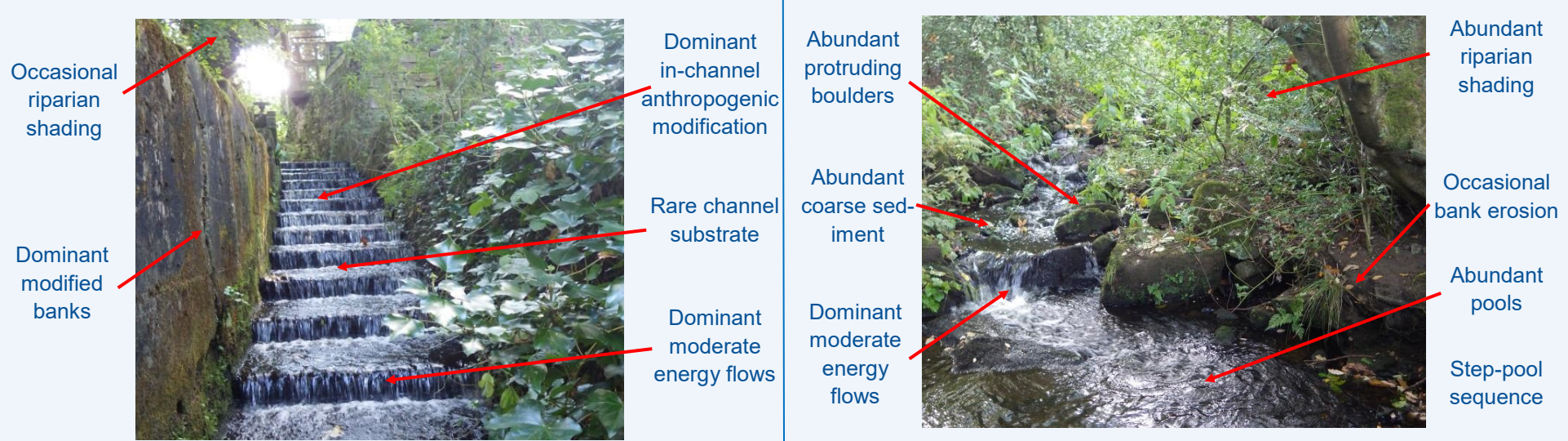
River Flow Regime



	Reference Conditions (Ml/d)	Drought Plan Conditions (Ml/d)	% Reduction	Impact
Q <sub>s</sub> 95	0.61	0.20	67	Summer Major
Q <sub>s</sub> 99	0.61	0.20	67	
Q95	0.61	0.20	67	Winter Major
Q50	0.61	0.20	67	

**There are no significant flow additions/reductions associated with this reach**


River Habitats




River Water Quality

Significant Water Quality Pressures	Permit Conditions
Causeway Side 13/ CSO	Intermittent Discharge

At the Colne at Market Street, Milnsbridge (NE-49500638) the average pH was 7.8 with a maximum temperature of 19.0°C.

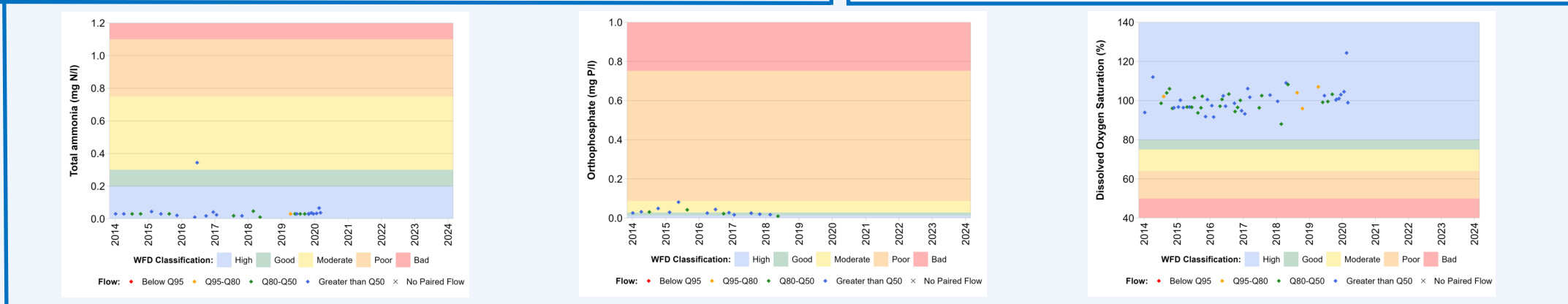


YorkshireWater



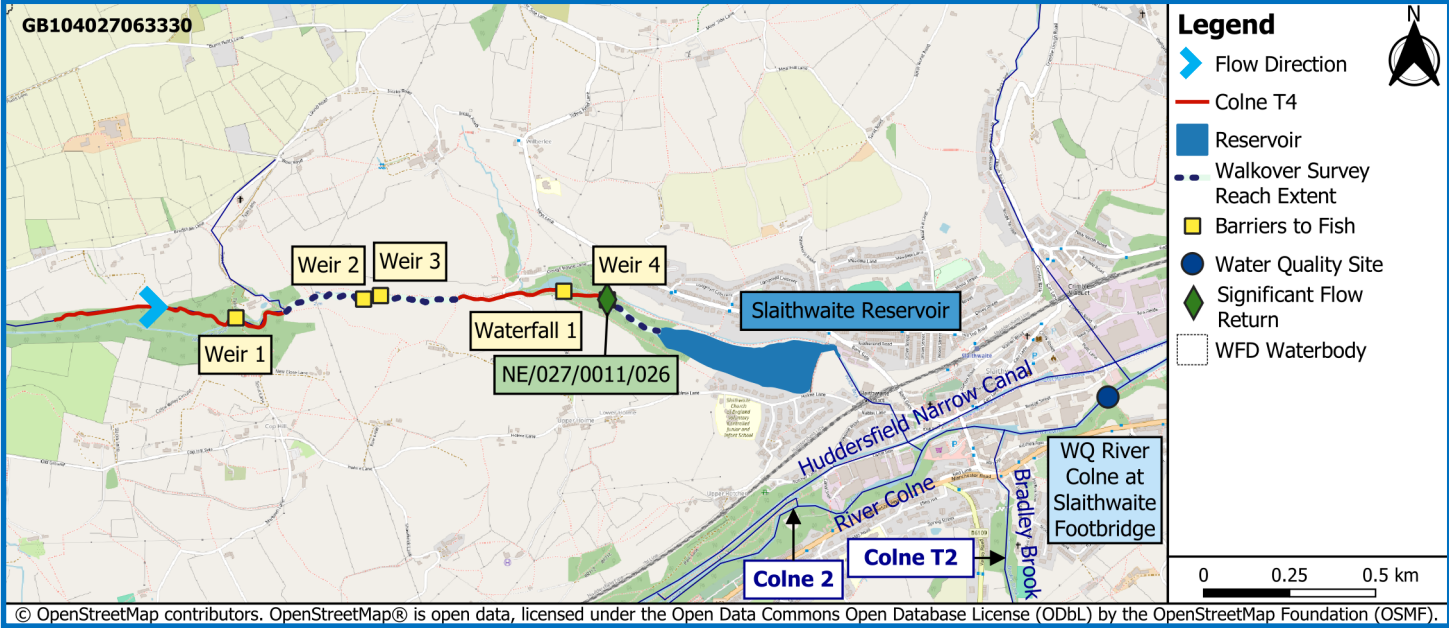
RICARDO

**Figure A4.7**  
**River Colne T3**  
**Physical Environment Information**





Reach Setting



Reach Setting Information:

The bedrock geology is dominated by lithologies of the Millstone Grit Group (mudstone, sandstone and siltstone) and superficial geology is limited with no significant deposits identified. Soil types along the reach are composed predominantly of freely draining, slightly acid loamy soils. With the exception of two farmhouses, there is no urbanisation along the reach.

	Supplementary Information
Catchment Area at Assessment Point	1.3km <sup>2</sup>
Mean Slope Gradient	2.78°
Length of Reach	2.0km
Additional Catchment Area	2.9km <sup>2</sup>
Upstream Reach	N/A
Downstream Reach	N/A

River Flow Regime

There is no hydrological information available for this reach

	Reference Conditions (MI/d)	Drought Plan Conditions (MI/d)	% Reduction	Impact	Significant Flow Additions/Reductions	Flow Rate (MI/d)	Abstraction / Discharge
-							
Q <sub>s95</sub>	1.36	0.45	67	Summer Major	Canal and River Trust NE/027/0011/026	No value	Abstraction
Q <sub>s99</sub>	1.36	0.45	67				
Q <sub>95</sub>	1.36	0.45	67	Winter Major			
Q <sub>50</sub>	1.36	0.45	67				

River Habitats



River Water Quality

There are no significant water quality pressures associated with this reach

At the River Colne at Slaithwaite Footbridge Works (NE-49500641) the average pH was 7.8 with a maximum temperature of 17.5°C

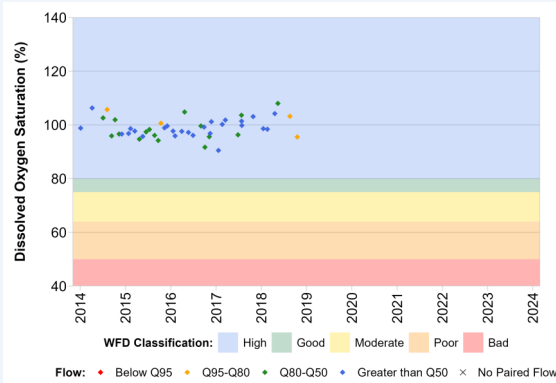
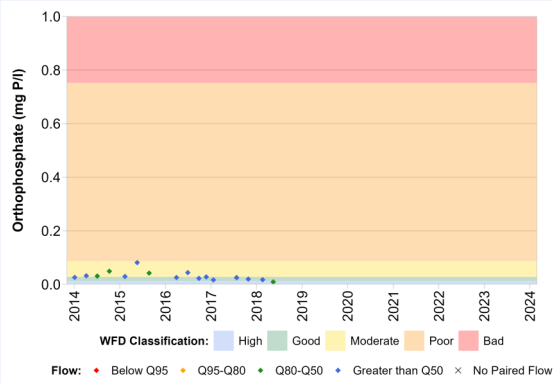
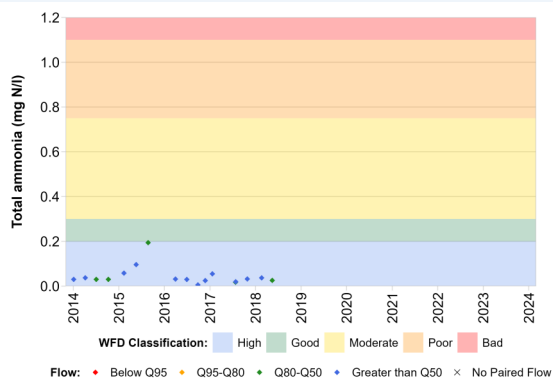
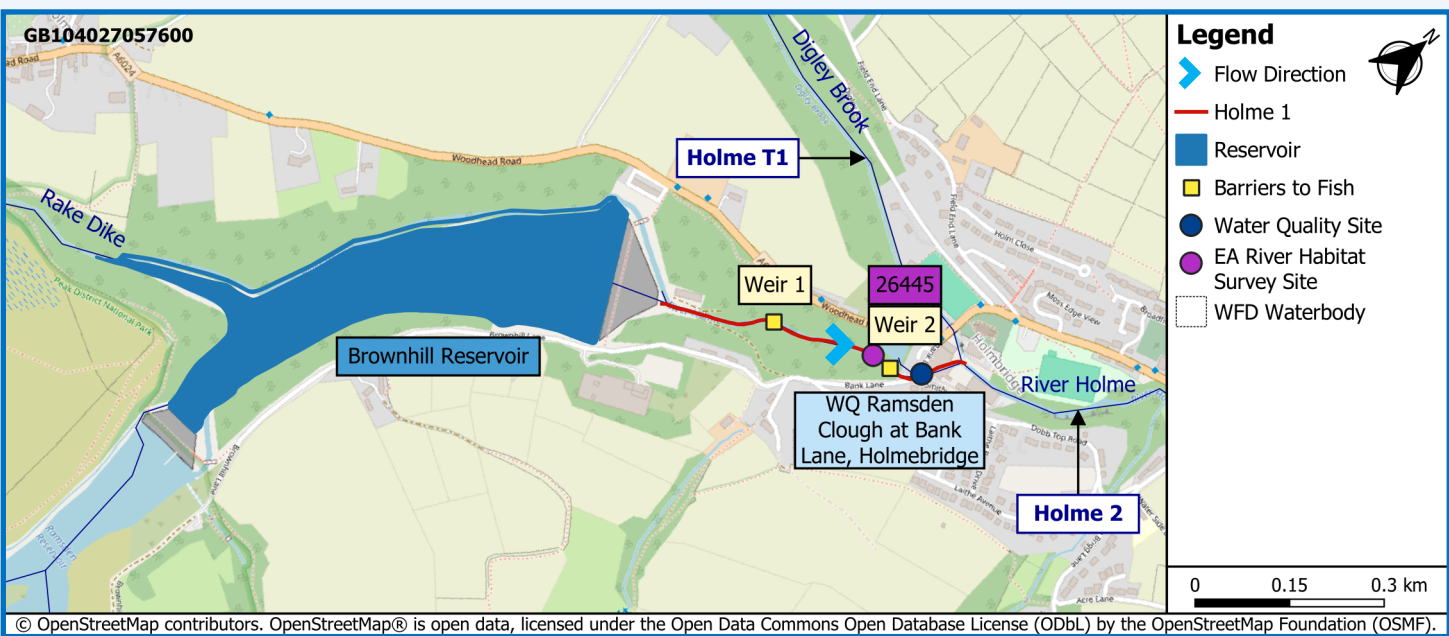


Figure A4.8  
River Colne T4  
Physical Environment Information



Reach Setting

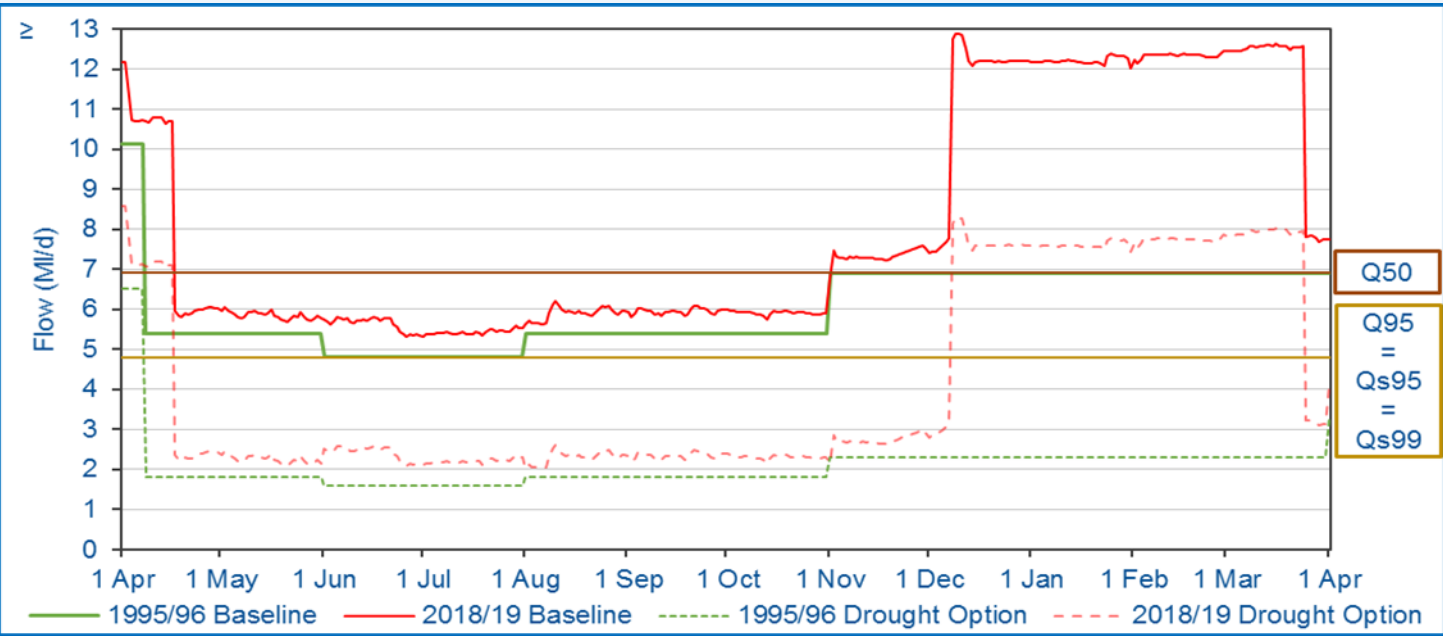


Reach Setting Information:

The bedrock geology is dominated by lithologies of the Millstone Grit Group (mudstone, sandstone, siltstone) and superficial geology is limited to deposits of alluvium beneath the channel. Soil types along the reach are composed predominantly of freely draining, slightly acid loamy soils. Land use on both banks is predominantly broadleaf woodland around the channel with a mixture of suburban/urban land use on the right bank beyond the broadleaf woodland.

	Supplementary Information
Catchment Area at Assessment Point	9.7km <sup>2</sup>
Mean Slope Gradient	0.9°
Length of Reach	0.5km
Additional Catchment Area	0.5km <sup>2</sup>
Upstream Reach	N/A
Downstream Reach	River Holme 2

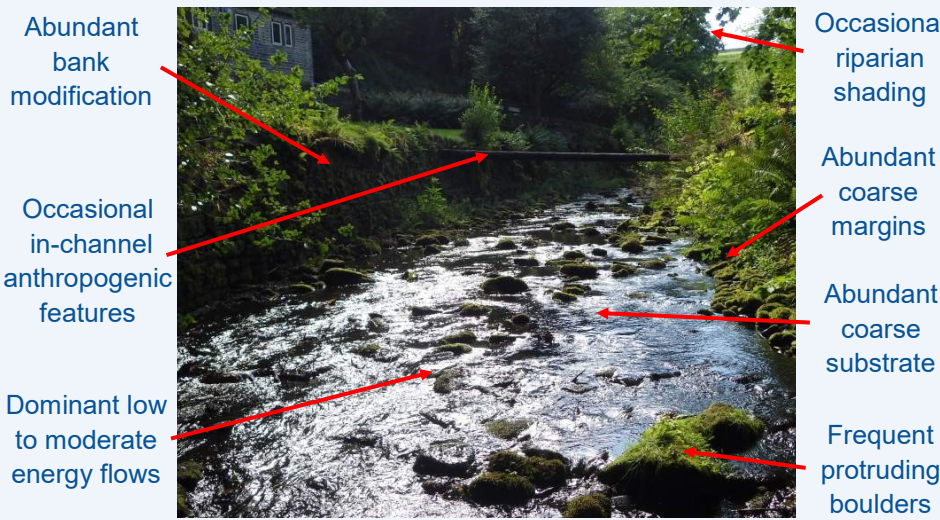
River Flow Regime



	Reference Conditions (M/d)	Drought Plan Conditions (M/d)	% Reduction	Impact
Qs95	4.80	1.58	67	Summer Major
Qs99	4.80	1.58	67	
Q95	6.90	2.28	67	Winter Major
Q50	6.90	2.28	67	

There are no significant flow additions/ reductions associated with this reach

River Habitats



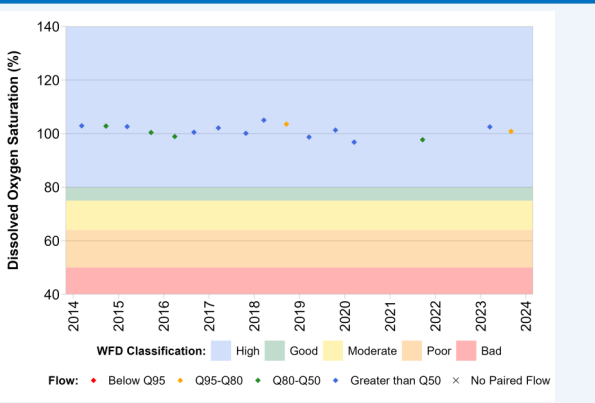
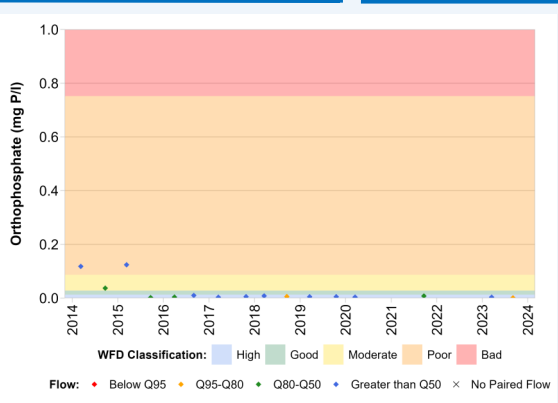
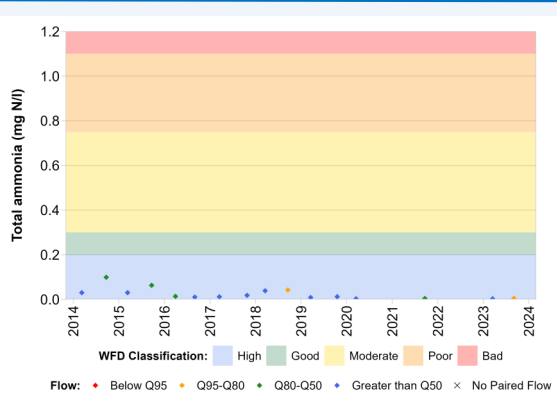
River Water Quality

There are no significant water quality pressures associated with this reach

At the Ramsden Clough At Bank Lane, Holmebridge (NE-49500571) the average pH was 7.9 with a maximum temperature of 14°C

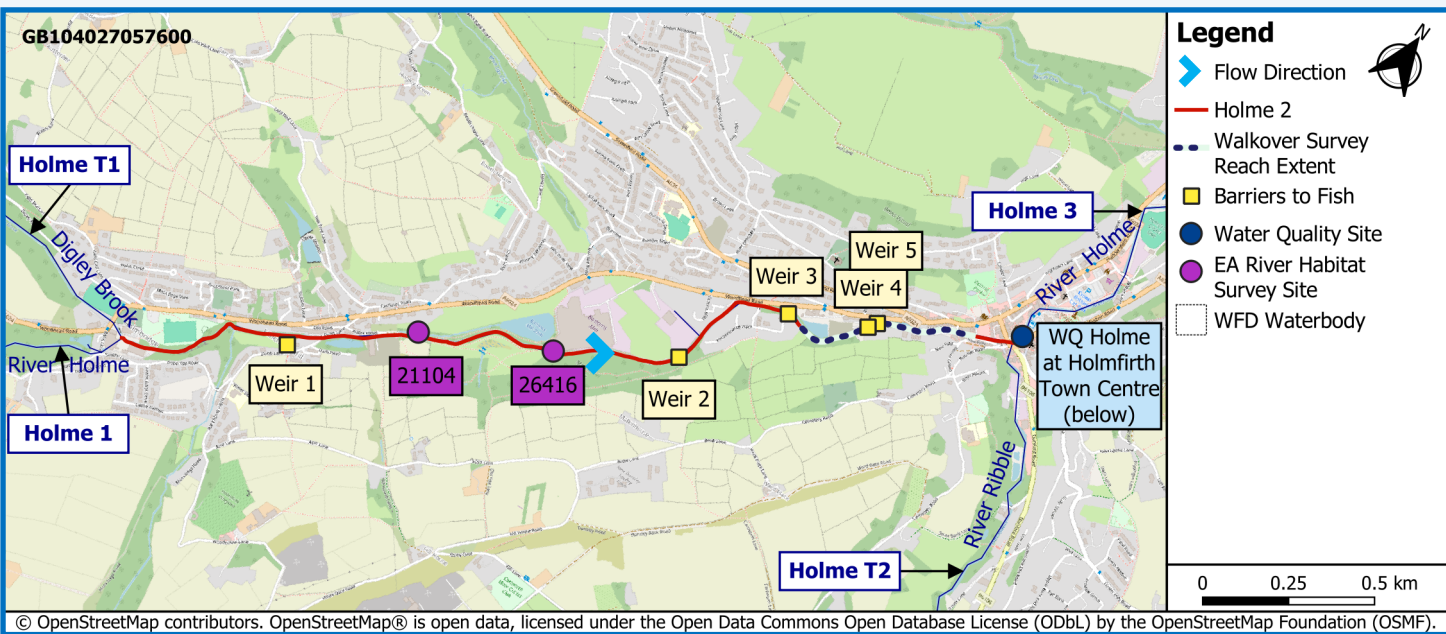


Figure A4.9  
River Holme 1  
Physical Environment Information





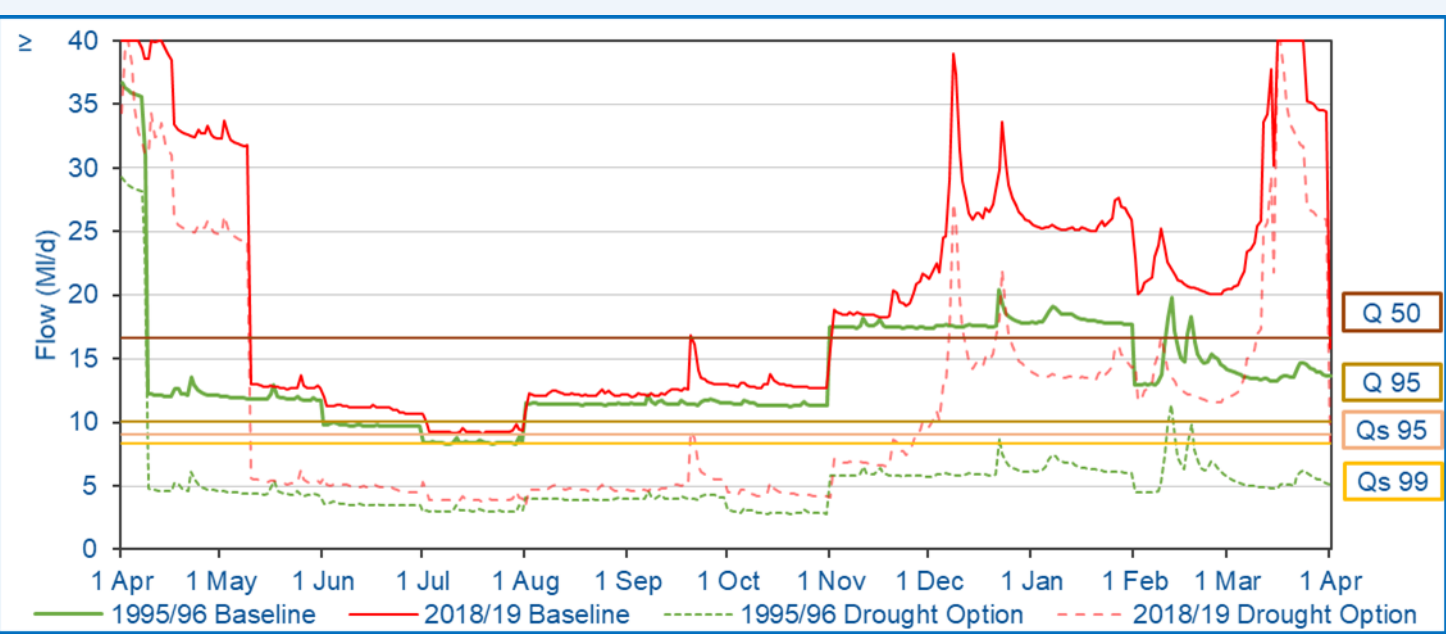
Reach Setting



**Reach Setting Information:**  
The bedrock geology is dominated by the Millstone Grit Group and superficial geology is limited to deposits of alluvium beneath the channel. Soil types along the reach are composed of freely draining, slightly acid loamy soils. Land-use on both banks is predominantly suburban/urban development with some areas of improved grassland and open water in the in the first 2.1km downstream from the start of the reach.

	Supplementary Information
Catchment Area at Assessment Point	20.6km <sup>2</sup>
Mean Slope Gradient	0.75°
Length of Reach	2.8km
Additional Catchment Area	6.2km <sup>2</sup>
Upstream Reach	River Holme 1/T1
Downstream Reach	River Holme 3

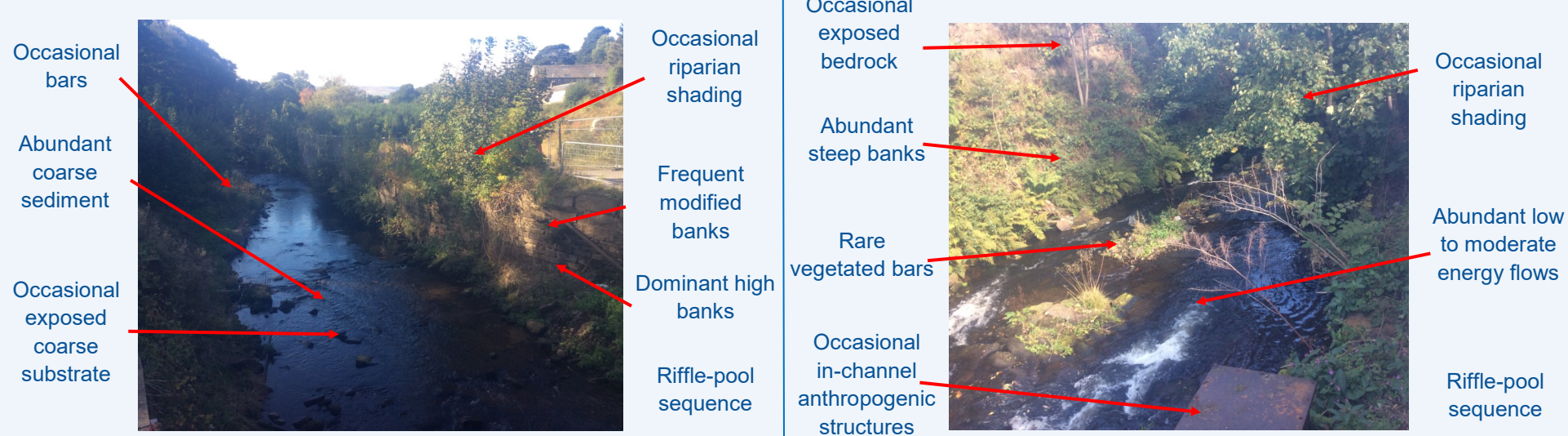
River Flow Regime



	Reference Conditions (ML/d)	Drought Plan Conditions (ML/d)	% Reduction	Impact
Qs95	9.21	Min 2.64-3.69	Up to 67	Summer Major
Qs99	8.36	Min 2.64-3.69	Up to 67	Major
Q95	10.05	Min 3.69-5.78	Up to 67	Winter Major
Q50	17.26	Min 3.69-5.78	Up to 67	Major

**There are no significant flow additions/ reductions associated with this reach**

River Habitats

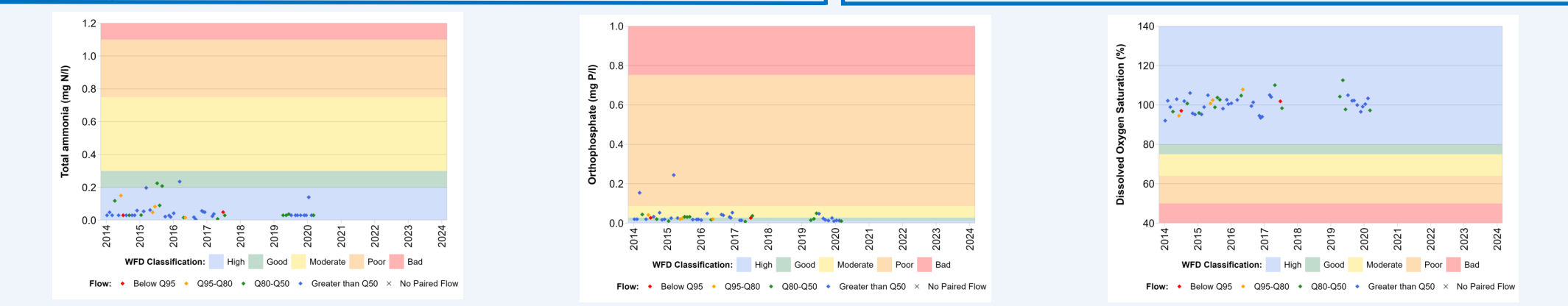


River Water Quality

**There are no significant water quality pressures associated with this reach**

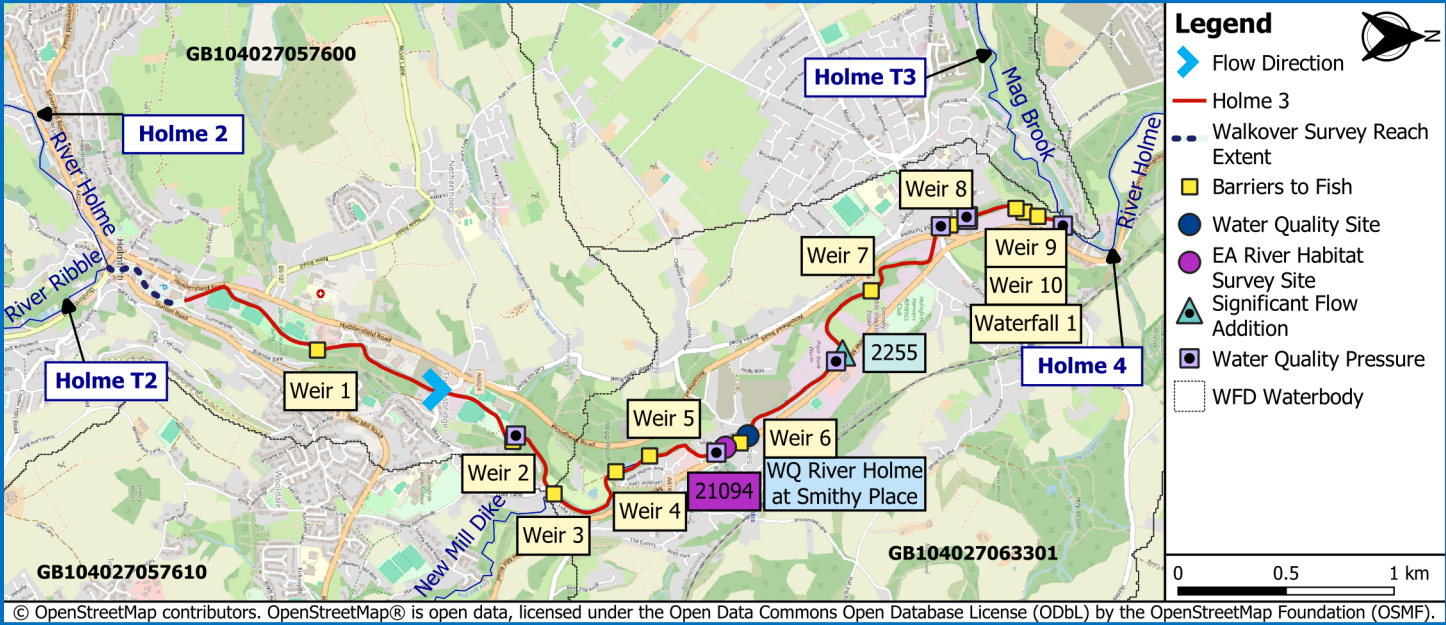
At the River Holme at Holmfirth Town Centre (Below) (NE-49500656) the average pH was 7.7 with a maximum temperature of 15.8°C

**Figure A4.10**  
**River Holme 2**  
**Physical Environment Information**





Reach Setting

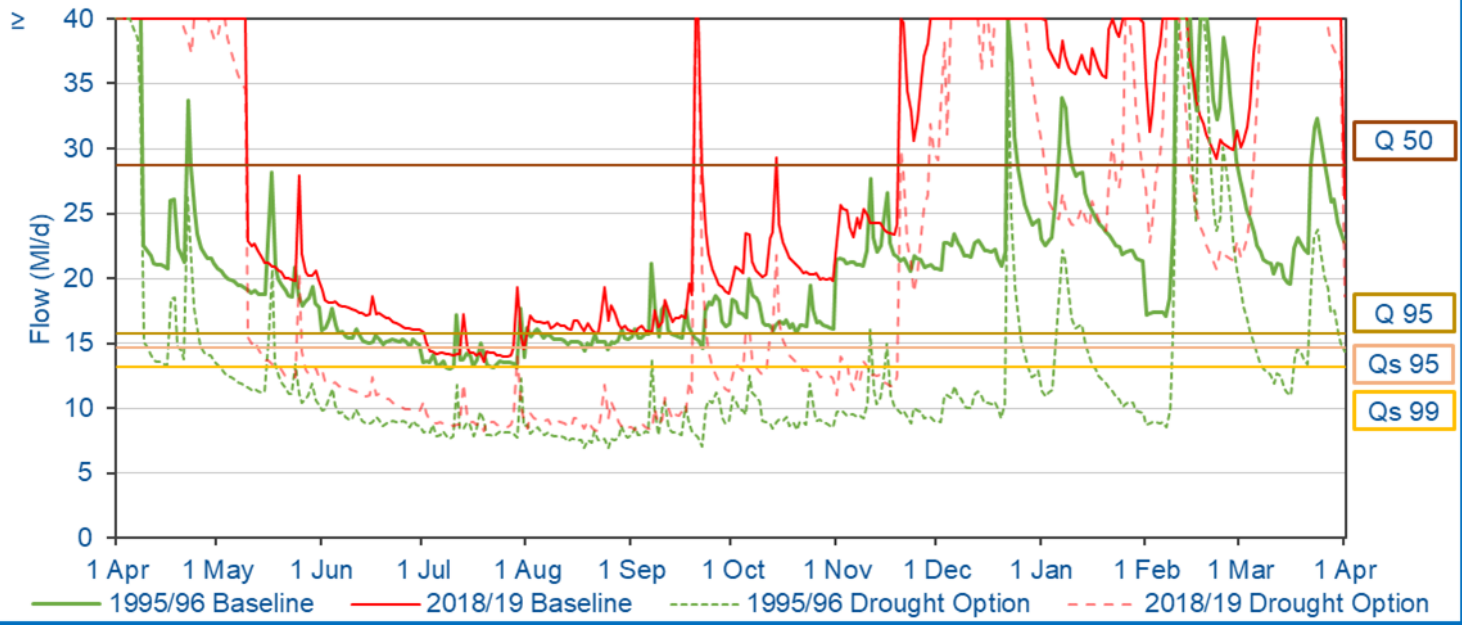


Reach Setting Information:

The bedrock geology is dominated by the Millstone Grit Group and superficial geology is limited to deposits of alluvium beneath the channel. Soil types along the reach are composed of freely draining, slightly acid loamy soils. Land-use on both banks is predominantly suburban/urban development as the reach passes through Holmfirth and Honley.

	Supplementary Information
Catchment Area at Assessment Point	33.0km <sup>2</sup>
Mean Slope Gradient	0.5°
Length of Reach	5.9km
Additional Catchment Area	28.1km <sup>2</sup>
Upstream Reach	River Holme 2/River Holme T2
Downstream Reach	River Holme 4

River Flow Regime



	Reference Conditions (Ml/d)	Drought Plan Conditions (Ml/d)	% Reduction	Impact
Qs95	14.69	7.18	51	Summer Major
Qs99	13.18	6.30	57	
Q95	15.73	Min of 5.67	64	Winter Major
Q50	28.73	17.01	41	

Significant Flow Additions/Reductions	Flow Rate (Ml/d)	Abstraction / Discharge
NEILEY WWTW 2255	7.497	Discharge

River Habitats



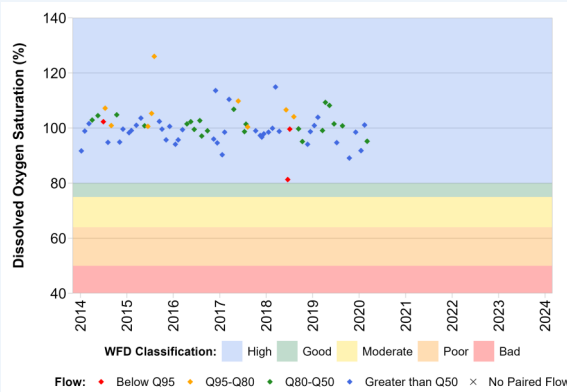
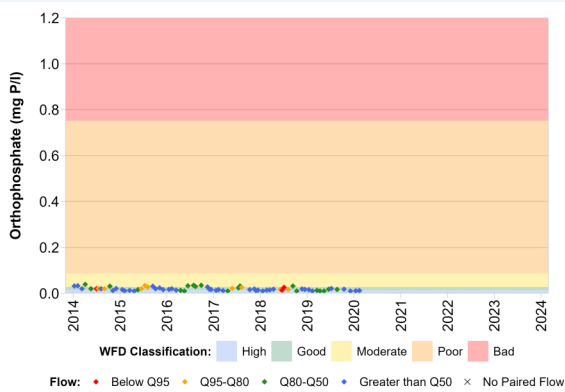
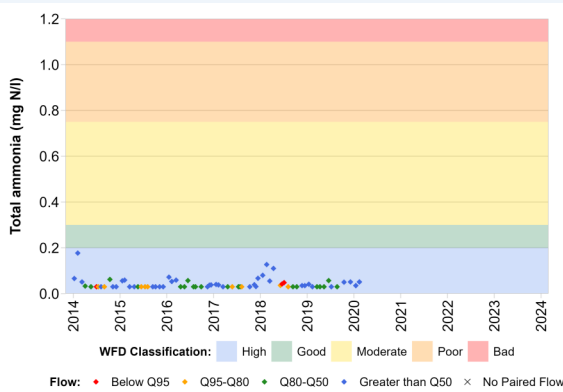
River Water Quality

Significant Water Quality Pressures	Permit Conditions
There are 8 CSOs that could be considered intermittent water quality pressures in this reach, each with descriptive consents.	Intermittent Discharge

In the River Holme At Smithy Place, Brockholes (NE-49500663) the average pH was 7.8 with a maximum temperature of 15.9°C for the same period.

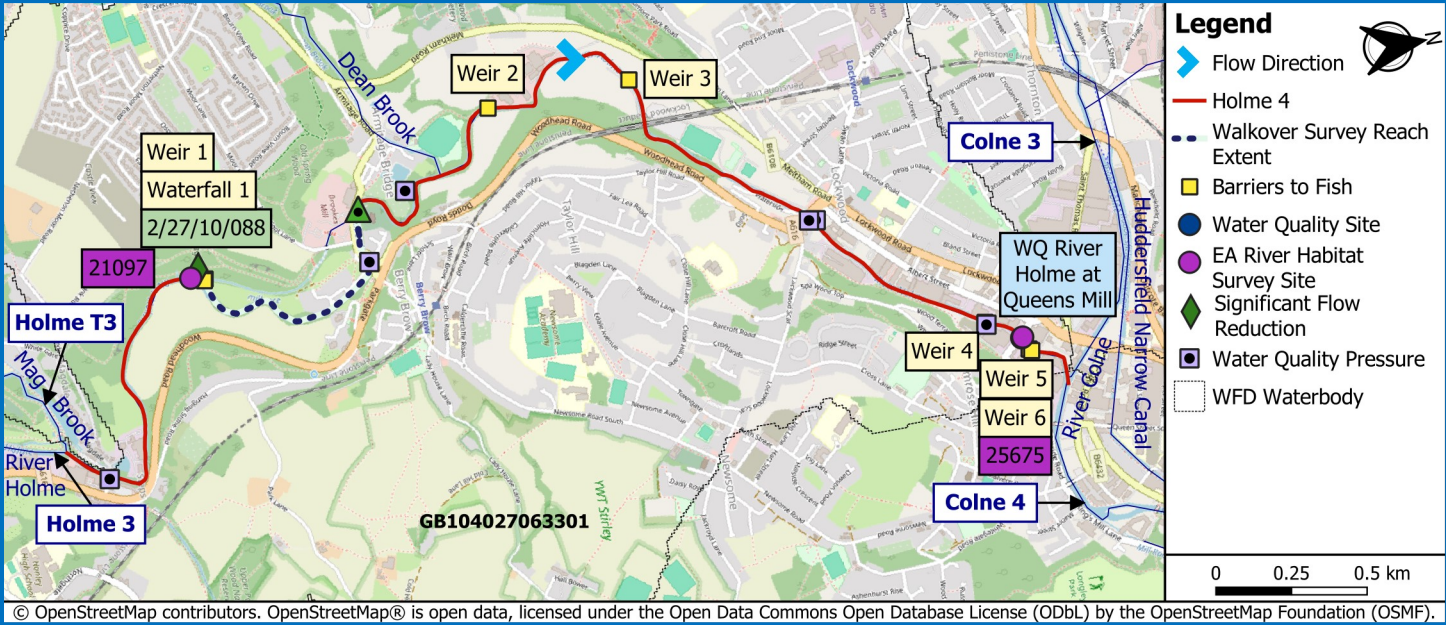


Figure A4.11  
River Holme 3  
Physical Environment Information





Reach Setting

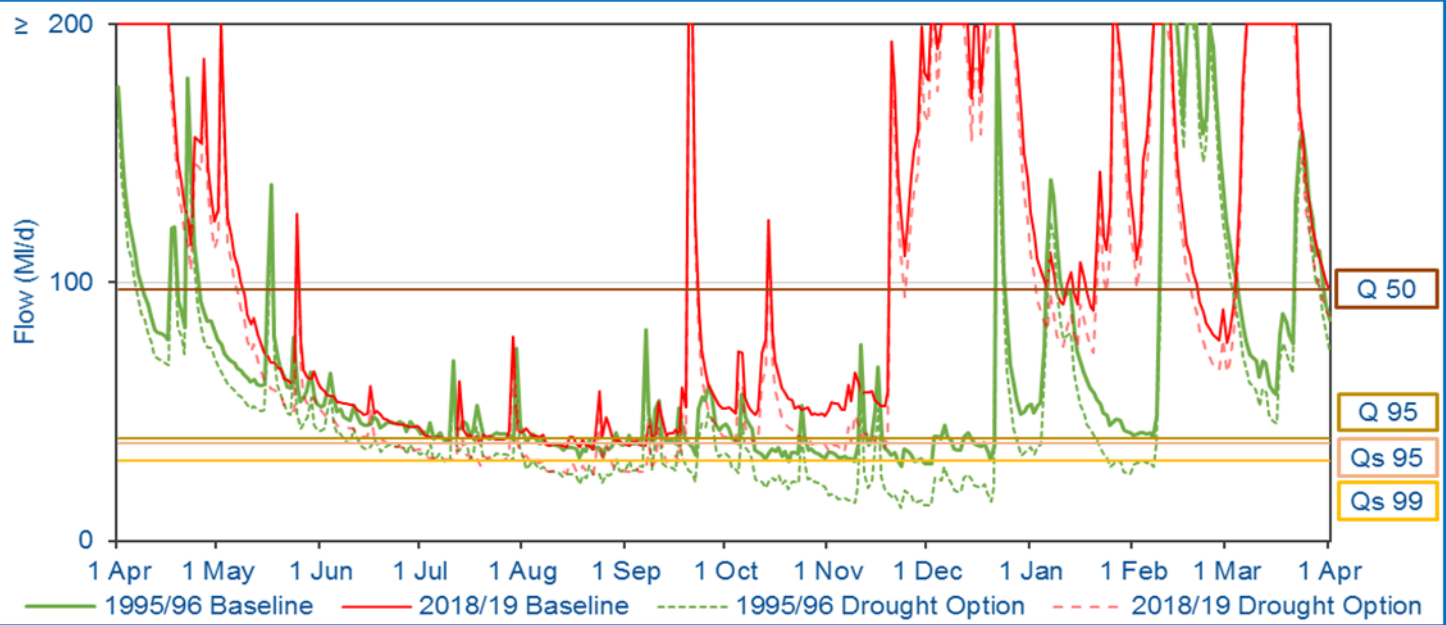


Reach Setting Information:

The bedrock geology is dominated by the Millstone Grit Group and superficial geology is limited to deposits of alluvium beneath the channel. Soil types along the reach are composed of freely draining, slightly acid loamy soils with some loamy and clayey floodplain soils around the confluence with the River Colne. This reach is largely urbanised especially towards the end as the channel enters Huddersfield.

	Supplementary Information
Catchment Area at Assessment Point	90.3km <sup>2</sup>
Mean Slope Gradient	0.25°
Length of Reach	5.3km
Additional Catchment Area	10.4km <sup>2</sup>
Upstream Reach	River Holme 3/ River Holme T3
Downstream Reach	River Colne 4

River Flow Regime



	Reference Conditions (Ml/d)	Drought Plan Conditions (Ml/d)	% Reduction	Impact
Q <sub>s</sub> 95	37.71	28.42	25	Summer Major
Q <sub>s</sub> 99	31.49	22.20	30	
Q95	39.96	26.46	34	Winter Major
Q50	98.47	84.97	14	

Significant Flow Additions/Reductions	Flow Rate (Ml/d)	Abstraction / Discharge
RIVER HOLME - HUDDERSFIELD 2/27/10/088	181.84	Abstraction

River Habitats

No walkover survey was carried out during the onset of drought in 2018 along this reach. This will be included in the EMP.

River Water Quality

Significant Water Quality Pressures	Permit Conditions
There are 7 CSOs that could be considered intermittent water quality pressures in this reach, each with descriptive consents.	Intermittent Discharge

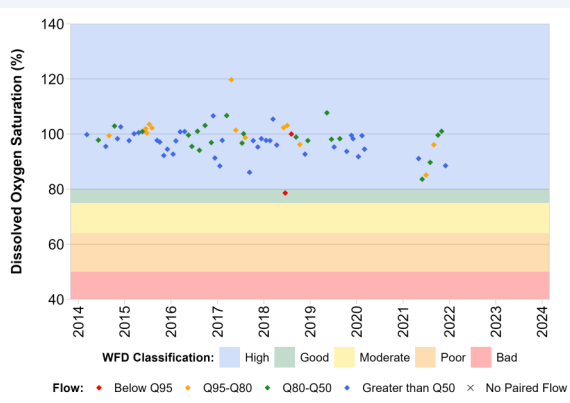
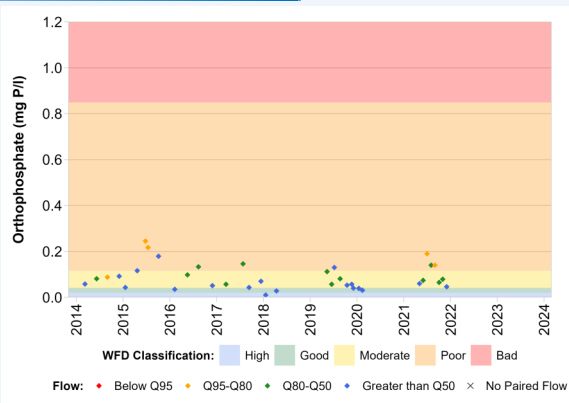
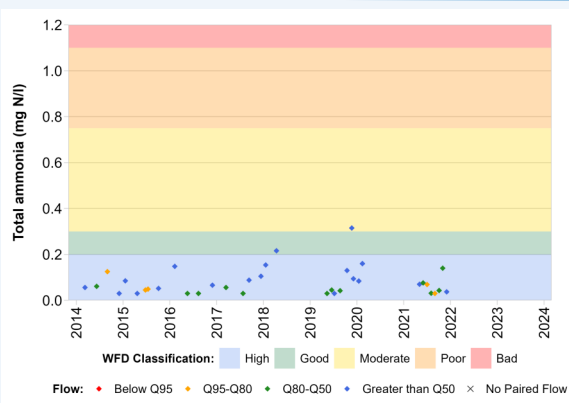
At the River Holme at Queens Mill (NE-49500662) the average pH was 7.8 with a maximum temperature of 17.0°C



Figure A4.12

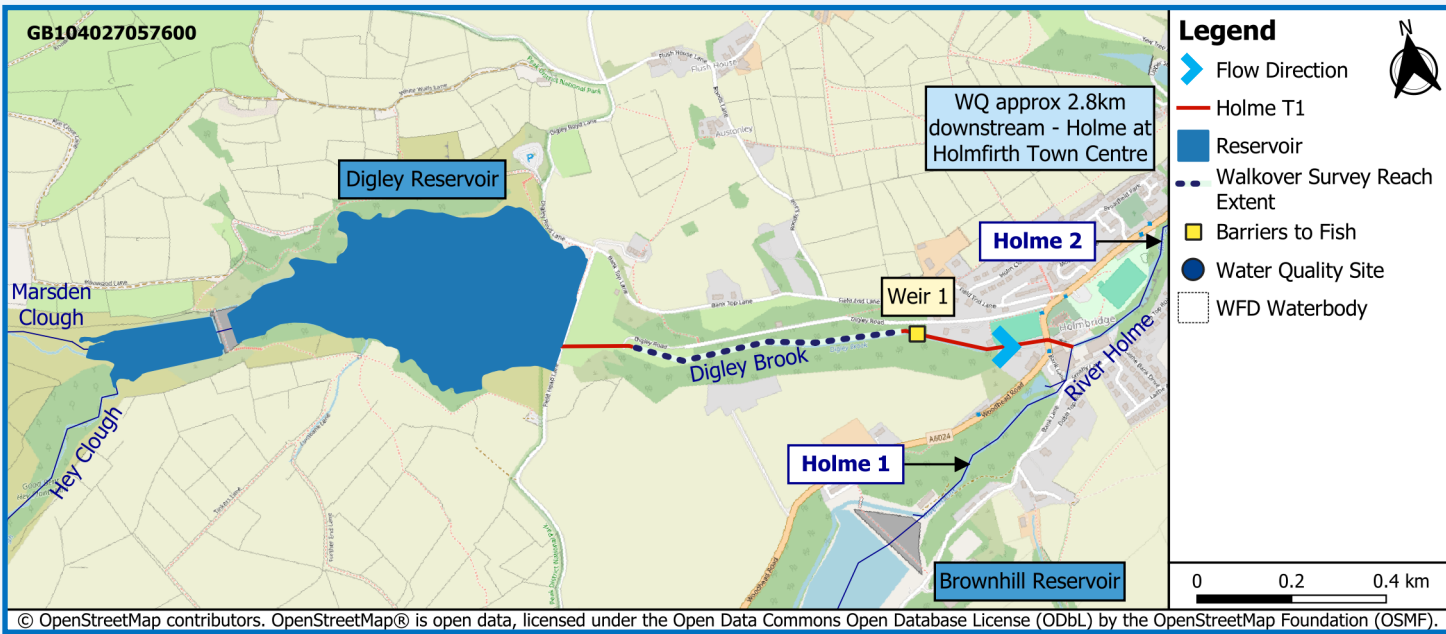
River Holme 4

Physical Environment Information





Reach Setting

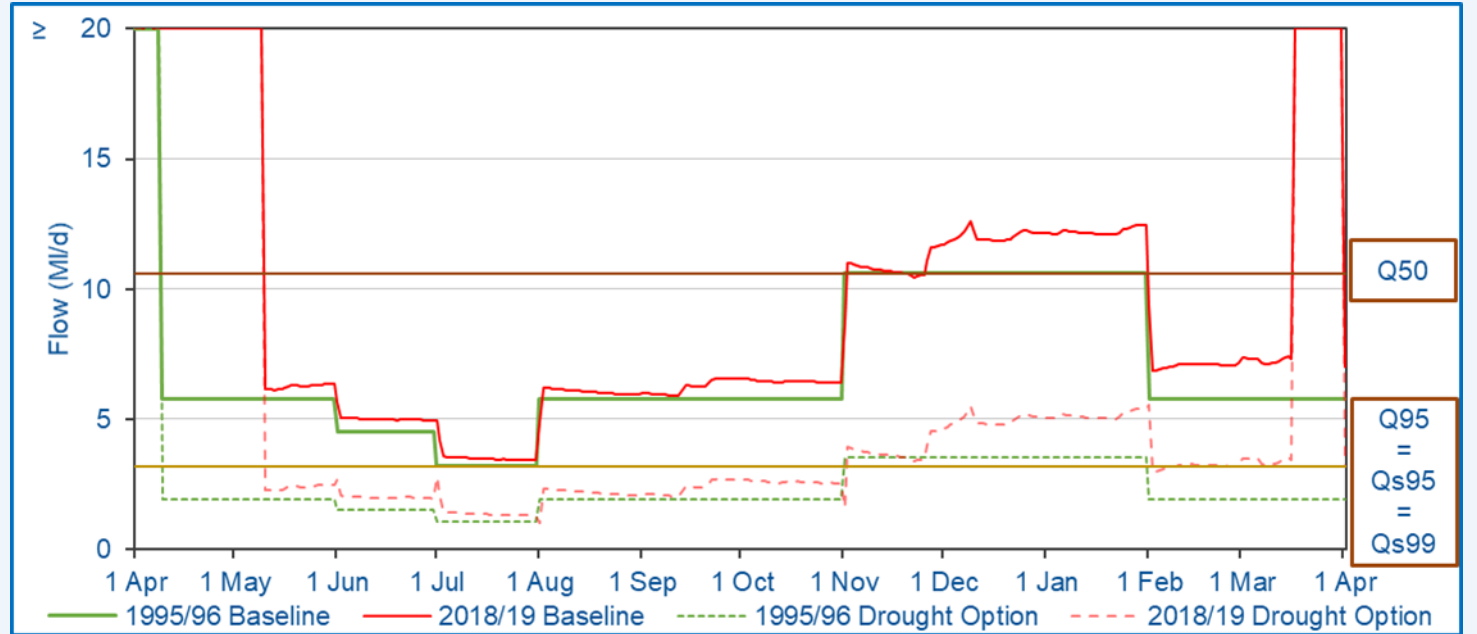


Reach Setting Information:

The bedrock geology is dominated by the Millstone Grit Group and superficial geology is limited to deposits of alluvium beneath the channel. Soil types along the reach are composed predominantly of freely draining, slightly acid loamy soils with some very acid, loamy upland soils adjacent to the reservoir outflow. Suburban/urban land use increases towards the end of the reach as the reach flows through Holmbridge.

	Supplementary Information
Catchment Area at Assessment Point	9.6km <sup>2</sup>
Mean Slope Gradient	3.02°
Length of Reach	1.1km
Additional Catchment Area	0.7km <sup>2</sup>
Upstream Reach	N/A
Downstream Reach	River Holme 2

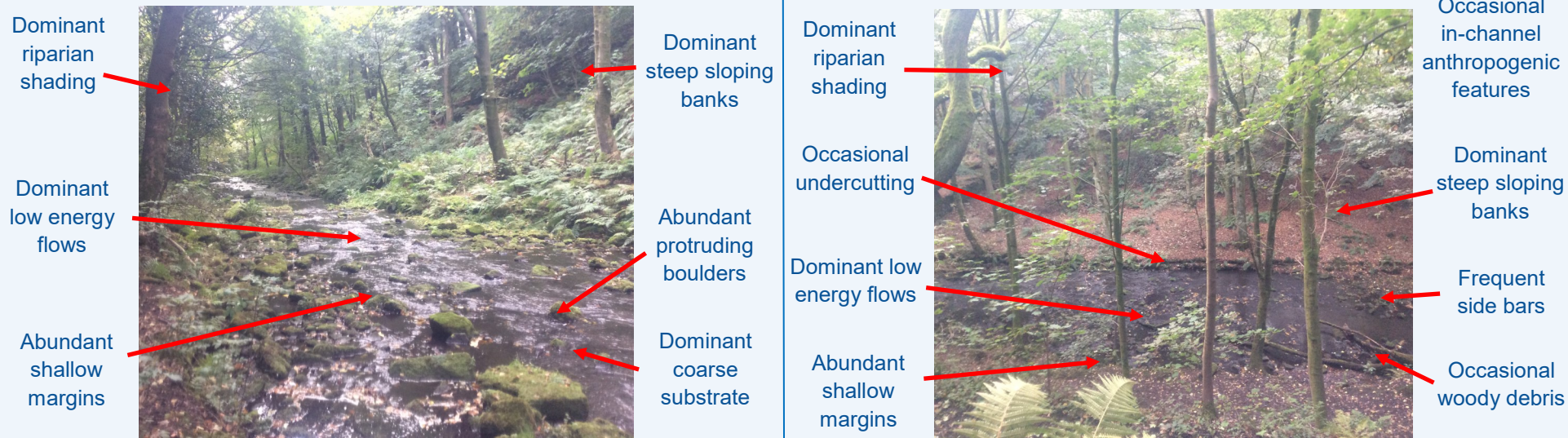
River Flow Regime



	Reference Conditions (MI/d)	Drought Plan Conditions (MI/d)	% Reduction	Impact
Q <sub>s</sub> 95	3.20	1.06	67	Summer Major
Q <sub>s</sub> 99	3.20	1.06	67	
Q95	10.60	3.50	67	Winter Major
Q50	10.60	3.50	67	

There are no significant flow additions/reductions associated with this reach

River Habitats



River Water Quality

There are no significant water quality pressures associated with this reach

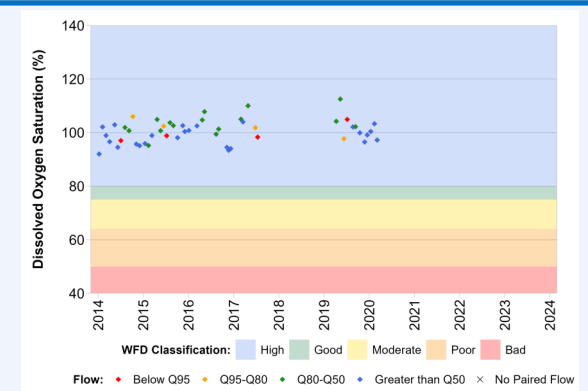
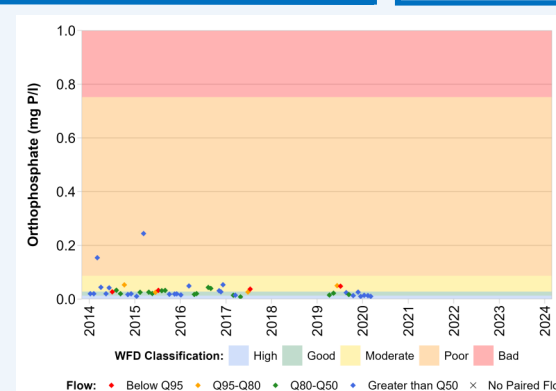
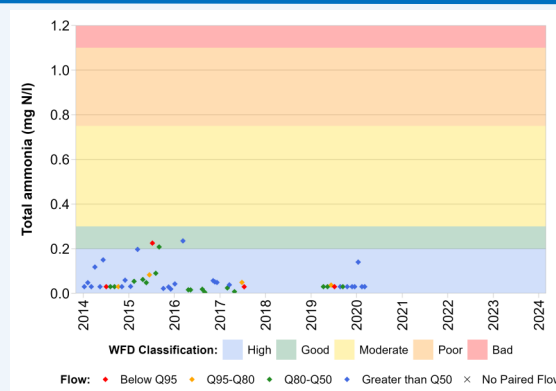
At the River Holme at Holmfirth Town Centre (Below) (NE-49500656) the average pH was 7.7 with a maximum temperature of 15.8°C



Figure A4.13

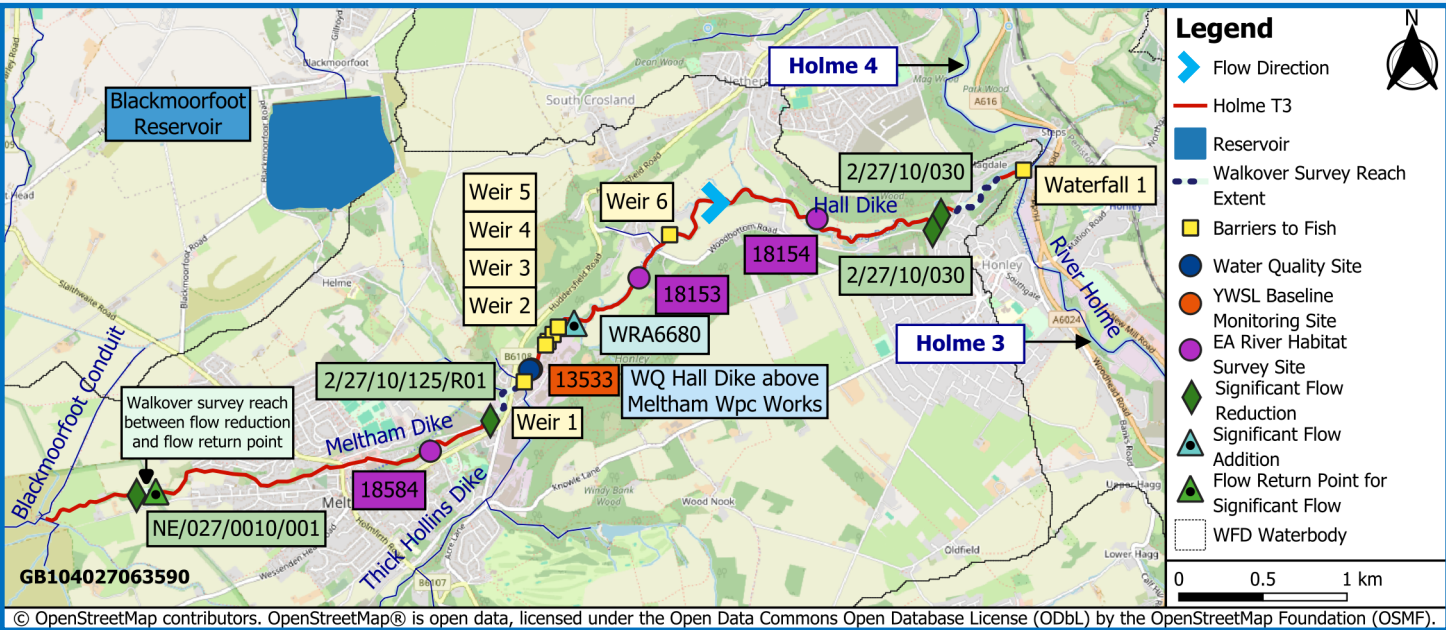
River Holme T1

Physical Environment Information





Reach Setting

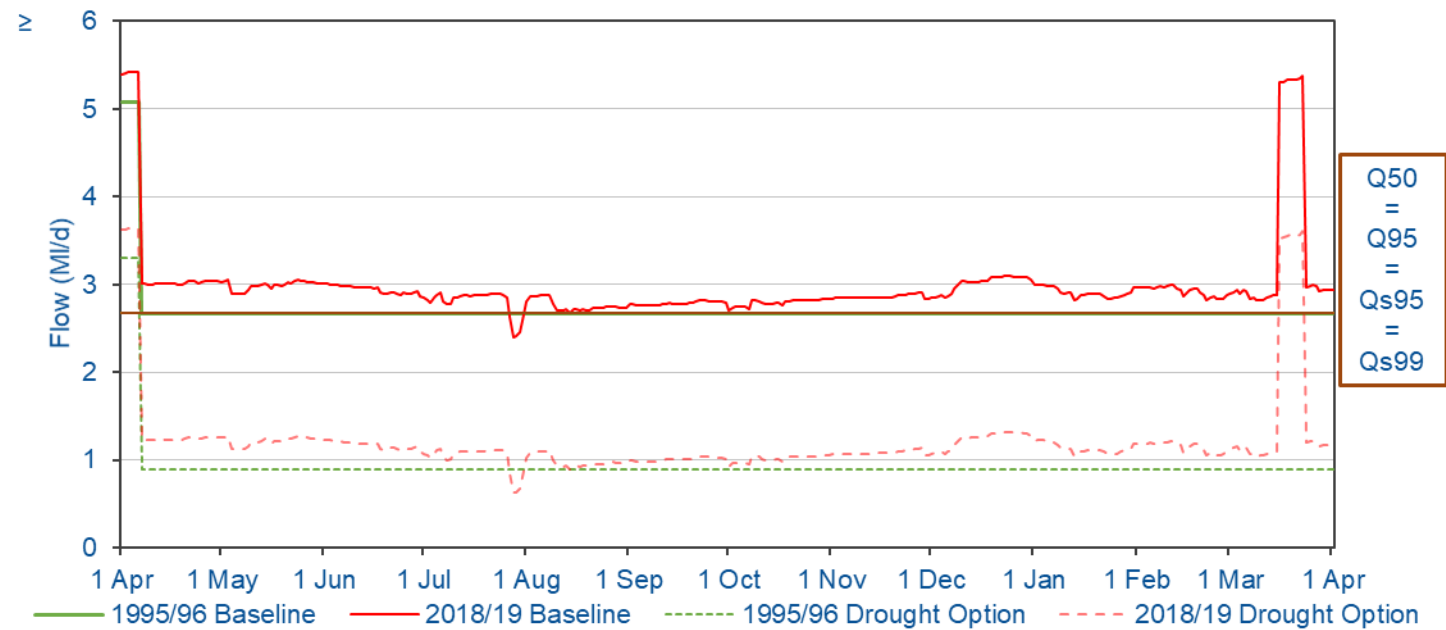


Reach Setting Information:

The bedrock geology is dominated by lithologies of the Millstone Grit Group (mudstone, sandstone, siltstone) Superficial geology is limited in the first 2.5km of the reach and after this is composed of alluvium deposits beneath the channel. Soil types along the reach are composed of freely draining, slightly acid loamy soils. Suburban/urban land use is generally limited to individual buildings throughout the reach.

	Supplementary Information
Catchment Area at Assessment Point	4.3km <sup>2</sup>
Mean Slope Gradient	1.6°
Length of Reach	5.9km
Additional Catchment Area	25.0 km <sup>2</sup>
Upstream Reach	N/A
Downstream Reach	River Holme 4

River Flow Regime



	Reference Conditions (MI/d)	Drought Plan Conditions (MI/d)	% Reduction	Impact	Significant Flow Additions/Reductions	Flow Rate (MI/d)	Abstraction / Discharge
-					MAG BROOK-HONLEY-HUDDERSFIELD 2/27/10/030	0.35	Abstraction
Q <sub>s95</sub>	2.67	0.88	67	Summer Major	MELTHAM STW WRA6680	2.35	Discharge
Q <sub>s99</sub>	2.67	0.88	67		BROW GRAINS DIKE AT NEW BRIDGE ROAD, MELTHAM; 2/27/10/125/R01	2.33	Abstraction
Q95	2.67	0.88	67	Winter Major	MELTHAM DYKE VIA MILL DAM NE/027/0010/001	0.325	Abstraction
Q50	2.67	0.88	67				

River Habitats

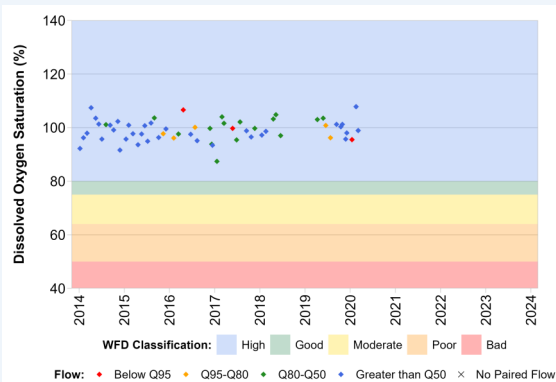
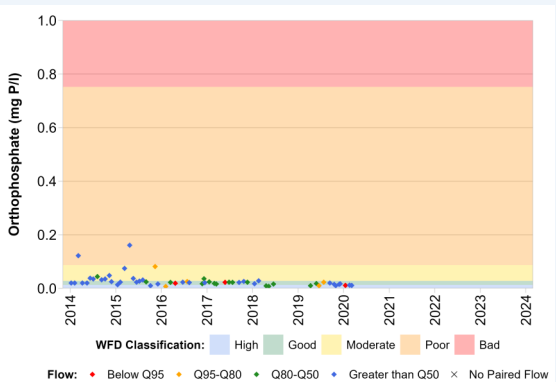
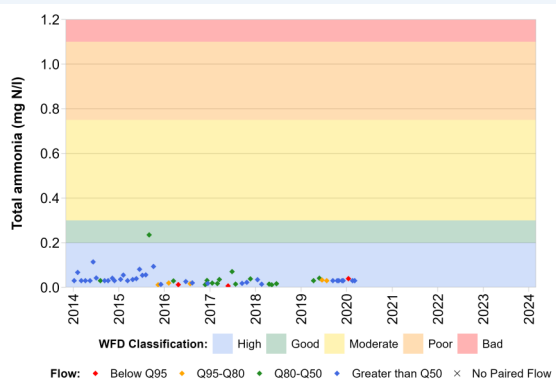


River Water Quality

There are no significant water quality pressures associated with this reach

In Hall Dikey above Meltham WPC Works (NE-49500340) the average pH was 7.7 with a maximum temperature of 17.8°C

**Figure A4.14**  
**River Holme T3**  
**Physical Environment Information**





Reach Setting

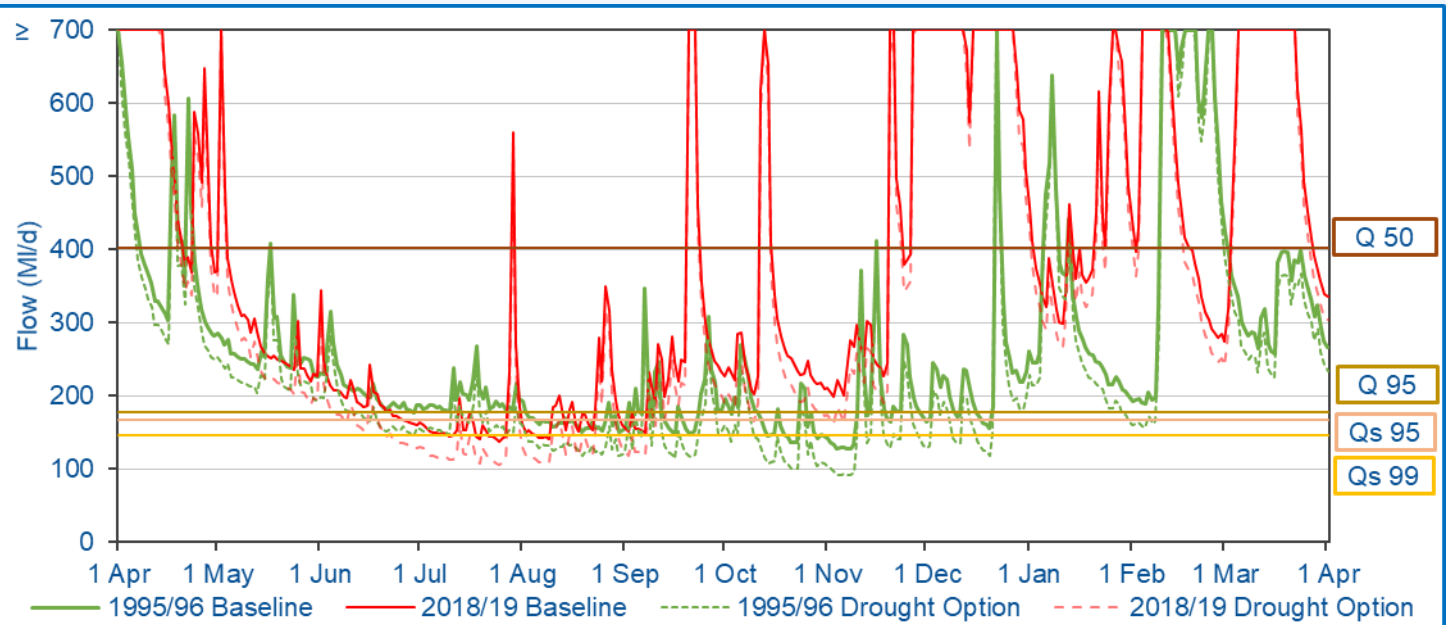


Reach Setting Information:

The bedrock geology is dominated by the Penine Coal Measures Group and superficial geology is dominated by alluvium beneath the channel with scattered river terrace deposits along the reach, particularly in the lower sections of the reach. Soils are mainly composed of loamy and clayey floodplain soils with slowly permeable, seasonally wet acid loamy and clayey soils further out from the river. The river passes significant urban areas of West Yorkshire, namely Mirfield, Dewsbury, Wakefield and Castleford.

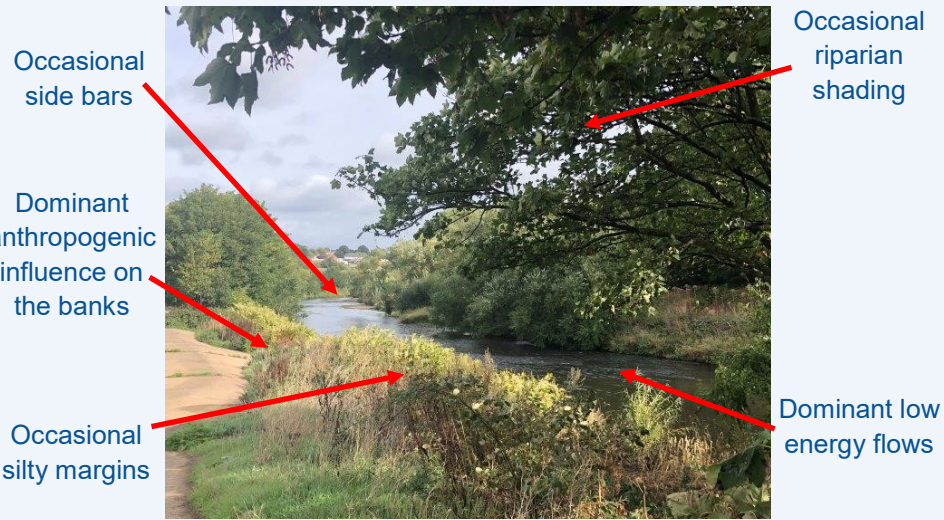
	Supplementary Information
Catchment Area at Assessment Point	170.9km <sup>2</sup>
Mean Slope Gradient	0.1°
Length of Reach	56.7km
Additional Catchment Area	781.1km <sup>2</sup>
Upstream Reach	River Calder 4/River Colne 4
Downstream Reach	N/A

River Flow Regime



	Reference Conditions (MI/d)	Drought Plan Conditions (MI/d)	% Reduction	Impact	Significant Flow Additions/Reductions	Flow Rate (MI/d)	Abstraction / Discharge
					CALDERVALE (WAKEFIELD) STW C4106	32 (DWF)	Discharge
	Q <sub>s95</sub>	168.75	137.26	18.7	RIVER CALDER - DALTON WORKS - HUDDERSFIELD 2/27/13/201	27.3	Abstraction
	Q <sub>s99</sub>	148.61	117.12	21.2			
	Q <sub>95</sub>	177.12	140.90	20.4			
Q <sub>50</sub>	401.76	365.54	7.8				

River Habitats



River Water Quality

Significant Water Quality Pressures	Permit Conditions
There are 27 CSOs that could be considered intermittent water quality pressures in this reach, each with descriptive consents.	Intermittent discharges

In the River Calder at Cooper Bridge (NE-49500601). the average pH was 7.7 with a maximum temperature of 21.0°C

**Figure A4.15**  
**River Calder 4**  
**Physical Environment Information**

