

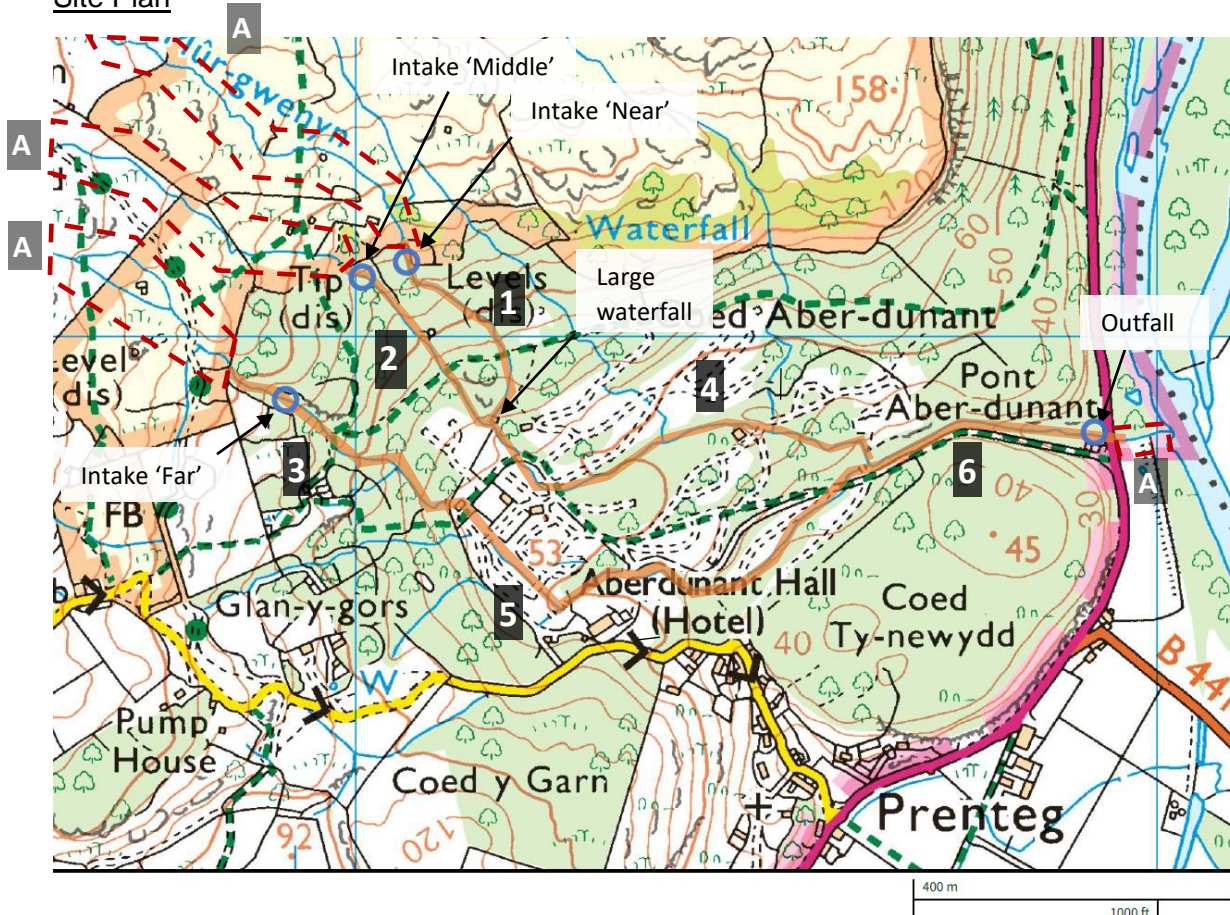
## Aberdunant Hall Holiday Park

### Proposed Micro-Hydroelectric Power Generation Scheme

#### Geomorphology photosurvey

Surveyed 01/03/2023 (except photos on page 3 taken 22/11/2022). Survey conditions: low flow, after unusually dry February with between 20-33% of typical rainfall<sup>1</sup>.

#### Site Plan



#### Photosurvey sections indicated on site plan above

1. Afon Mûr-gwenyn
2. Unnamed tributary 1 above confluence with Afon Mûr-gwenyn
3. Unnamed tributary 2 above Holiday Park
4. Afon Mûr-gwenyn middle reach
5. Unnamed tributary 2 within Holiday Park
6. Afon Mûr-gwenyn lower reaches

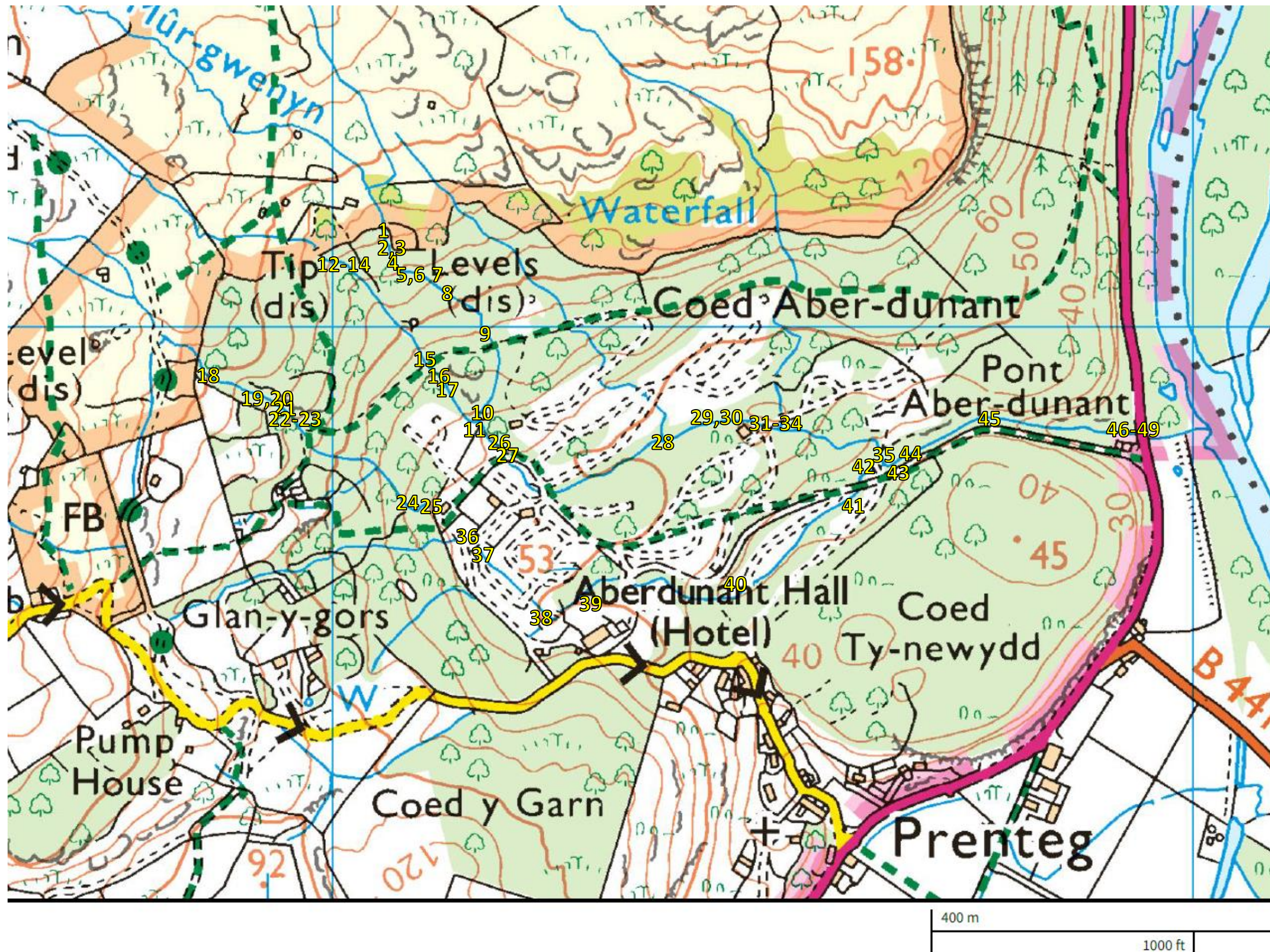
Note: Sections marked A indicated on plan not surveyed as that is outside the ownership boundary and applicant has no permission to access the land or to locate structures there.

<sup>1</sup> Source: <https://www.metoffice.gov.uk/about-us/press-office/news/weather-and-climate/2023/february-and-winter-stats>



### Photo key

Numbers  
on plan  
correspond  
to photo  
numbers in  
document





**Section 1: Afon Mûr-gwenyn**



1. Grid Reference: SH 58059 42114

Waterfall c. 10m upstream of proposed intake

Note: watercourse not surveyed further upstream as no permission to access or use that land.



## Section 1: Afon Mûr-gwenyn

Proposed Intake 'Near'



2. Grid Reference: SH 58067 42097

Approximate line of weir shown with yellow dashed line



3. Grid Reference: 58067 42097

Weir located at natural fall in watercourse in order to create limited impoundment volume (shown with orange arrows)



## Section 1: Afon Mûr-gwenyn



4. Grid Reference: SH 58070 42080

Proposed header tank location 20m downstream of Intake 'Near'



5. Grid Reference: SH 58085 42068

Chute 35m downstream of Intake 'Near'



## Section 1: Afon Mûr-gwenyn



6. Grid Reference: SH 58085 42068  
Chute 35m downstream of Intake 'Near' continues (looking downstream)



7. Grid Reference: SH 58120 42074. In this area the river has a number of channels which are not all shown on OS mapping  
70m downstream of intake 'Near', c. 5m waterfall



## Section 1: Afon Mûr-gwenyn



8. Grid Reference: SH 58153 42027  
125m downstream



9. Grid Reference: SH 58179 41994  
175m downstream



## Section 1: Afon Mûr-gwenyn



10. Grid Reference: SH 58172 41900  
250m downstream, waterfalls of over 2.5m and 4m



11. Grid Reference: SH 58170 41892  
260m downstream, confluence of unnamed tributary 1 with Afon Mûr-gwenyn

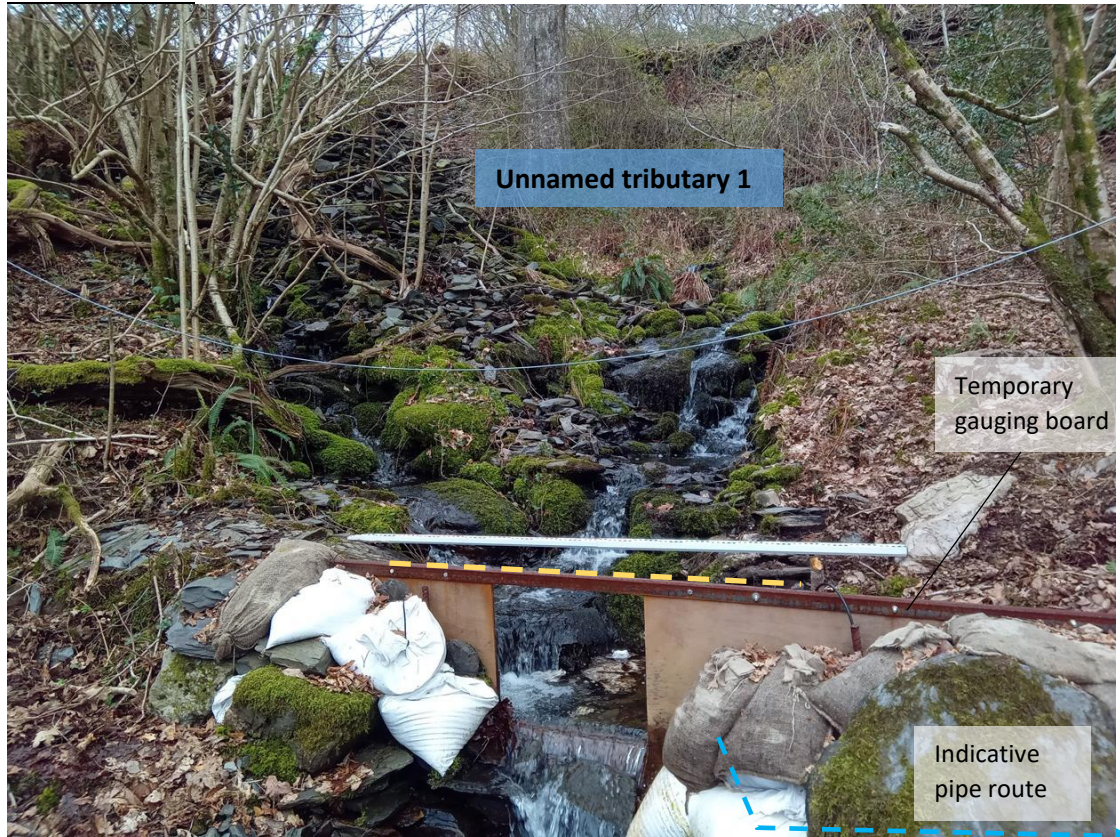


Section 2: Unnamed tributary 1 above confluence with Afon Mûr-gwenyn

**Section 2: Unnamed tributary 1 above confluence with Afon Mûr-gwenyn**

Note: watercourse not surveyed upstream of Intake 'Middle' as no permission to access or use that land.

Intake 'Middle'



12. Grid Reference: SH 58005 42080  
Approximate line of weir shown with yellow dashed line



Section 2: Unnamed tributary 1 above confluence with Afon Mûr-gwenyn



13. Grid Reference: SH 58005 42080  
Weir located at natural fall in watercourse in order to create limited impoundment volume (shown with orange arrows)



14. Grid Reference: SH 58005 42080  
General view looking downstream from Intake 'Middle' – start of steep descent



Section 2: Unnamed tributary 1 above confluence with Afon Mûr-gwenyn



15. Grid Reference: SH 58106 41963  
175m downstream, chute in excess of 3.0m



16. Grid Reference: SH 58129 41938  
200m downstream of Intake 'Middle'



Section 2: Unnamed tributary 1 above confluence with Afon Mûr-gwenyn



17. Grid Reference: SH 58135 41927  
225m downstream of Intake 'Middle', waterfall in excess of 2.0m



**Section 3: Unnamed tributary 2 above Holiday Park**



18. Grid Reference: SH 57854 41948  
60m upstream of Intake 'Far'  
Watercourse not surveyed further upstream as no permission to access or use that land.



### Section 3: Unnamed tributary 2 above Holiday Park

#### Intake 'Far'



19. Grid Reference: SH 57914 41924  
Approximate line of weir shown with yellow dashed line



20. Grid Reference: SH 57914 41924

Weir located at natural fall in watercourse  
in order to create limited impoundment  
volume (shown with orange arrows)



Section 3: Unnamed tributary 2 above Holiday Park



21. Grid Reference: SH 57930 41919

30m downstream, start of steep decline  
(looking downstream)



22. Grid Reference: SH 57944 41905  
60m downstream, chute and waterfall in excess of 3.0m



### Section 3: Unnamed tributary 2 above Holiday Park



23. Grid Reference: SH 57944 41905  
60m downstream, view looking downstream



24. Grid Reference: SH 58095 41789  
250m downstream of Intake 'Far'



Section 3: Unnamed tributary 2 above Holiday Park



25. Grid Reference: SH 58110 41796  
270m downstream of Intake 'Far', watercourse enters culvert



**Section 4: Afon Mûr-gwenyn middle reaches**



26. Grid Reference: SH 58177 41878  
20m downstream of large waterfall



27. Grid Reference: SH 58181 41870  
Bridge 25m downstream of large waterfall



#### Section 4: Afon Mŵr-gwenyn middle reaches



28. Grid Reference: SH 58382 41872  
Tributary joining main watercourse 250m downstream of large waterfall



29. Grid Reference: SH 58433 41890  
Small tributary draining into main watercourse 300m downstream of large waterfall



#### Section 4: Afon Mŵr-gwenyn middle reaches



30. Grid Reference: SH 58433 41890  
300m downstream of large waterfall



31. Grid Reference: SH 58506 41885  
Bridge with culvert, 350m downstream of large waterfall



#### Section 4: Afon Mûr-gwenyn middle reaches



32. Grid Reference: SH 58506 41885  
Culvert under bridge



33. Grid Reference: SH 58506 41885  
Outfall from culvert - 0.65m drop



#### Section 4: Afon Mûr-gwenyn middle reaches



34. Grid Reference: SH 58517 41882  
Tributary joining main watercourse 375m downstream of large waterfall



35. Grid Reference: SH 58640 41845  
Afon Mûr-gwenyn 525m downstream of large waterfall just before confluence with Section 5



**Section 5: Unnamed tributary 2 within Holiday Park**



36. Grid Reference: SH 58161 41754  
Tributary joining watercourse just inside Holiday Park



37. Grid Reference: SH 58170 41744  
Watercourse after emerging from culvert, 325m downstream of Intake 'Far'



Section 5: Unnamed tributary 2 within Holiday Park



38. Grid Reference: SH 58252 41663  
Tributary joining watercourse 450m downstream of Intake 'Far'



39. Grid Reference: SH 58296 41693  
Watercourse 500m downstream of Intake 'Far' (photographed from top of steep bank)



Section 5: Unnamed tributary 2 within Holiday Park



40. Grid Reference: SH 58465 41687  
Watercourse 700m downstream of Intake 'Far'



41. Grid Reference: SH 58601 41804  
Watercourse 800m downstream of Intake 'Far'



Section 5: Unnamed tributary 2 within Holiday Park



42. Grid Reference: SH 58637 41841  
Watercourse just before it joins Afon Mûr-gwenyn 850m downstream of Intake 'Far'



**Section 6: Afon Mûr-gwenyn lower reaches**



43. Grid Reference: SH 58641 41843  
Confluence of section 5 (left hand side) and Afon Mûr-gwenyn



44. Grid Reference: SH 58659 41847  
1.7m waterfall, 25m downstream of Section 4 & Section 5 confluence



## Section 6: Afon Mŵr-gwenyn lower reaches



45. Grid Reference: SH 58755 41896  
125m downstream of Section 4 & Section 5 confluence

### Outfall location



46. Grid Reference: SH 58938 41876  
Watercourse at outfall location, 300m downstream of Section 4 & Section 5 confluence



## Section 6: Afon Mŵr-gwenyn lower reaches



47. Grid Reference: SH 58938 41876  
Turbine house and outfall arrangement



48. Grid Reference: SH 58938 41876  
Close up of river bed at outfall location showing slate shard composition. A4 clipboard for scale



## Section 6: Afon Mûr-gwenyn lower reaches



49. Grid Reference: SH 58938 41876

At outfall location, looking downstream toward road bridge.

Note: watercourse not surveyed further downstream as no permission to access or use that land.