

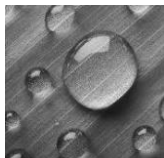
ELEMENTS ENERGY

**Plas Farm Hydro  
Scheme**

**Hydromorphology  
Survey**

**February 2024**

**Hydropower Consultancy &  
Development**



## Document Control

**Scheme Name:** Plas Farm Hydro Scheme

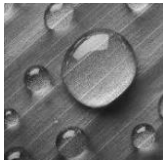
**Client Name:** Richard Bowen

**Elements Energy Ltd Reference:** PFH

**Elements Energy Ltd**

**Tel:** 07717811107

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



# ELEMENTS ENERGY

Plas Farm Hydro Scheme  
Hydromorphology Survey

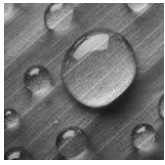
**Survey Date & Time:** 23<sup>th</sup> February 2024, 11am-4pm (20 Locations)

**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**

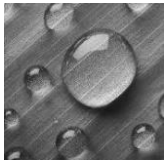




**Figure 1: Right Bank**



**Figure 4: Upstream**



**Figure 2: Sediment**





**Figure 3: Downstream**



**Figure 4: Left Bank**





# ELEMENTS ENERGY

## Plas Farm Hydro Scheme Hydromorphology Survey



**Figure 5: Right Bank**



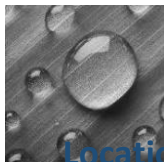
**Figure 6: Upstream**





**Figure 7: Sediment**



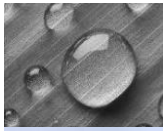


**Figure 8: Downstream**



**Figure 9: Left Bank**



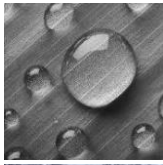


**Figure 13: Right Bank**



**Figure 10: Upstream**





**Figure 11: Sediment**





Figure 12: Downstream



Figure 13: Left Bank





**Figure 14: Right Bank**



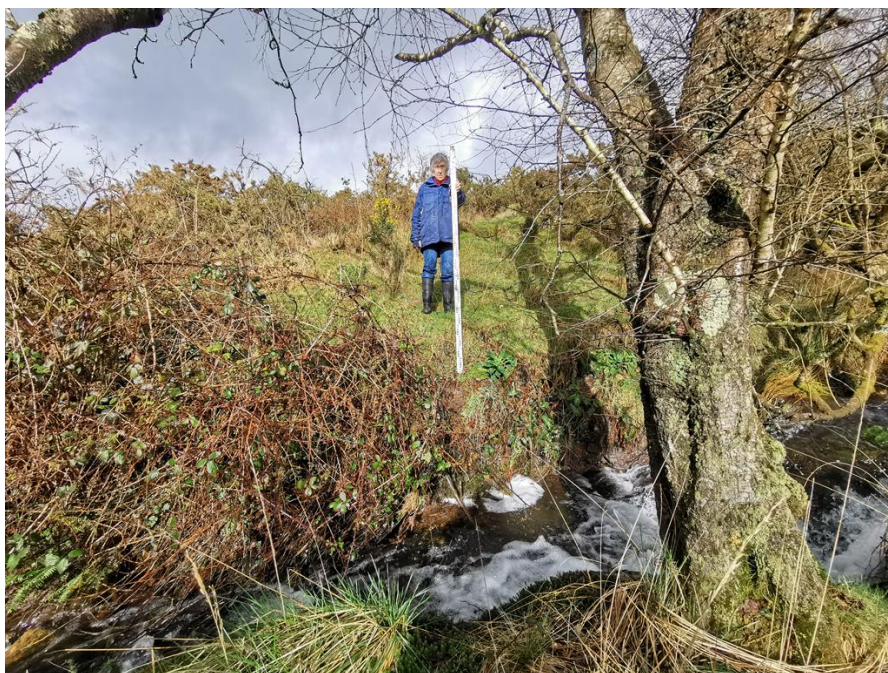
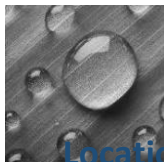
**Figure 15: Upstream**





**Figure 16: Sediment**



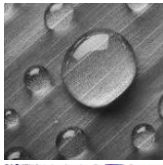


**Figure 17: Downstream**



**Figure 18: Left Bank**





**Figure 19: Right Bank**



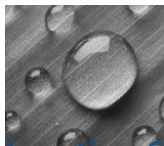
**Figure 20: Upstream**





**Figure 21: Sediment**





# ELEMENTS ENERGY

Plas Farm Hydro Scheme  
Hydromorphology Survey

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

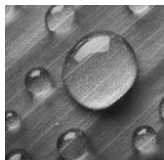




**Figure 24: Right Bank**



**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**



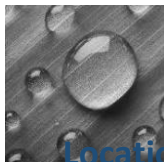
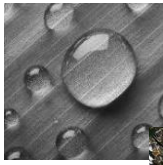


Figure 42: Downstream



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



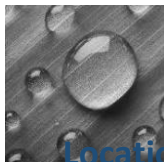
Figure 50: Upstream





**Figure 51: Sediment**





# ELEMENTS ENERGY

Location 11 – SN 75162 03992

Plas Farm Hydro Scheme  
Hydromorphology Survey

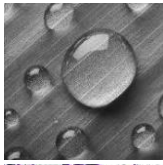


**Figure 52: Downstream**



**Figure 53: Left Bank**





**Figure 54: Right Bank**



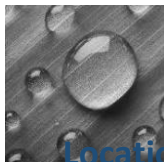
**Figure 55: Upstream**





**Figure 56: Sediment**





**Figure 57: Downstream**



**Figure 58: Left Bank**





**Figure 59: Right Bank**



**Figure 60: Upstream**





**Figure 61: Sediment**





**Location 13 – SN 75061 03982**



**Figure 62: Downstream**



**Figure 63: Left Bank**



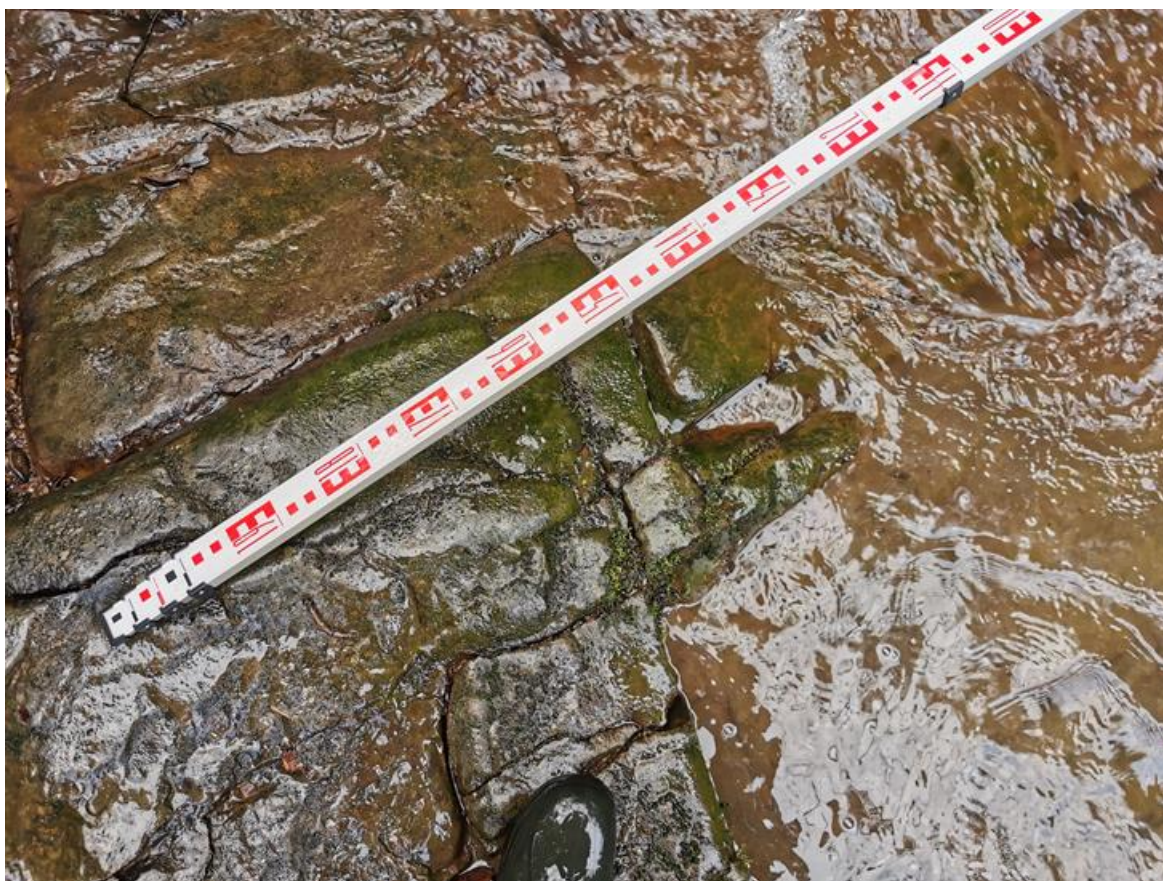


**Figure 64: Right Bank**



**Figure 65: Upstream**





**Figure 66: Sediment**



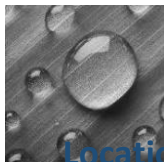
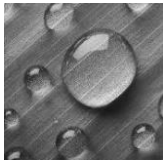


Figure 67: Downstream



Figure 68: Left Bank





**Figure 69: Right Bank**



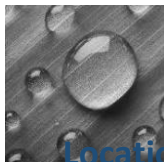
**Figure 70: Upstream**





**Figure 71: Sediment**



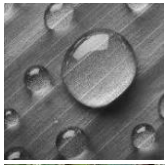


**Figure 72: Downstream**



**Figure 73: Left Bank**





**Figure 74: Right Bank**



**Figure 75: Upstream**





Figure 76: Sediment



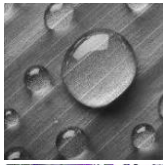


**Figure 77: Downstream**



**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**



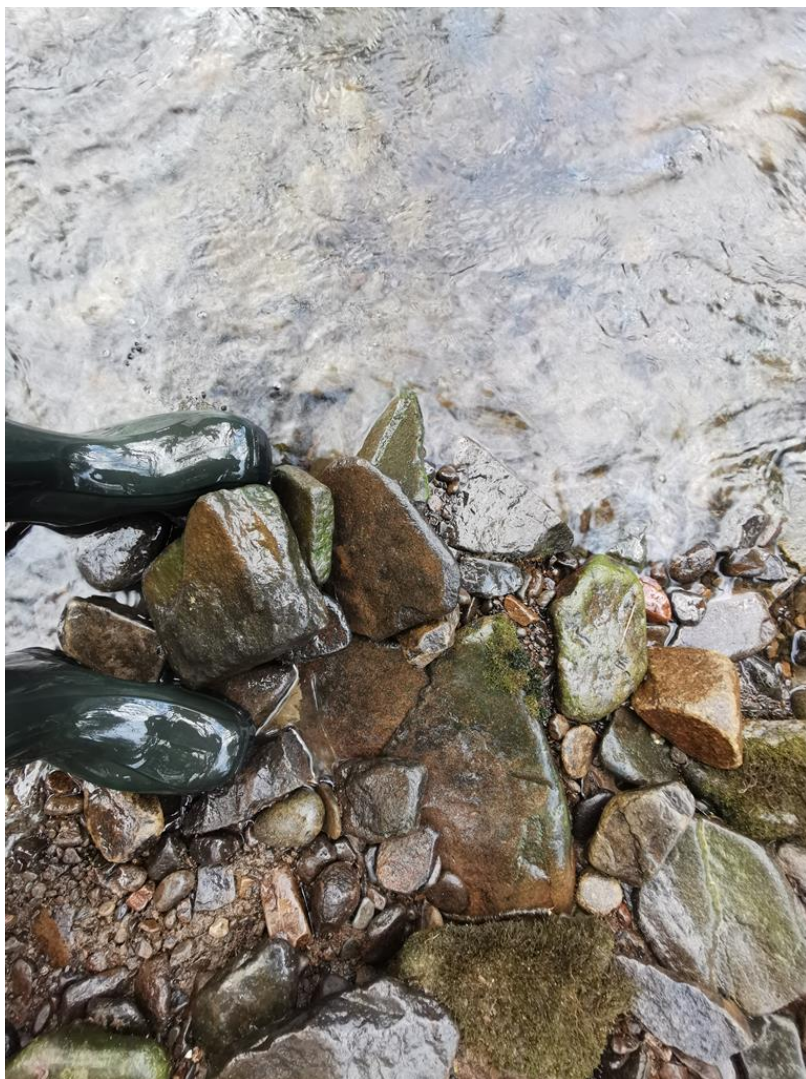


**Figure 89: Right Bank**



**Figure 90: Upstream**





**Figure 91: Sediment**





**Location 19 – SN 74726 03817**

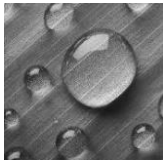


**Figure 92: Downstream**



**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**



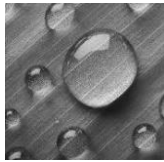


**Figure 99: Right Bank**



**Figure 100: Upstream**





**Figure 101: Sediment**