

Appendix 10-5: Preliminary Watercourse Crossing Inventory

Calderdale Energy Park

PEIR Volume 3

PINS Reference: EN0110023

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations
2009 – Reg 5 (2) (a).

7 April 2026



Appendix 10-5: Watercourse Crossing Inventory

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1 Introduction

Fluid Environmental Consulting Ltd (Fluid) were commissioned by Calderdale Wind Farm Ltd to complete depth of penetration probing and coring at the proposed Calderdale Energy Park (the 'Proposed Development').

As set out in **Chapter 1: Introduction** of the PEIR, the Proposed Development at this point in time includes a number of components and associated areas, as follows:

- Turbine Area, where the wind turbines and associated infrastructure will be located;
- Eastern Access Route and Western Access Route (collectively referred to as the 'Access Routes'), providing access to the Turbine Area; and
- Bradford West Cable Corridor, where the export cable will run from the Turbine Area to the Bradford West Substation to connect the wind turbines to the grid.

Altogether, these areas are termed the 'PEIR Boundary'. The extent of the PEIR Boundary is shown in **Figure 3-1** of the PEIR. It will comprise approximately 25km of founded tracks, ~ 8.9km of new floated tracks and 749m of existing tracks. The access tracks within the Access Routes and the internal site access track layout within the Turbine Area have been designed to avoid watercourses and use existing access tracks, where possible, with a preference for crossing of smaller scale watercourses.

This appendix provides an inventory of information on each watercourse crossing within the Turbine Area and the Western Access Route only. The description regarding the dimensions, bedload, vegetation, and proposed type of crossing to be installed will be added to this appendix following further design refinement and site surveys for the ES. At detailed design, these crossings will be sized by the appointed Contractor to allow the 200-year annual probability event plus climate change flows and freeboard and will be agreed with the Environment Agency (EA) and relevant Lead Local Flood Authority (LLFA). This will be secured as part of a DCO requirement.

Details on the watercourse crossings within the Bradford West Cable Corridor and the Eastern Access Route will be included in the ES.

This appendix should be read in conjunction with **Chapter 10: Hydrology, Hydrogeology, Geology and Peat** of the PEIR.

2 Hydrological Context

The majority of the Proposed Development is located on undulating upland moorland and farmland. Upland areas reach heights of 463m Above Ordnance Datum (AOD) at Heather Hill summit in the northwest of the PIER Boundary and 452m AOD at Withins Heights in the north. Several moors are named within the Turbine Area including Widdop Moor which covers the western portion of the Turbine Area and Wadsworth Moor covering the eastern portion of the Turbine Area. Heather Hill and Withins Heights slope down to the Walshaw Dean Reservoirs which run north south across the centre of the Turbine Area and at levels of between 300m AOD and 335m AOD. Many of the watercourses draining the Turbine Area are connected to various manmade reservoirs. The hydrological features are presented in **Figure 10-9**:

Hydrological Features of Chapter 10: Hydrogeology, Hydrology, Geology and Peat of the PEIR.

Environment Agency Catchment Data Explorer information indicates that most of the Turbine Area lies within the Aire and Calder Management Catchment of the Humber River Basin District, primarily within the Calder Upper Operational Catchment. The Turbine Area is mainly drained southwards by several sub-catchments into Hebden Water, which discharges to the River Calder at Hebden Bridge.

The western parts of the Turbine Area drain via Greave Clough, much of which is culverted into Widdop Reservoir, with overflow passing through Graining Water before forming Hebden Water, while remaining flows enter Alcomden Water directly.

The central parts of the Turbine Area contain the linked Walshaw Dean Upper, Middle and Lower Reservoirs, which discharge to Alcomden Water, and the eastern parts of the Turbine Area drain to Crimsworth Dean Beck, joining Hebden Water upstream of Hebden Bridge. A small area in the far west of the Turbine Area drains to Thursden Brook and the River Brun within the Ribble Management Catchment.

The northeastern boundary of the Turbine Area broadly follows the watershed separating drainage to Hebden Water from northern watercourses, including the River Worth and Bridgehouse Beck, which drain northwards via Ponden, Lower Laithe and Leeshaw Reservoirs within the Aire Middle Operational Catchment.

Several ponds, springs, wells, issues, sinks and small watercourses have been identified within the area surrounding the Turbine Area. The watercourses generally drain towards the surrounding reservoirs that are located in close proximity (and outside of the PEIR Boundary) to the north, south and centre, including:

- Walshaw Dean Upper, Middle and Lower Reservoirs found in the centre, though outside of the Turbine Area;
- Widdop Reservoir, south of the Turbine Area; and
- Watersheddles Reservoir to the north of the Western Access Route.

Springs are recorded beyond the PEIR Boundary and the surface waters within the PEIR Boundary may receive some limited groundwater baseflow.

Topographic analysis using 1:50,000 scale Ordnance Survey (OS) mapping indicates the presence of 23 watercourses and associated tributaries within the Turbine Area and the Western Access Route. Further detailed assessment will be undertaken for the ES.

A more detailed review of 1:10,000 scale OS mapping has revealed additional un-named tributaries within the Turbine Area and Western Access Route, which are tributaries of the larger watercourses identified at the 1:50,000 scale. These smaller tributaries highlight the complexity of drainage patterns within the PEIR Boundary and the importance of considering all contributing watercourses in the assessment.

Furthermore, the presence of springs and the mining history in the area, along with seasonal variations in flow and groundwater level add to this complexity, influencing both surface and

groundwater interactions across the area. Given these factors, it is possible that not every minor spring or drainage feature has been fully accounted for in the assessment.

This hydrological background underpins the assessment of watercourse crossings, informing the identification of key watercourses and guiding the proposed infrastructure locations and their design to minimise environmental impacts and ensure sustainable management of water resources.

3 Legislative Context

The water environment includes wetlands, rivers, lakes, transitional waters (estuaries), coastal waters, and groundwater. EA guidance, in relation to The Environmental Permitting (England and Wales) Regulations 2016 (as amended)¹ states that it is an offence to undertake the following activities without an appropriate permit:

- Discharges to all wetlands, surface waters, and groundwater;
- Disposal to land;
- Abstractions from all wetlands, surface waters, and groundwater;
- Impoundments (such as dams and weirs) of rivers, lakes, wetlands, and transitional waters; and
- Engineering works in or near a main river or flood defence structure.

Requirements for watercourse crossings (engineering works in or near a watercourse) are regulated under the Flood Risk Activity Permit (FRAP) system for main rivers. For ordinary watercourses, consents may be required from the relevant LLFA.

The permitting system operates at different levels, based on the potential environmental impact of the activity:

- Exemptions (for low-risk activities);
- Standard Rules Permits (for activities that fit pre-defined conditions); and
- Bespoke Permits (for more complex or higher-risk activities).

Minor watercourses, which do not feature on 1:50,000 scale OS mapping, may not require formal EA permitting for track crossings. However, these watercourse crossings have been considered within this report.

The objective of the Applicant is to ensure that all activities remain within the relevant regulatory thresholds set out in the Environmental Permitting (England and Wales) Regulations 2016 and associated EA guidance². The applicable regulatory requirements for this application are as follows:

¹ The Environmental Permitting (England and Wales) Regulations 2016 (as amended).

² Environment Agency (EA) Guidance on Environmental Permitting.

- Exemptions – Minor works, such as small bridges with no construction on the riverbed or banks, may be exempt from permitting, provided they meet EA guidance on low-risk activities.
- FRAP – Required for engineering works in or near a main river or flood defence structure, including:
 - Bank reinforcement or re-profiling for erosion control.
 - Operating machinery in or near a main river when carrying out permitted activities.
 - Bridges or culverts that affect the riverbanks but do not involve extensive in-channel works.
- Ordinary Watercourse Consents – For crossings or modifications affecting ordinary watercourses, approval must be sought from the LLFA or the IDB where applicable.
- Environmental Permit for Water Discharges – Required for discharges, such as construction site run-off, that could impact the water environment.
- Bespoke Permits – For more complex activities, including:
 - Bridges or culverts with construction on the bed and significant bank disturbance.
 - Larger-scale river modifications that do not fit within standard FRAP conditions.

Should activities exceed the above permitting thresholds, a Bespoke Permit application will be required. The EA will assess conservation considerations, environmental standards for waterbody morphology, and good practice as part of the determination process, considering factors such as location, water quality, and the scale of works.

A Water Discharge Permit for construction run-off will be required, in accordance with EA guidance. This application process will be undertaken pre-construction, supplementing information provided at the DCO application stage.

4 Desk Study

The desk study consisted of a review of the information regarding the PEIR Boundary (specifically the Turbine Area and Western Access Route) and the proposed infrastructure locations and their design, principally involving an examination of the access track in the Western Access Route and the internal site access track layout within the Turbine Area and the identification of watercourses marked on the OS 1:50,000 scale map which would require crossings to be constructed. Crossings of minor watercourses were also identified at OS 1:25,000 and 1:10,000 OS scale mapping. This information informed the design to minimise crossing locations of all mapped watercourses.

5 Walkover Surveys

Walkover surveys have not been undertaken before this assessment and these will be completed as part of the assessment for the ES.

6 Ecological Provision

The PEIR Boundary is situated in an upland peatland environment with small, shallow watercourses that are unlikely to support fish migration or provide suitable habitat for otters. These watercourses typically exhibit low flow conditions, further reducing the likelihood of fish or mammal presence. As a result, specific design features such as ledges, dry passages, or in-channel modifications for fish and mammal passage are not required.

Nevertheless, the crossing designs will prioritise maintaining the natural hydrological and geomorphological characteristics of the watercourses to minimise disruption to downstream habitats and preserve overall ecosystem functionality.

7 Watercourse Crossings

A total of 41 watercourse crossings will be constructed within the Turbine Area and Western Access Route, but not including for the Bradford West Cable Corridor or the Eastern Access Route which are under consideration and will be set out in the ES. These comprise:

- 18 crossings of 1:25,000 scale OS mapped watercourses; and
- 23 crossings of 1:50,000 scale OS mapped watercourses.

All proposed watercourse crossings will be permanent, are listed in **Table 1** and shown on **Figure 10-9**.

The location of watercourse crossings are being considered to cross watercourses where channel sections are straighter and narrower, avoiding meanders and areas of erosion, and at angles perpendicular to the water flow where possible. The crossing locations also consider the best approach to and from the crossings, considering the topography, gradients and valley dimensions. The crossings of the larger watercourse are being carefully positioned so that single span crossing on bedrock abutments can be used. Further details will be provided in the ES.

The number of watercourse crossings has been minimised where possible.

Watercourse crossings will be subject to appropriate EA authorisation and will be designed to allow the conveyance of a 0.5% AP (Annual Probability 200 year) flow event plus an allowance for climate change and freeboard. Additionally, mitigation will be put in place to control and attenuate runoff during all phases of the Proposed Development and crossings will be regularly checked and maintained during operation. Regardless of the authorisation requirements, all watercourse crossings will be in accordance with the good practice measures provided in **Appendix 10-1: Good Practice Methods**.

8 Infrastructure within 50m of Watercourses

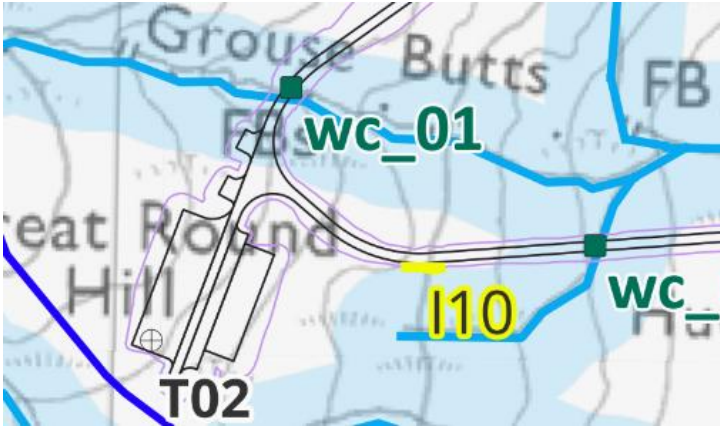
Although the proposed infrastructure layout for PEIR has largely been designed to avoid encroachment within 50m of surface watercourses, there are 34 locations where the proposed infrastructure is situated within this buffer zone.

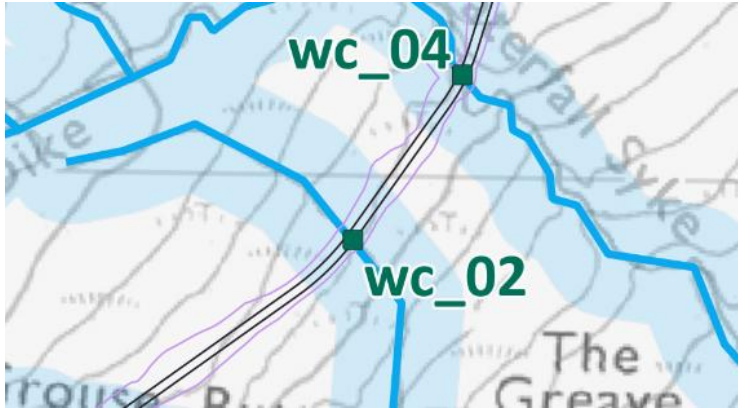
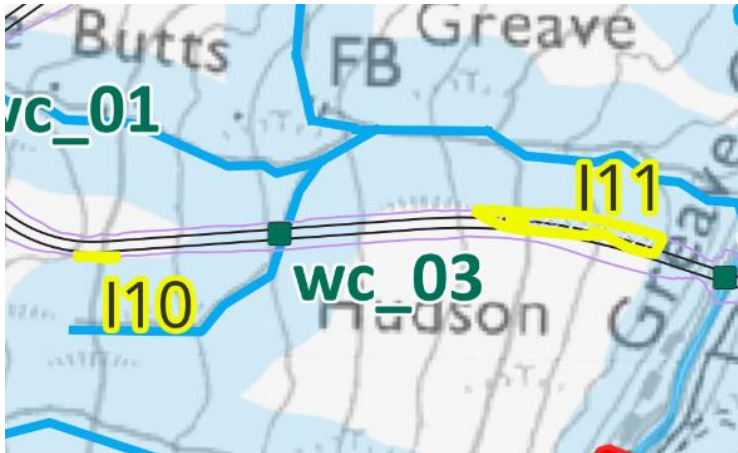
An inventory of these locations, detailing the specific infrastructure involved, the watercourses affected, and relevant mitigation considerations, is presented in **Table 2** and shown in **Figure 10-9**.



The encroachments identified at this stage avoid direct proximity to active watercourses and primarily involve earthworks and temporary hardstanding or clearance works that do not intersect the channel itself and will be reinstated post-construction. Further site work will be conducted to assess these encroachments for the ES. Standard good practice methods, including silt fencing, buffer zones, and controlled drainage, will be employed to manage potential sediment mobilisation and avoid pollution risks and these will be secured by the outline Construction Environmental Management Plan (oCEMP).


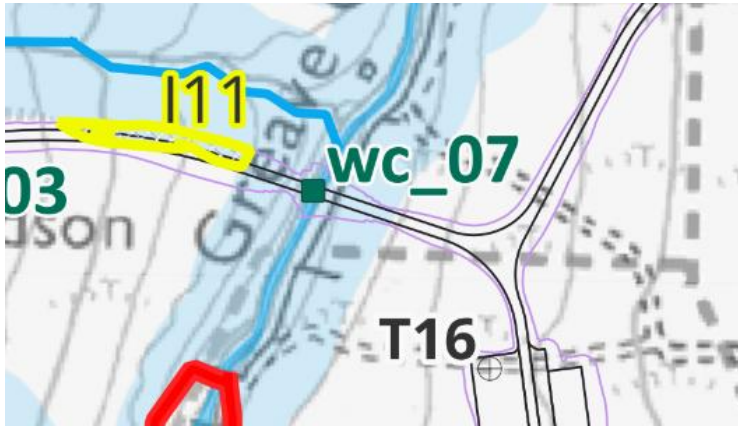
Table 1 Watercourse Crossing Inventory

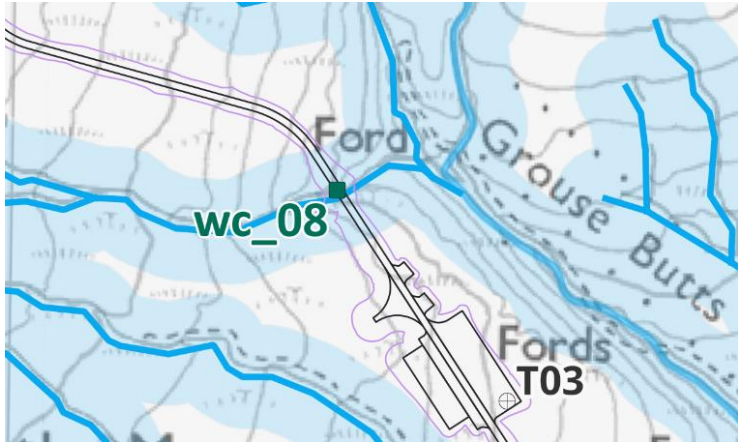
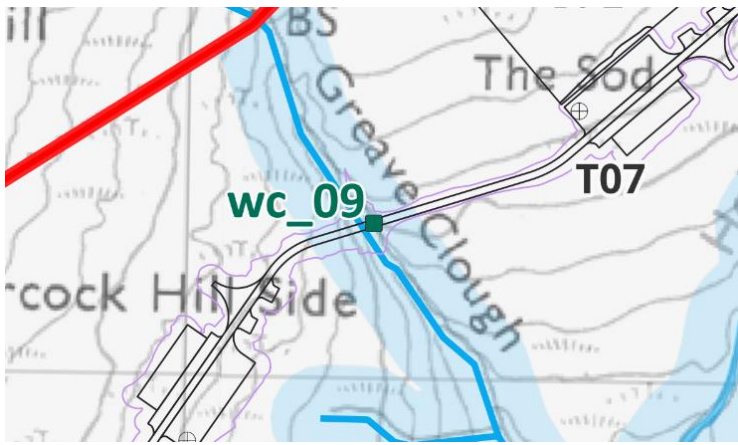
Please refer to **Figure 10-9** for the figures within **Table 1** and overall location within the Turbine Area and Western Access Route. (Detailed descriptions and images will be added once site visit has been conducted in the ES). Note that not all w/c IDs are shown in the figure extracts below.

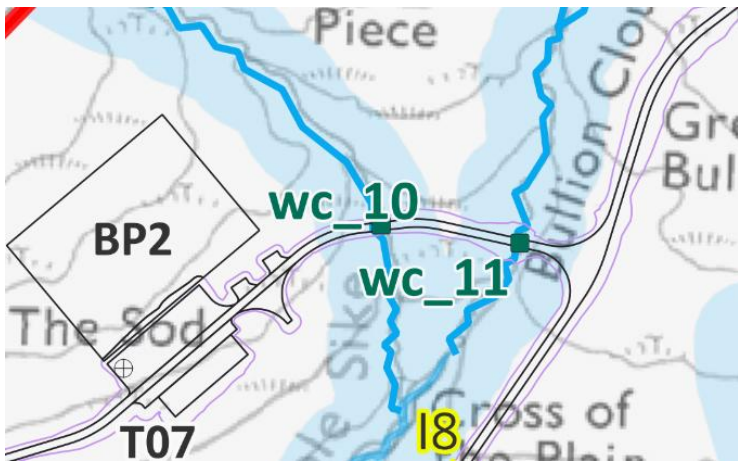
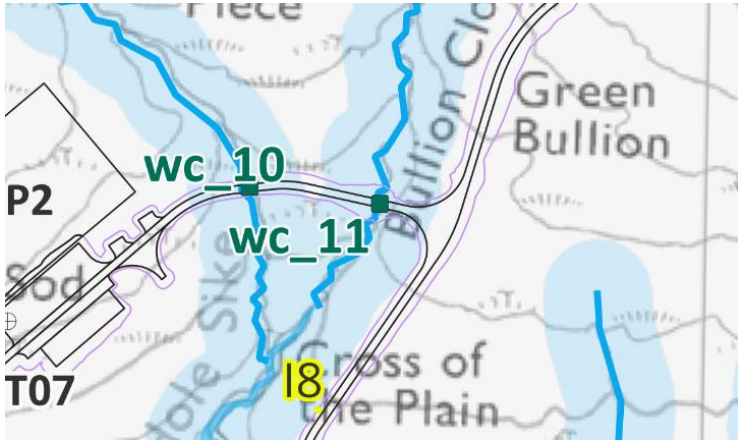
ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_01	33	394124	433793	0.04	Unnamed watercourses Shown on 1:25k OS scale colour raster mapping.	Closed Pipe Culvert	

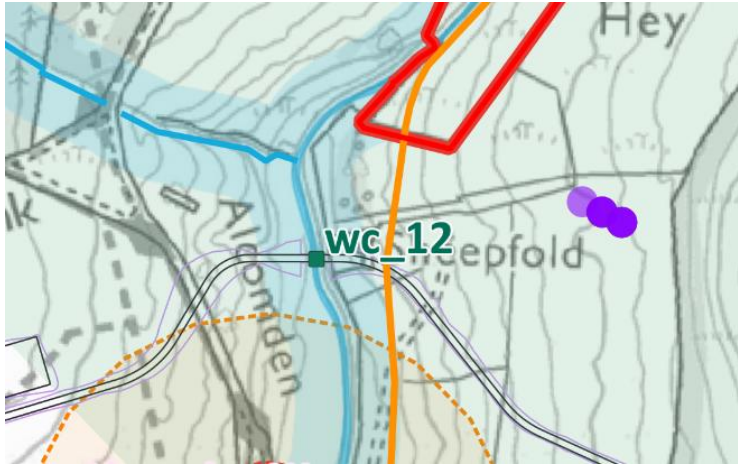

ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_02	34	394320	433951	0.02	Unnamed watercourse Shown on 1:50k OS scale colour raster mapping.	Closed Pipe Culvert	
wc_03	32	394344	433683	0.05	Unnamed watercourse Shown on 1:25k OS scale colour raster mapping.	Closed Pipe Culvert	

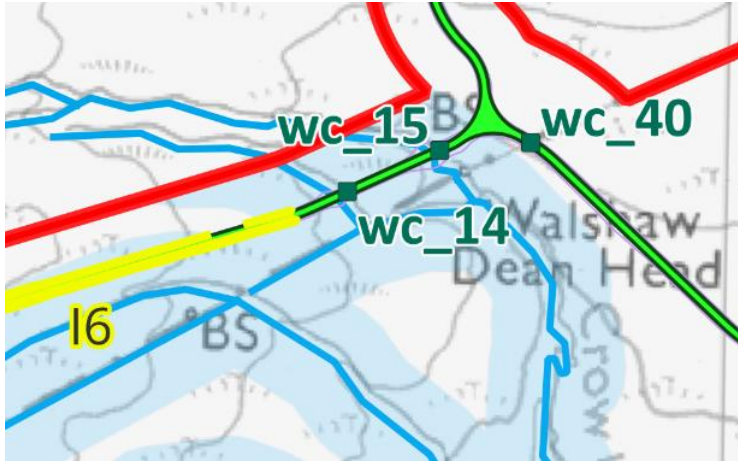
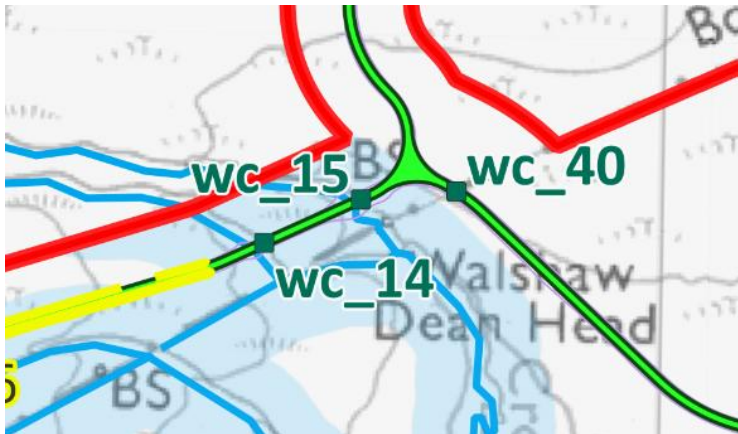
ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_04	35	394405	434083	0.64	Watercourse named "Waterfall Syke" Shown on 1:50k OS scale colour raster mapping.	Closed Pipe Culvert	
wc_05	36	394472	434300	0.03	Unnamed watercourse Shown on 1:50k OS scale colour raster mapping.	Closed Pipe Culvert	

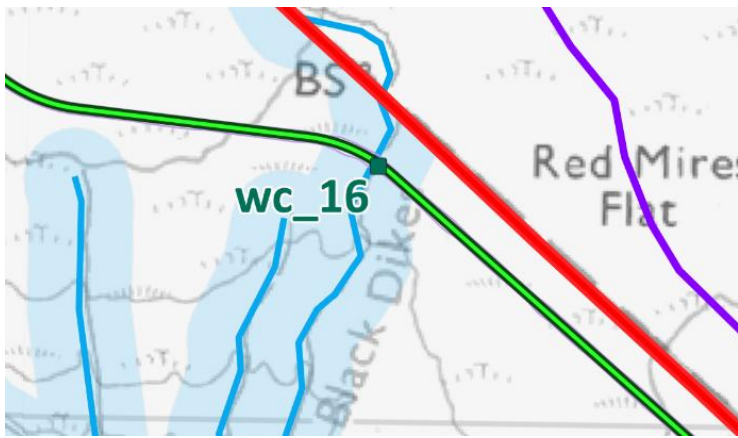

ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_06	37	394487	434357	0.06	Unnamed watercourse Shown on 1:25k OS scale colour raster mapping.	Closed Pipe Culvert	
wc_07	31	394645	433659	4.73	Watercourse named "Greave Clough" Shown on 1:50k OS scale colour raster mapping.	Bridge	

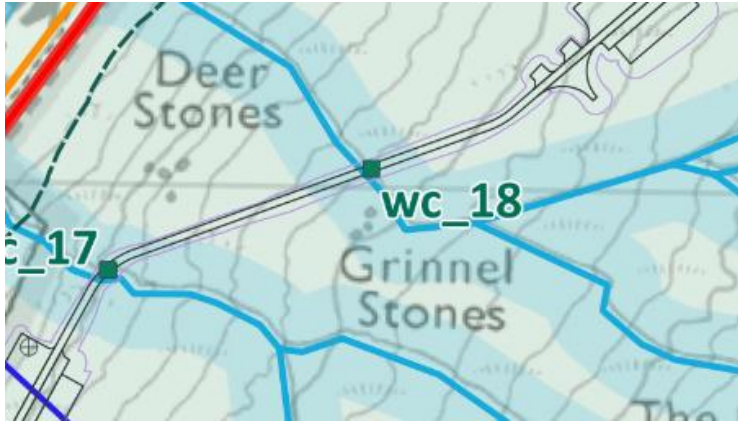
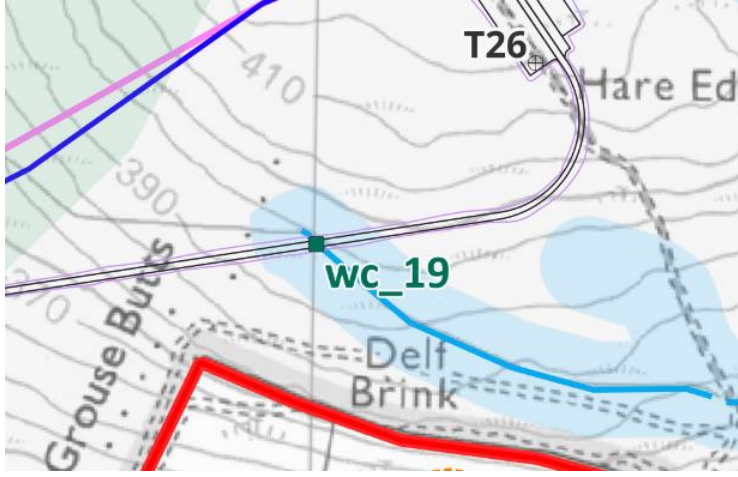
ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_08	38	394313	434688	0.13	Watercourse named "Foul Sike" Shown on 1:50k OS scale colour raster mapping.	Closed Pipe Culvert	
wc_09	39	394175	435147	0.14	Watercourse named "Greave Clough" Shown on 1:50k OS scale colour raster mapping.	Closed Pipe Culvert	

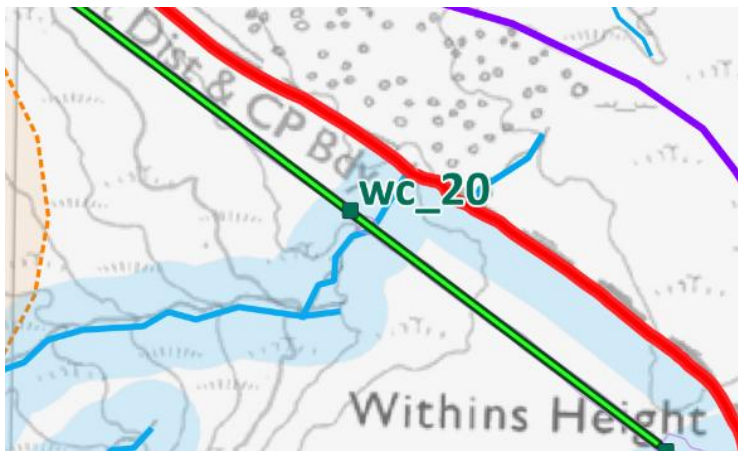
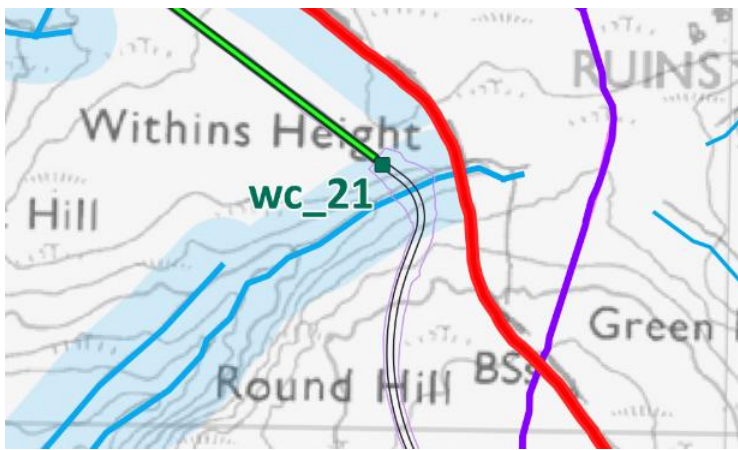
ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_1 0	40	394584	435382	0.50	Watercourse named "Hole Sike" Shown on 1:50k OS scale colour raster mapping.	Closed Pipe Culvert	
wc_1 1	41	394703	435368	0.52	Watercourse named "Bullion Clough" Shown on 1:50k OS scale colour raster mapping.	Closed Pipe Culvert	

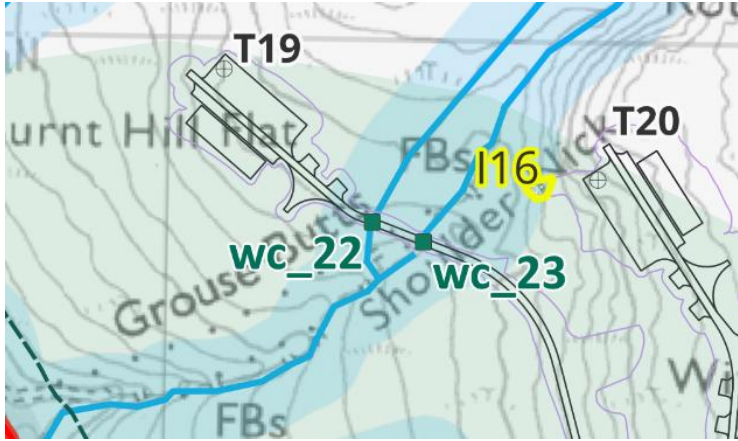
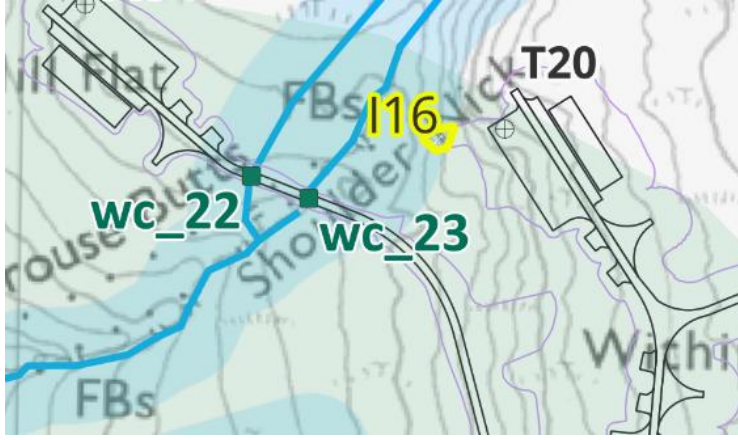
ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_1 2	29	395553	432448	10.36	Watercourse named "Alcomden Water" originating from "Walshaw Dean Lower Reservoir" Shown on 1:50k OS scale colour raster mapping.	Bridge	
wc_1 3	30	395705	433837	0.19	Watercourse named "Shaw Dike" Shown on 1:50k OS scale colour raster mapping.	Closed Pipe Culvert	

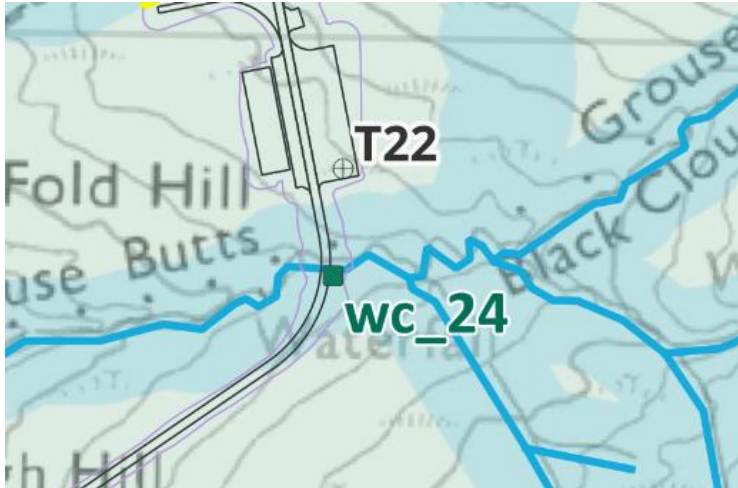
ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_1 4	9	395679	436443	0.02	Tributaries of watercourse named "Crow Hill Beck" Shown on 1:25k OS scale colour raster mapping.	Closed Pipe Culvert	
wc_1 5	8	395757	436479	0.10	Tributary of watercourse named "Crow Hill Beck" Shown on 1:25k OS scale colour raster mapping.	Closed Pipe Culvert	



ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_16	11	396376	436247	0.15	Watercourse named "Low Black Dikes" Shown on 1:50k OS scale colour raster mapping.	Closed Pipe Culvert	
wc_17	28	396192	432924	0.34	Unnamed watercourse Shown on 1:25k OS scale colour raster mapping.	Closed Pipe Culvert	

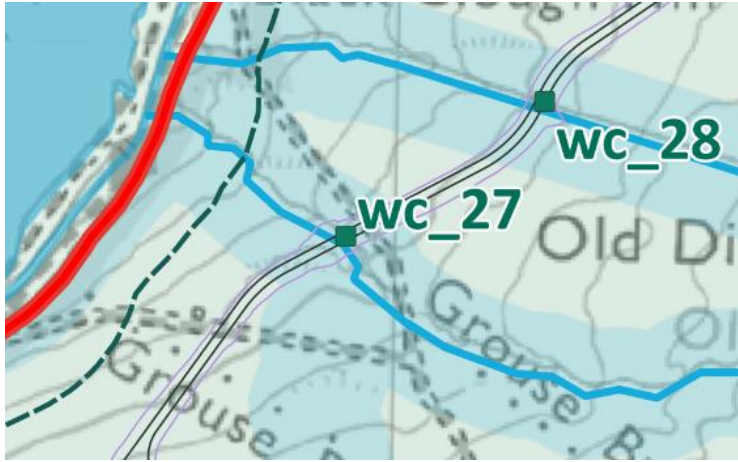

ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_18	27	396431	433020	0.20	Unnamed watercourse Shown on 1:25k OS scale colour raster mapping.	Closed Pipe Culvert	
wc_19	26	397002	432318	0.04	Unnamed watercourse Shown on 1:25k OS scale colour raster mapping.	Closed Pipe Culvert	

ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_20	12	397329	435506	0.03	Unnamed watercourse Shown on 1:50k OS scale colour raster mapping.	Closed Pipe Culvert	
wc_21	13	397643	435275	0.04	Unnamed watercourse Shown on 1:50k OS scale colour raster mapping.	Closed Pipe Culvert	

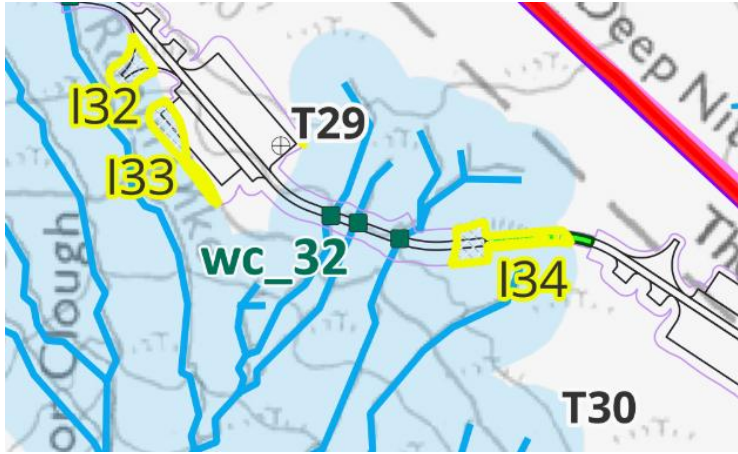
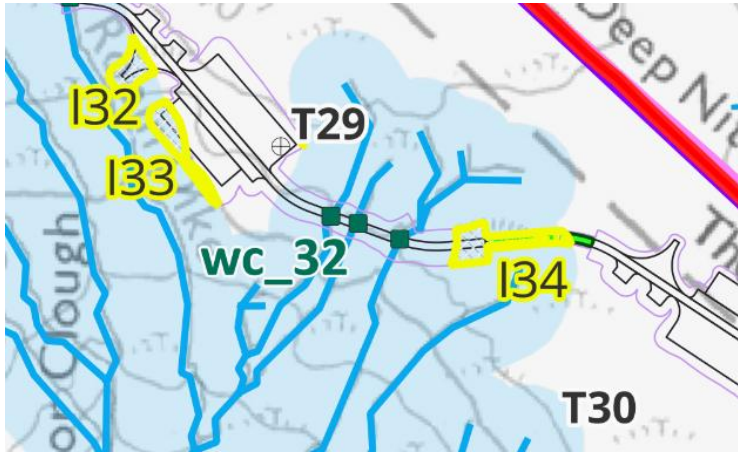
ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_2 2	14	397198	434829	0.04	Unnamed watercourse Shown on 1:25k OS scale colour raster mapping.	Closed Pipe Culvert	
wc_2 3	15	397247	434811	0.12	Unnamed watercourse Shown on 1:50k OS scale colour raster mapping.	Closed Pipe Culvert	

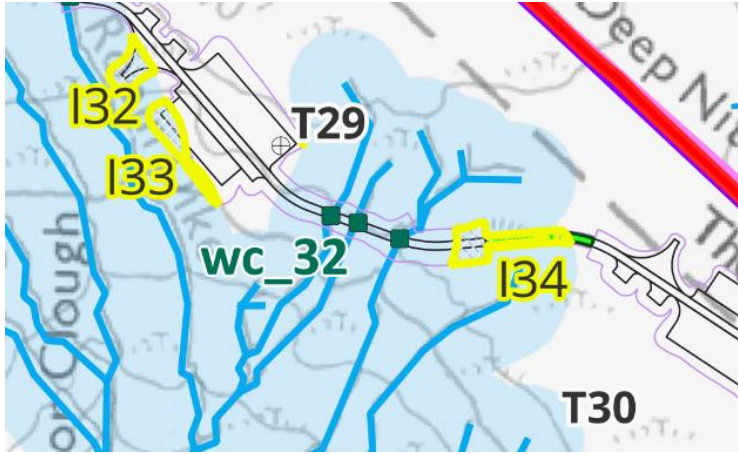
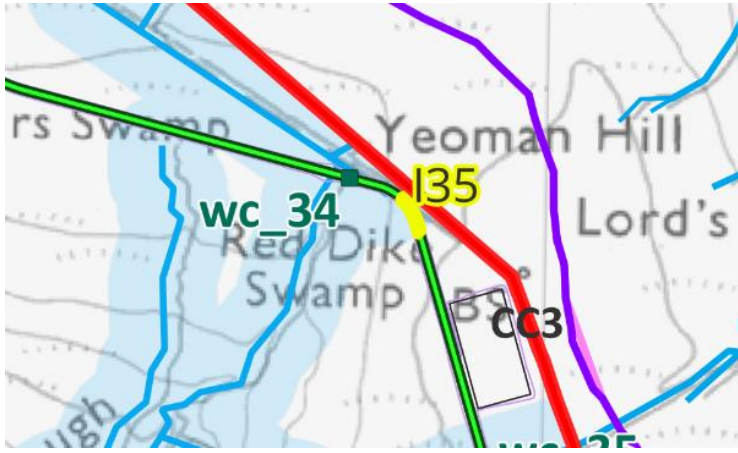
ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_24	25	397379	433816	1.12	Watercourse named "Black Clough" Shown on 1:50k OS scale colour raster mapping.	Closed Pipe Culvert	


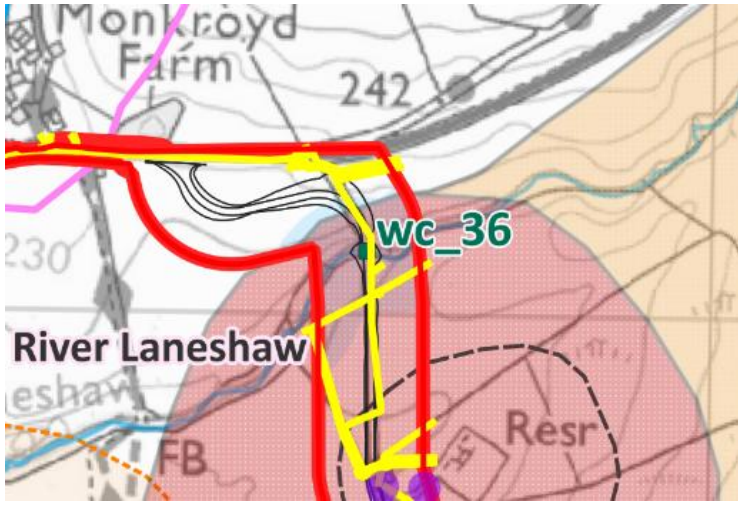
ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_25		397876	432913	0.04	Unnamed watercourse Shown on 1:50k OS scale colour raster mapping.	Closed Pipe Culvert	
wc_26		397918	432890	0.02	Unnamed watercourse Shown on 1:25k OS scale colour raster mapping.	Closed Pipe Culvert	

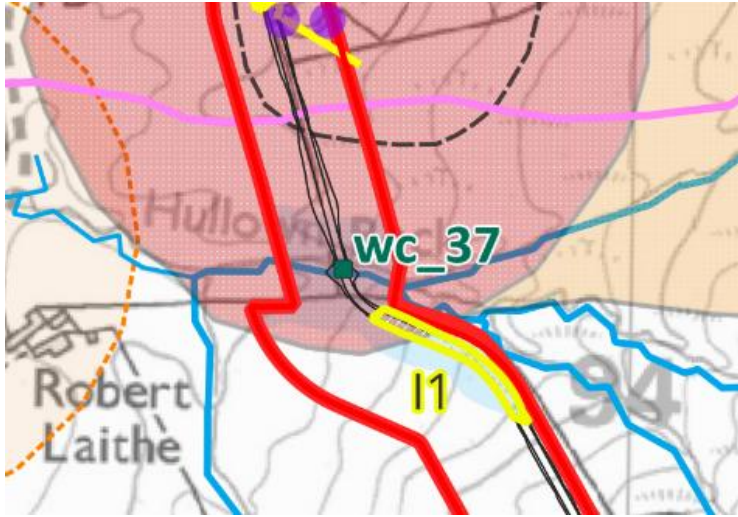
ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_27	23	396961	433461	0.29	Watercourse named "Old Dike" Shown on 1:50k OS scale colour raster mapping.	Closed Pipe Culvert	
wc_28	24	397114	433569	0.14	Unnamed watercourse Shown on 1:25k OS scale colour raster mapping.	Closed Pipe Culvert	


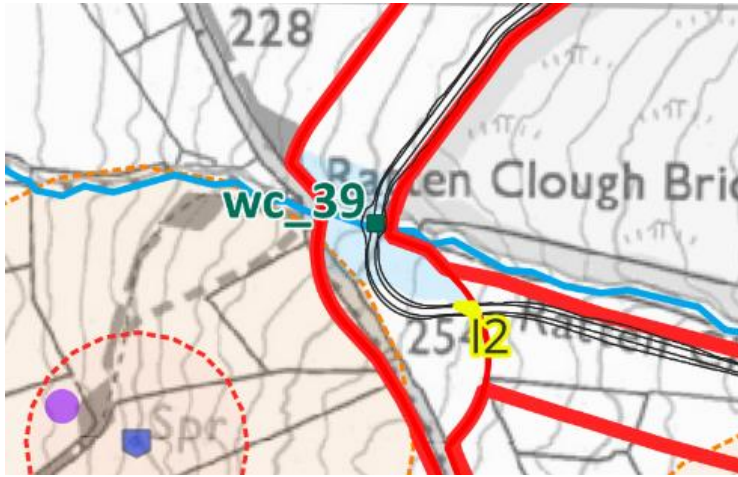
ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_29	16	398854	434560	0.02	Unnamed watercourse Shown on 1:25k OS scale colour raster mapping.	Closed Pipe Culvert	
wc_30	17	399276	434445	0.04	Watercourse named "Robin Dike" Shown on 1:50k OS scale colour raster mapping.	Closed Pipe Culvert	

ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_3_1	18	399506	434258	0.02	Unnamed watercourse Shown on 1:50k OS scale colour raster mapping.	Closed Pipe Culvert	
wc_3_2	19	399529	434252	0.01	Unnamed watercourse Shown on 1:25k OS scale colour raster mapping.	Closed Pipe Culvert	

ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_3 3	20	399566	434239	0.01	Unnamed watercourse Shown on 1:25k OS scale colour raster mapping.	Closed Pipe Culvert	
wc_3 4	21	400819	433405	0.06	Unnamed watercourse Shown on 1:50k OS scale colour raster mapping.	Closed Pipe Culvert	

ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_35	22	400952	433134	0.05	Unnamed watercourse Shown on 1:25k OS scale colour raster mapping.	Closed Pipe Culvert	
wc_36	1	393671	441065	TBC	River Laneshaw	Existing Bridge	

ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_37	2	393747	440623	1.34	Hullown Beck	Bridge	 <p>The map shows a topographic view of a watercourse crossing. A red line represents the watercourse, labeled 'wc_37' in green. It crosses a road labeled 'I1' in yellow. The area is shaded in pink and orange, indicating a catchment area. Labels 'Hullown Beck' and 'Robert Laithe' are visible on the map.</p>

ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_38	3	393976	440234	0.17	Unnamed watercourse on 1:25k OS mapping	Closed Pipe Culvert	
wc_39	4	393543	439803	0.68	Ratten Clough	Closed Pipe Culvert	

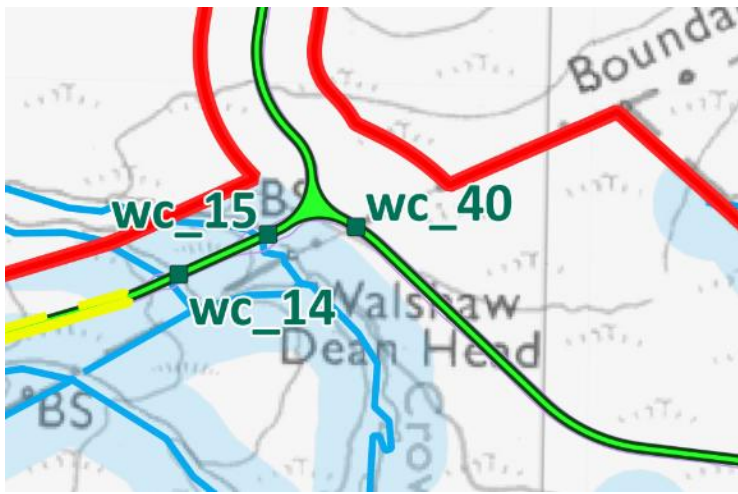
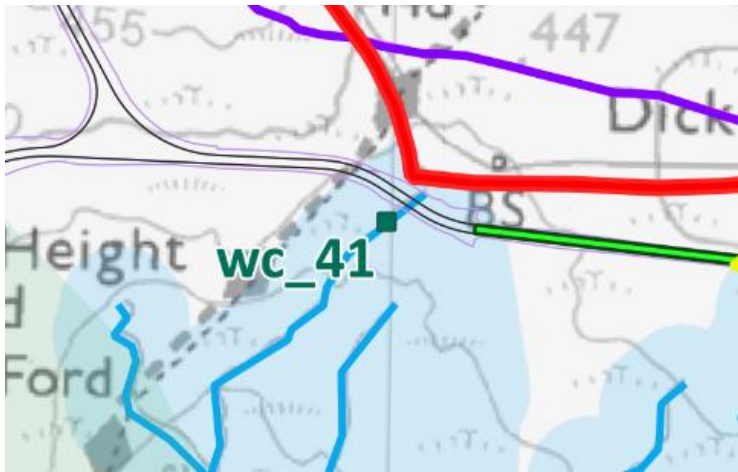
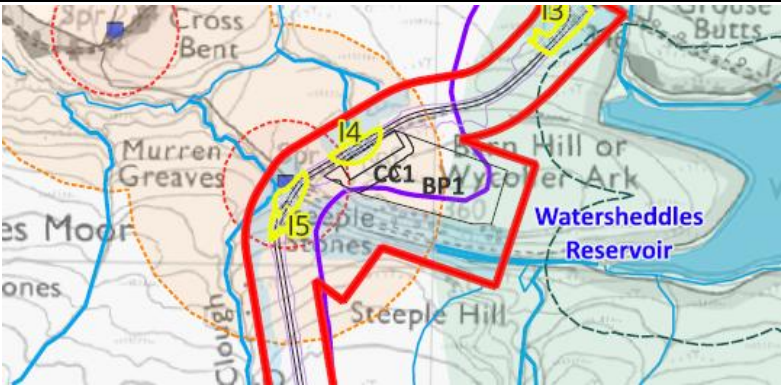
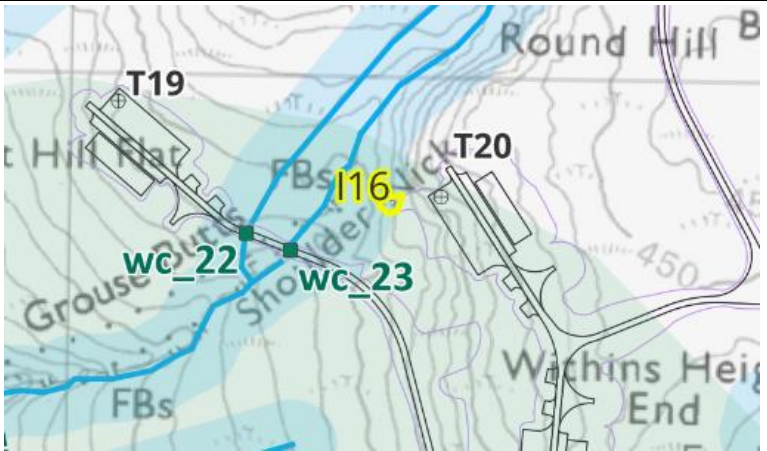
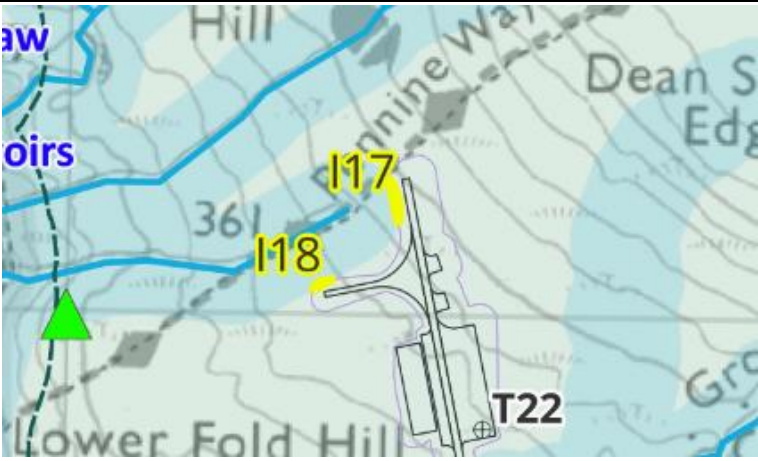

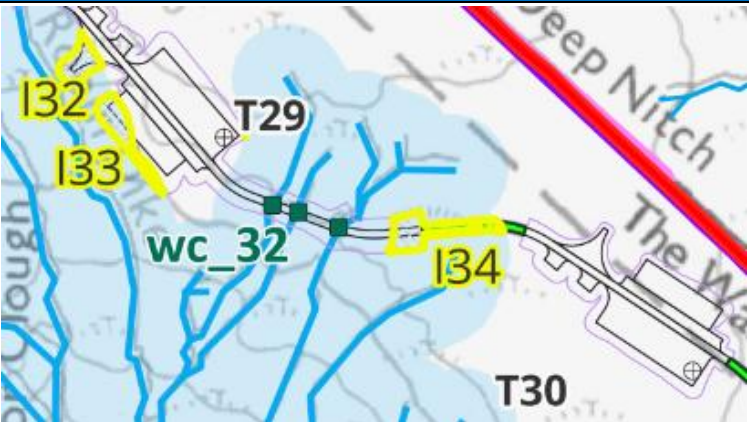
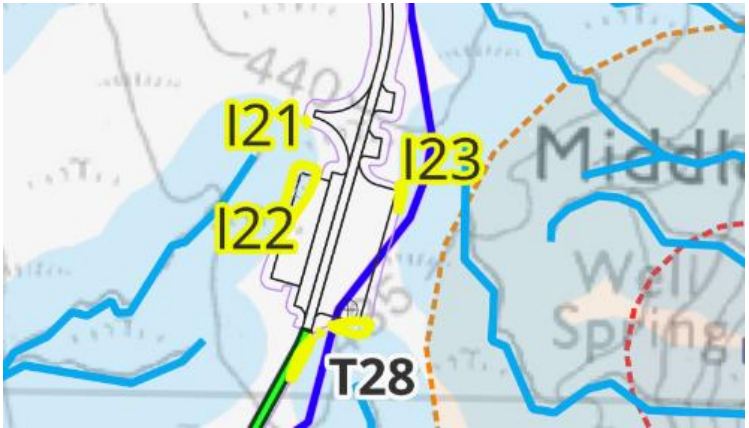
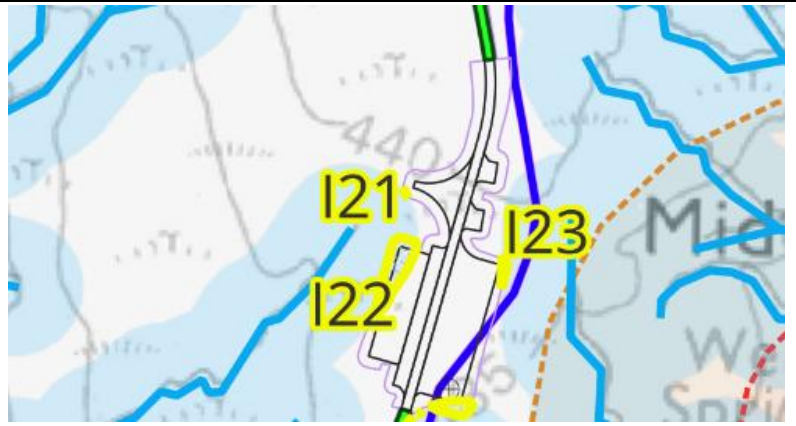
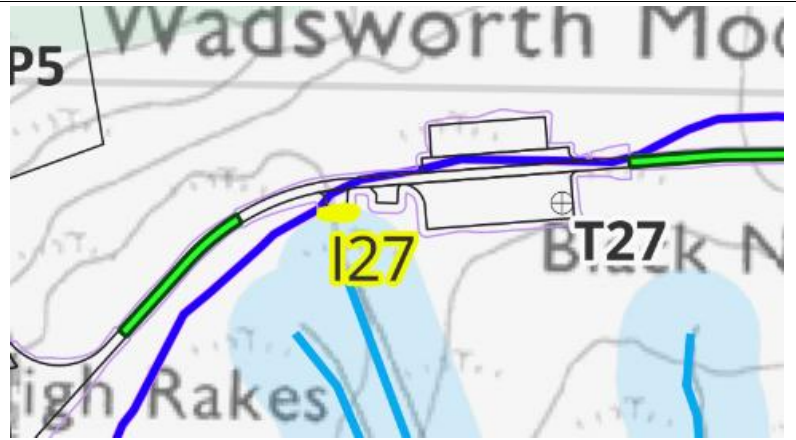
ID	Logika ID	Grid Reference		Catchment Area (Km ²)	Watercourse Name	Estimated Structural Form	Location
		Easting	Northing				
wc_40	10	395834	436487	0.09	Unnamed tributary of the crow hill beck on 1:25k OS mapping	Closed Pipe Culvert	
wc_41		397996	434712	0.03	Unnamed tributary to Black Dike on 1:25k OS mapping	Closed Pipe Culvert	

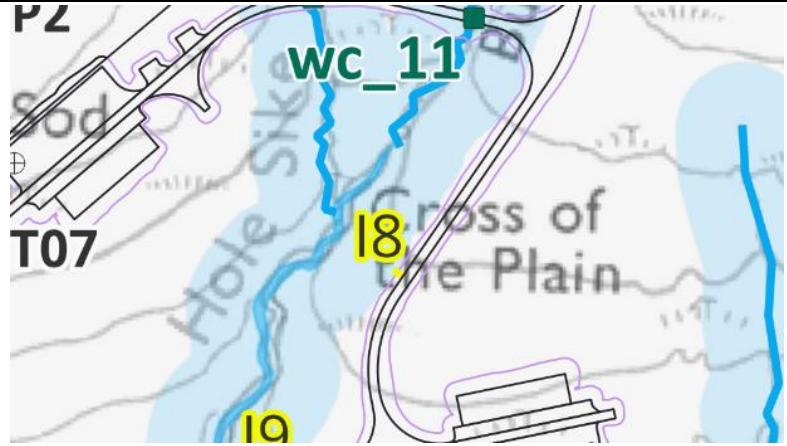
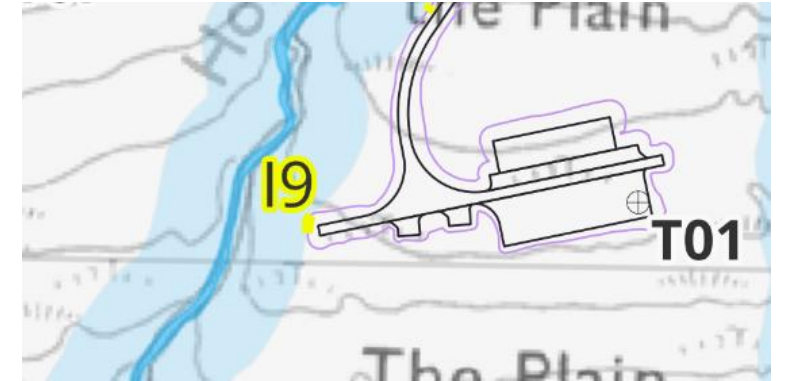
Table 2. Infrastructure Encroachments on watercourse buffers

Infrastructure	Figure label	Grid Reference		Water feature name	Distance to water feature	Area/length of encroachment	Location (Figure 10.9)
		Easting	Northing				
S125017_FOUNDED_TRACK &EW (1)	I15	395768	438095	Nan Hole Clough shown on 1:25k OS mapping	2 m	2709 m ²	
T20 Earthworks (2)	I16	397357	434864	Unnamed watercourse shown on 1:50k OS mapping	44 m	363 m ²	

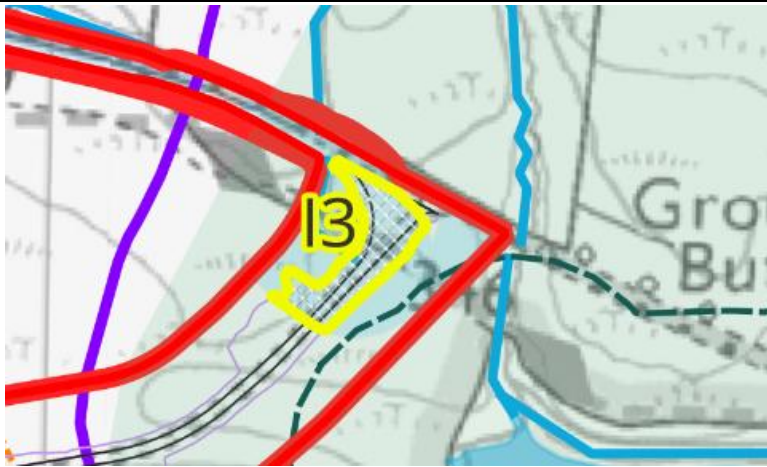
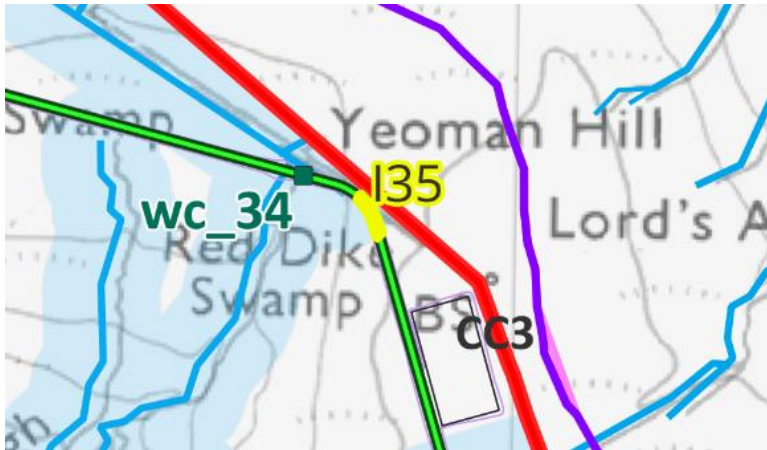
Infrastructure	Figure label	Grid Reference		Water feature name	Distance to water feature	Area/length of encroachment	Location (Figure 10.9)
		Easting	Northing				
T22 Earthworks (3)	I17	397301	434109	Unnamed watercourse shown on 1:25k OS mapping	44 m	183 m ²	
T22 Earthworks (4)	I18	397235	434032	Unnamed watercourse shown on 1:25k OS mapping	46 m	66 m ²	

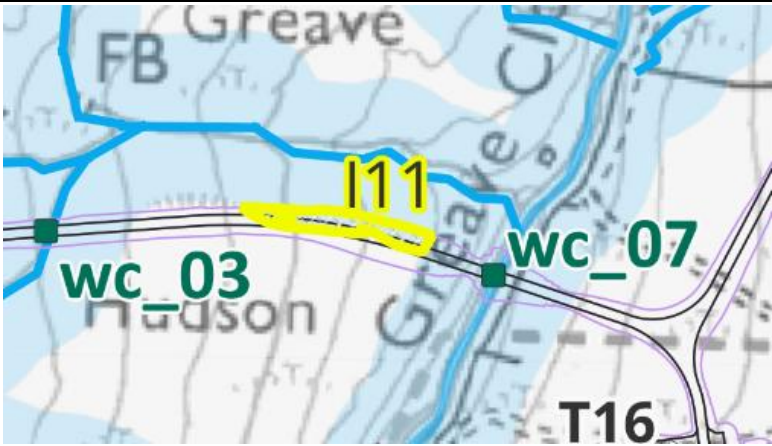
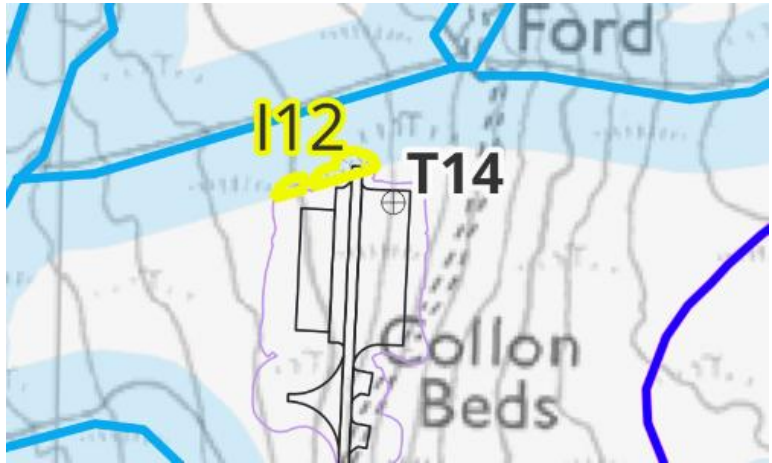
Infrastructure	Figure label	Grid Reference		Water feature name	Distance to water feature	Area/length of encroachment	Location (Figure 10.9)
		Easting	Northing				
T29 Earthworks (5)	I34	399480	434319	Unnamed watercourse shown on 1:25k OS mapping	49 m	1 m ²	
T28 Earthworks (6)	I23	398488	434153	Unnamed watercourse shown on 1:50k OS mapping	46 m	49 m ²	


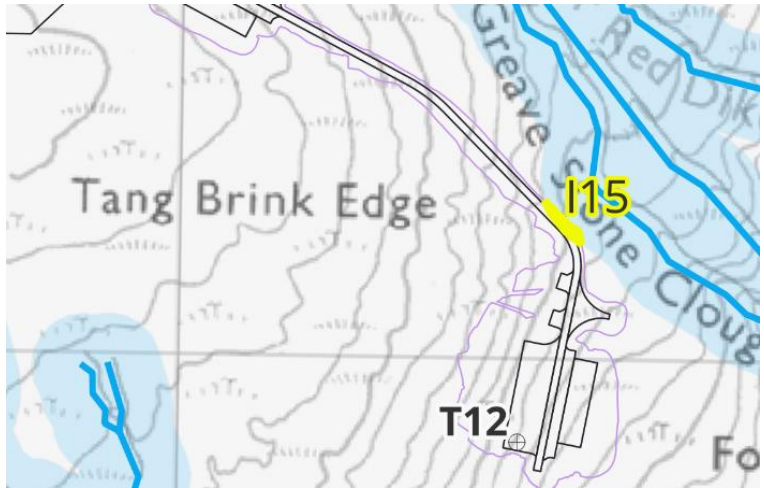
Infrastructure	Figure label	Grid Reference		Water feature name	Distance to water feature	Area/length of encroachment	Location (Figure 10.9)
		Easting	Northing				
T28 Earthworks (7)	I21	398416	434207	Unnamed watercourse shown on 1:25k OS mapping	49 m	4 m ²	
T27 Earthworks (8)	I27	397349	432915	Unnamed watercourse shown on 1:25k OS mapping	43 m	124 m ²	

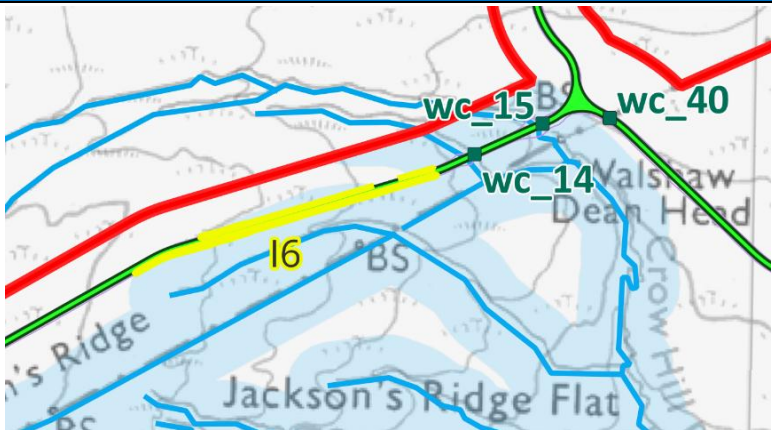

Infrastructure	Figure label	Grid Reference		Water feature name	Distance to water feature	Area/length of encroachment	Location (Figure 10.9)
		Easting	Northing				
Track Earthworks (9)	18	394650	435179	Greave Clough shown on 1:50k OS mapping	49 m	1 m ²	
Earthworks (10)	19	394569	435029	Greave Clough shown on 1:50k OS mapping	47 m	11 m ²	

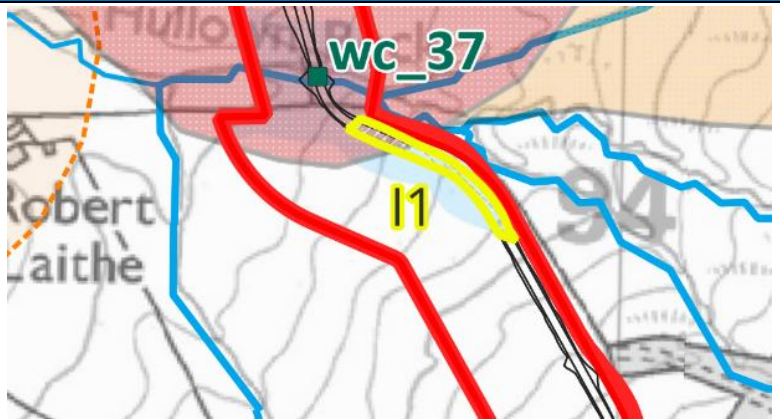
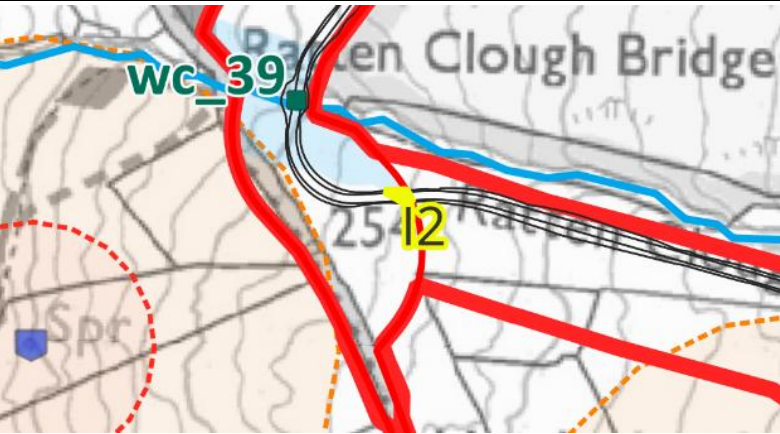
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		Easting	Northing				
Track Earthworks (11)	I10	394225	433665	Unnamed watercourse shown on 1:25k OS mapping	48 m	20 m ²	
Earthworks (12)	I14	396311	434466	Unnamed watercourse shown on 1:25k OS mapping	49 m	2 m ²	

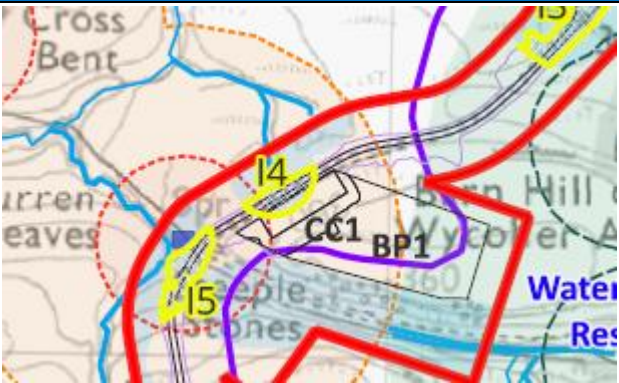
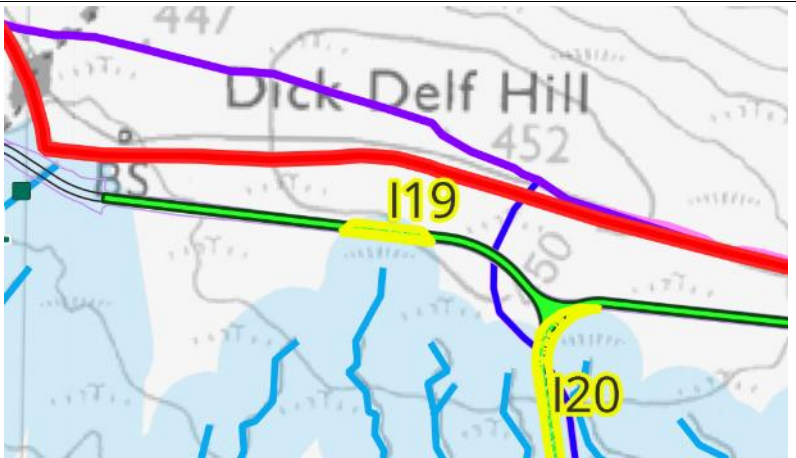
Infrastructure	Figure label	Grid Reference		Water feature name	Distance to water feature	Area/length of encroachment	Location (Figure 10.9)
		Easting	Northing				
Earthworks & existing track (13)	I3	396198	438388	Unnamed watercourse shown on 1:25k OS mapping	0 m	3571 m ²	
S125017_FLOATED_TRACK (14)	I35	400877	433372	Unnamed watercourse shown on 1:25k OS mapping	14 m	275 m ²	

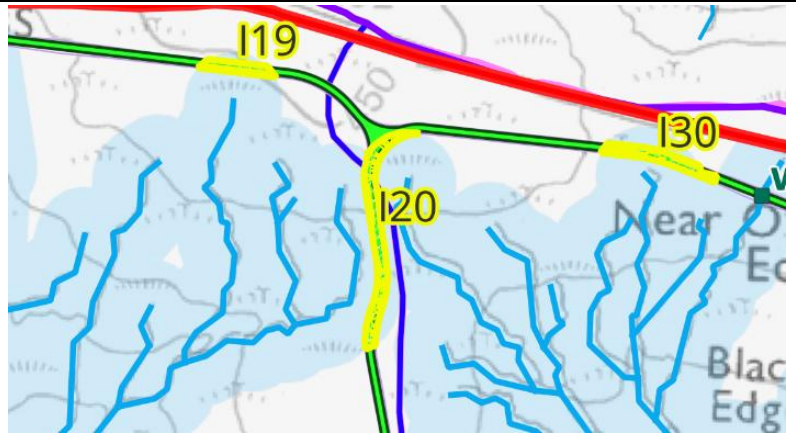
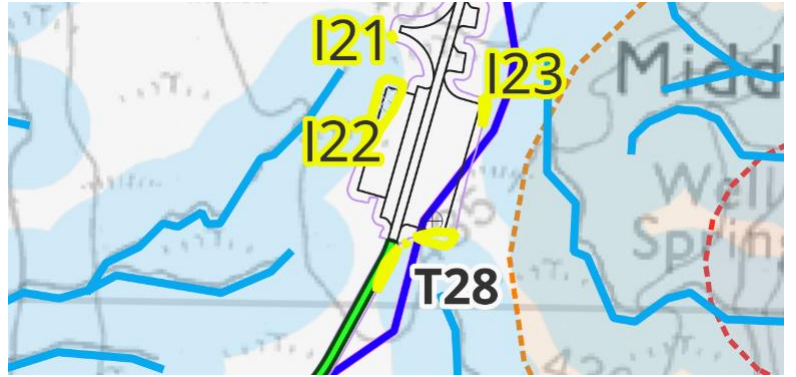
Infrastructure	Figure label	Grid Reference		Water feature name	Distance to water feature	Area/length of encroachment	Location (Figure 10.9)
		Easting	Northing				
S125017_FOUNDED_TRACK &EW (16)	I11	394544	433691	Unnamed tributary to Greave Clough shown on 1:50k OS mapping	36 m	1420 m ²	
T14 Earthworks & track (17)	I12	395183	434704	Unnamed tributary to Greave Clough shown on 1:50k OS mapping	34 m	647 m ²	


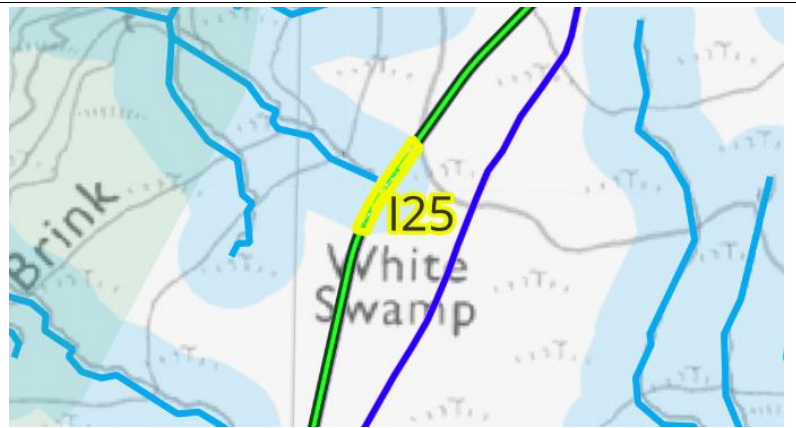
Infrastructure	Figure label	Grid Reference		Water feature name	Distance to water feature	Area/length of encroachment	Location (Figure 10.9)
		Easting	Northing				
S125017_FLOATED_TRACK & EW (18)	I13	395563	435026	Unnamed watercourse shown on 1:25k OS mapping	23 m	2217 m ²	
S125017_FOUNDED_TRACK & EW (19)	I15	396368	435133	Unnamed watercourse shown on 1:25k OS mapping	41 m	274 m ²	



Infrastructure	Figure label	Grid Reference		Water feature name	Distance to water feature	Area/length of encroachment	Location (Figure 10.9)
		Easting	Northing				
Track Earthworks (20)	16	395444	436358	Unnamed watercourse shown on 1:25k OS mapping	24 m	1050 m ²	
Track Earthworks (21)	17	395099	436086	Unnamed watercourse shown on 1:25k OS mapping	0 m	382 m ²	

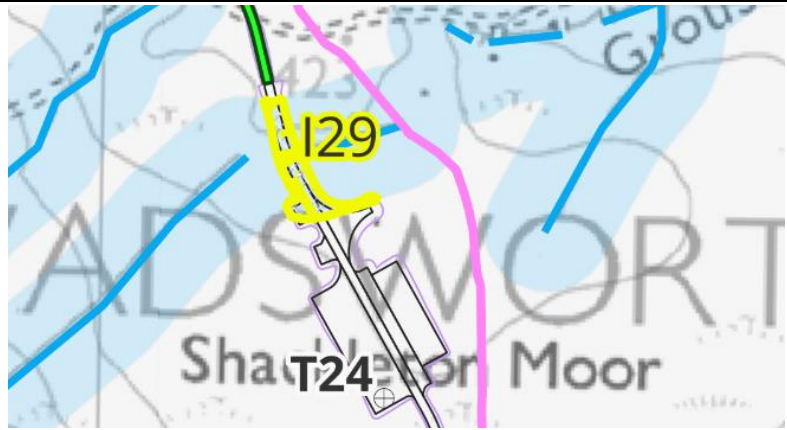
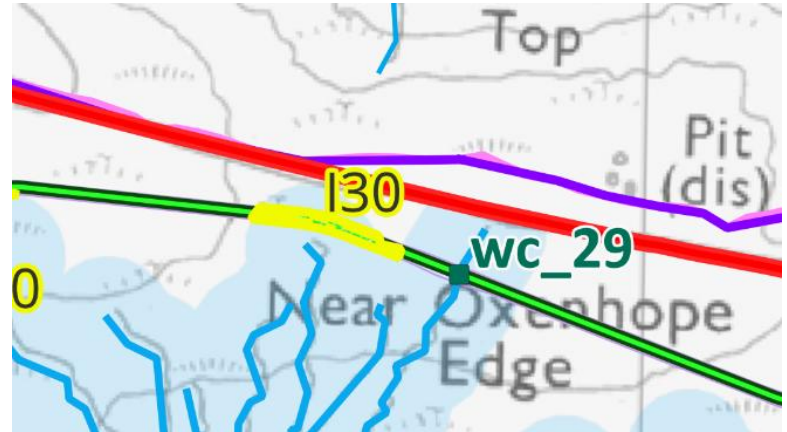
Infrastructure	Figure label	Grid Reference		Water feature name	Distance to water feature	Area/length of encroachment	Location (Figure 10.9)
		Easting	Northing				
C-SURFACE_access trackBorder (22)	I1	393845	440549	Hullown Beck shown on 1:25k OS mapping	12 m	1812 m ²	
C-SURFACE_Border (23)	I2	393629	439727	Ratten Clough shown on 1:25k OS mapping	41 m	116 m ²	


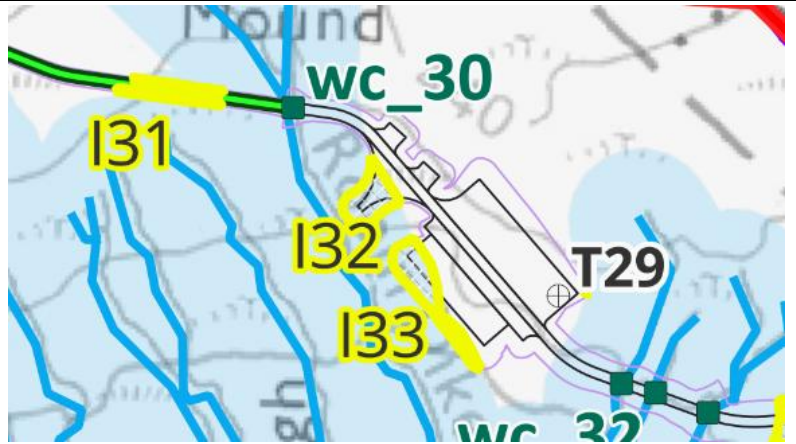
Infrastructure	Figure label	Grid Reference		Water feature name	Distance to water feature	Area/length of encroachment	Location (Figure 10.9)
		Easting	Northing				
Construction Compound, EW (25)	I4	395878	438185	Unnamed tributary to Smithy Clough shown on 1:25k OS mapping	16 m	2220 m ²	
S125017_FLOATED_TRACK & Earthworks (26)	I19	398317	434682	Unnamed watercourse shown on 1:50k OS mapping	29 m	714 m ²	

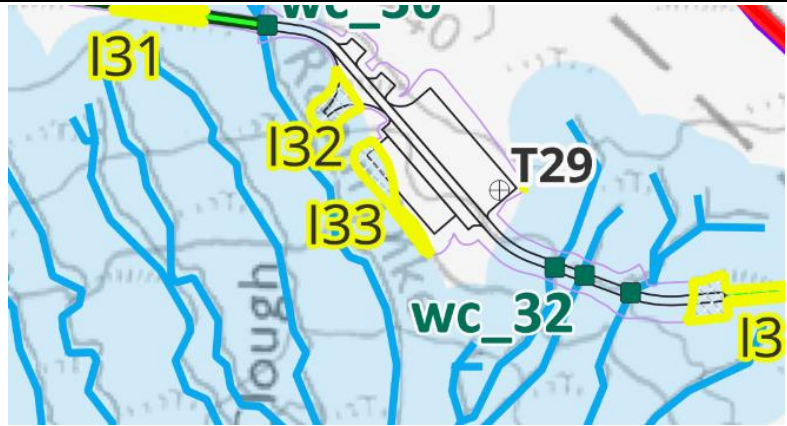
Infrastructure	Figure label	Grid Reference		Water feature name	Distance to water feature	Area/length of encroachment	Location (Figure 10.9)
		Easting	Northing				
S125017_FLOATED_TRACK & Earthworks (27)	I20	398462	434516	Unnamed watercourse shown on 1:50k OS mapping	17 m	2562 m ²	
T 28 TURBINE_BLADE_STORAGE_AREA & Earthworks (28)	I22	398410	434152	Unnamed watercourse shown on 1:25k OS mapping	32 m	688 m ²	

Infrastructure	Figure label	Grid Reference		Water feature name	Distance to water feature	Area/length of encroachment	Location (Figure 10.9)
		Easting	Northing				
T 28 Earthworks (29)	I24	398441	434046	Unnamed watercourse shown on 1:50k OS mapping	39 m	321 m ²	
S125017_FLOATED_TRACK & Earthworks (30)	I25	398081	433611	Unnamed watercourse shown on 1:25k OS mapping	8 m	998 m ²	

Infrastructure	Figure label	Grid Reference		Water feature name	Distance to water feature	Area/length of encroachment	Location (Figure 10.9)
		Easting	Northing				
S125017_FLOATED_TRACK & Earthworks (31)	I26	397934	433246	Unnamed tributary to Calf Hey Clough shown on 1:25k OS mapping	25 m	1131 m ²	
S125017_FLOATED_TRACK & Earthworks (32)	I28	398078	432802	Unnamed watercourse shown on 1:25k OS mapping	38 m	612 m ²	

Infrastructure	Figure label	Grid Reference		Water feature name	Distance to water feature	Area/length of encroachment	Location (Figure 10.9)
		Easting	Northing				
T24 & Earthworks (33)	I29	398156	432627	Unnamed watercourse shown on 1:25k OS mapping	4 m	2028 m ²	
S125017_FLOATED_TRACK & Earthworks (34)	I30	398747	434597	Unnamed watercourse shown on 1:25k OS mapping	17 m	1171 m ²	

Infrastructure	Figure label	Grid Reference		Water feature name	Distance to water feature	Area/length of encroachment	Location (Figure 10.9)
		Easting	Northing				
track Earthworks (35)	I31	399190	434453	Unnamed watercourse shown on 1:50k OS mapping	30 m	267 m ²	
T 29 Earthworks (36)	I32	399330	434382	Unnamed tributary to Hebden Water shown on 1:25k OS mapping	13 m	913 m ²	

Infrastructure	Figure label	Grid Reference		Water feature name	Distance to water feature	Area/length of encroachment	Location (Figure 10.9)
		Easting	Northing				
T29 blade storage area & Earthworks (37)	I33	399370	434321	Unnamed tributary to Paddock Beck watercourse shown on 1:25k OS mapping	27 m	1159 m ²	
Floated & founded track & EWEarthworks (38)	I34	399650	434238	Unnamed tributary to Paddock Beck watercourse shown on 1:25k OS mapping	20 m	1616 m ²	