

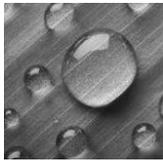
ELEMENTS ENERGY

**Plas Farm Hydro
Scheme**

**Hydromorphology
Survey**

February 2024

**Hydropower Consultancy &
Development**



Document Control

Scheme Name: Plas Farm Hydro Scheme

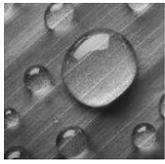
Client Name: Richard Bowen

Elements Energy Ltd Reference: PFH

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Document Control			
File Name:	PFH-DOC-Hydromorphology Survey Report-A-280224-DM		
	Original Rev A	Revision B	Revision C
Prepared by:	A. Cropper		
Approved by:	A. Cropper		
Date:	280224		
Status:	Approved		
Comments:			



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Plas Farm Hydro Scheme
Hydromorphology Survey

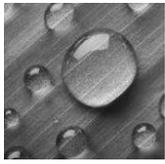
Survey Date & Time: 23th February 2024, 11am-4pm (20 Locations)

Conducted by: Richard Bowen

Flow Conditions: Moderate/ High

Hyrdomophology Survey

The hydromorphology survey was taken on the 23/02/24 between the 11:00am and 4:00pm. Twenty Locations were selected throughout the water course ranging from 500m up from the proposed intake down to the proposed outfall and one more 100m below outfall and 200m below outfall. Any further downstream was not able to be recorded due to access restrictions. For each location a grid reference was taken along with photographs of the location and where possible a photograph of the river bed sediment (all photographs include a stave or similar for scale).



Location 1 – SN 75877 03768



Figure 1: Downstream



Figure 2: Left Bank

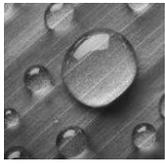
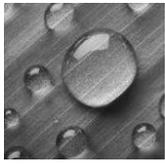


Figure 1: Right Bank



Figure 4: Upstream



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Figure 2: Sediment



Figure 3: Downstream



Figure 4: Left Bank

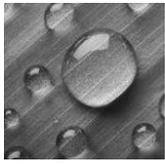


Figure 5: Right Bank



Figure 6: Upstream

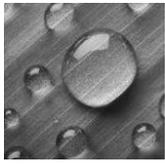


Figure 7: Sediment



Figure 8: Downstream



Figure 9: Left Bank

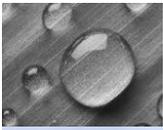


Figure 13: Right Bank



Figure 10: Upstream

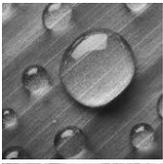


Figure 11: Sediment



Figure 12: Downstream



Figure 13: Left Bank

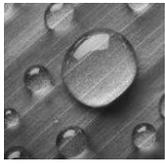


Figure 14: Right Bank



Figure 15: Upstream

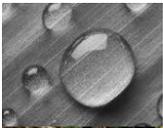


Figure 16: Sediment



Figure 17: Downstream



Figure 18: Left Bank

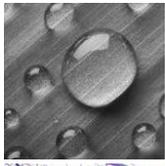


Figure 19: Right Bank



Figure 20: Upstream

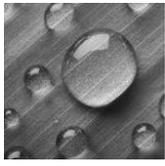
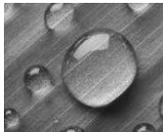


Figure 21: Sediment



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Location 6: SN 75410 03 943 (INTAKE)

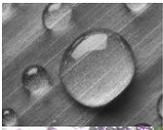
Note in lower flows a plunge pool is visible (about 400mm deep) at the bottom of the waterfall (seeing it is obscured but the whitewater in these photos due to the moderate/high flows)



Figure 22: Downstream



Figure 23: Left Bank



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Figure 24: Right Bank



Figure 25: Upstream

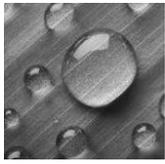


Figure 26: Sediment

Location 7– SN 75360 03942

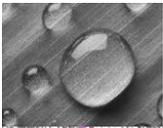


Figure 27: Downstream



Figure 28: Left Bank

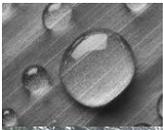


Figure 29: Right Bank



Figure 30: Upstream

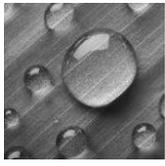


Figure 31: Sediment



Figure 32: Downstream



Figure 33: Left Bank

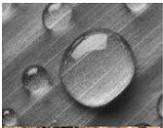


Figure 34: Right Bank



Figure 39: Upstream

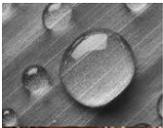


Figure 40: Sediment



Figure 41 Point of interest, waterfall halfway between location 8 and 9



Figure 42: Downstream



Figure 43: Left Bank

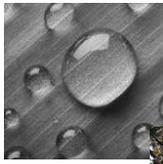


Figure 44: Right Bank



Figure 45: Upstream

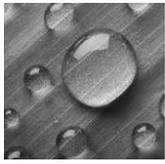
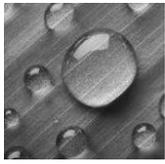


Figure 46: Sediment



Location 10 – SN 75215 03987



Figure 47: Downstream



Figure 48: Left Bank

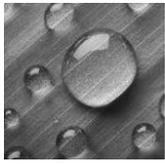


Figure 49: Right Bank



Figure 50: Upstream

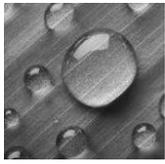


Figure 51: Sediment



Figure 52: Downstream



Figure 53: Left Bank

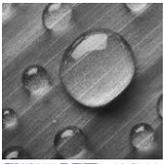


Figure 54: Right Bank



Figure 55: Upstream

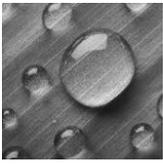


Figure 56: Sediment



Figure 57: Downstream



Figure 58: Left Bank

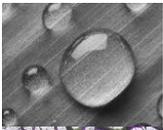
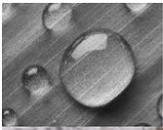


Figure 59: Right Bank



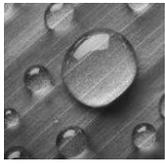
Figure 60: Upstream



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Figure 61: Sediment



Location 13 – SN 75061 03982



Figure 62: Downstream



Figure 63: Left Bank

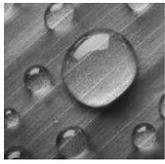


Figure 64: Right Bank



Figure 65: Upstream

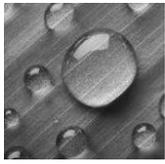


Figure 66: Sediment



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Location 14 – SN 75005 03978

Plas Farm Hydro Scheme
Hydromorphology Survey



Figure 67: Downstream



Figure 68: Left Bank

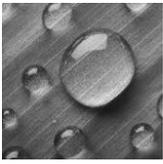


Figure 69: Right Bank



Figure 70: Upstream

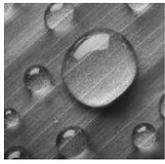


Figure 71: Sediment



Figure 72: Downstream



Figure 73: Left Bank

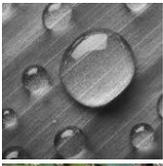


Figure 74: Right Bank



Figure 75: Upstream

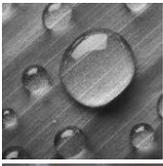


Figure 76: Sediment



Figure 77: Downstream



Figure 78: Left Bank

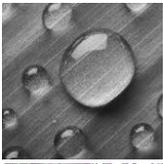


Figure 79: Right Bank



Figure 80: Upstream

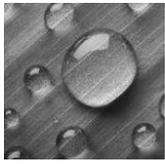
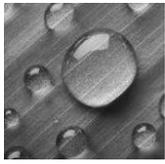


Figure 81: Sediment



Location 17 – SN 74825 03977 (Outfall Location)



Figure 82: Downstream



Figure 83: Left Bank

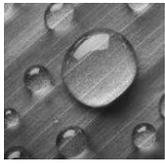


Figure 84: Right Bank



Figure 85: Upstream

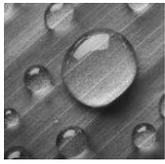
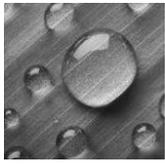


Figure 86: Sediment



Location 18 – SN 74749 03918



Figure 87: Downstream



Figure 88: Left Bank

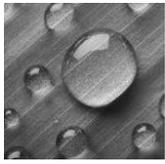


Figure 89: Right Bank



Figure 90: Upstream

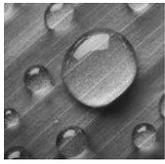
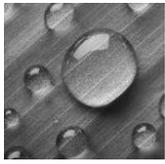


Figure 91: Sediment



Location 19 – SN 74726 03817



Figure 92: Downstream



Figure 93: Left Bank

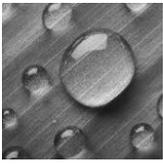


Figure 94: Right Bank



Figure 95: Upstream

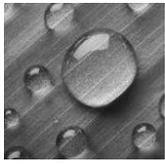
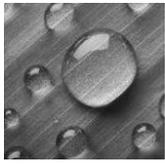


Figure 96: Sediment



Location 20 – SN 74709 03719



Figure 97: Downstream



Figure 98: Left Bank

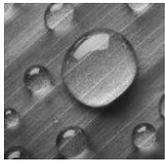


Figure 99: Right Bank



Figure 100: Upstream

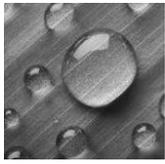


Figure 101: Sediment