

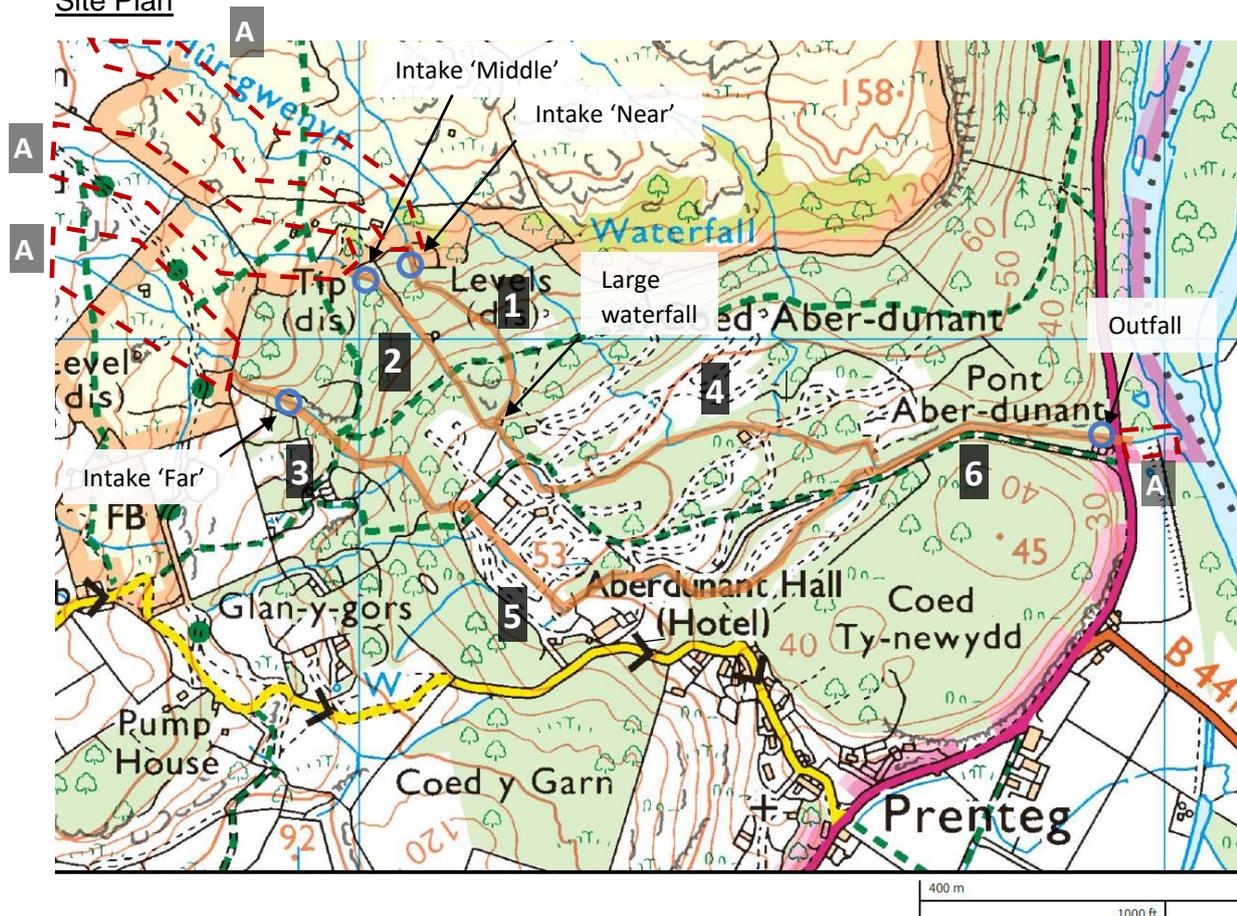
Aberdunant Hall Holiday Park

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 rainfall¹.

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.

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

Section 1: Afon Mûr-gwenyn

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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'



Approximate line of weir shown with yellow dashed line



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

Section 1: Afon Mûr-gwenyn



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



Chute 35m downstream of Intake 'Near'

Section 1: Afon Mûr-gwenyn



Chute 35m downstream of Intake 'Near' continues (looking downstream)



70m downstream of intake 'Near', c. 5m waterfall

Section 1: Afon Mûr-gwenyn



125m downstream



175m downstream

Section 1: Afon Mûr-gwenyn



250m downstream, waterfalls of over 2.5m and 4m



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'



Approximate line of weir shown with yellow dashed line

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



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



General view looking downstream from Intake 'Middle' – start of steep descent

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



175m downstream, chute in excess of 3.0m



200m downstream of Intake 'Middle'

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



225m downstream of Intake 'Middle', waterfall in excess of 2.0m

Section 3: Unnamed tributary 2 above Holiday Park



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'



Approximate line of weir shown with yellow dashed line



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



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



60m downstream, chute and waterfall in excess of 3.0m

Section 3: Unnamed tributary 2 above Holiday Park



60m downstream, view looking downstream



250m downstream of Intake 'Far'

Section 3: Unnamed tributary 2 above Holiday Park



270m downstream of Intake 'Far', watercourse enters culvert

Section 4: Afon Mûr-gwenyn middle reaches

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20m downstream of large waterfall



Bridge 25m downstream of large waterfall

Section 4: Afon Mûr-gwenyn middle reaches



Tributary joining main watercourse 250m downstream of large waterfall



Small tributary draining into main watercourse 300m downstream of large waterfall

Section 4: Afon Mûr-gwenyn middle reaches



300m downstream of large waterfall



Bridge with culvert, 350m downstream of large waterfall

Section 4: Afon Mûr-gwenyn middle reaches



Culvert under bridge



Outfall from culvert - 0.65m drop

Section 4: Afon Mûr-gwenyn middle reaches



Tributary joining main watercourse 375m downstream of large waterfall



Afon Mûr-gwenyn 525m downstream of large waterfall just before confluence with Section 5

Section 5: Unnamed tributary 2 within Holiday Park



Tributary joining watercourse just inside Holiday Park



Watercourse after emerging from culvert, 325m downstream of Intake 'Far'

Section 5: Unnamed tributary 2 within Holiday Park



Tributary joining watercourse 450m downstream of Intake 'Far'



Watercourse 500m downstream of Intake 'Far' (photographed from top of steep bank)

Section 5: Unnamed tributary 2 within Holiday Park



Watercourse 700m downstream of Intake 'Far'



Watercourse 800m downstream of Intake 'Far'

Section 5: Unnamed tributary 2 within Holiday Park



Watercourse just before it joins Afon Mûr-gwenyn 850m downstream of Intake 'Far'

Section 6: Afon Mûr-gwenyn lower reaches

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Confluence of section 5 (left hand side) and Afon Mûr-gwenyn



1.7m waterfall, 25m downstream of Section 4 & Section 5 confluence

Section 6: Afon Mûr-gwenyn lower reaches



125m downstream of Section 4 & Section 5 confluence

Outfall location



Watercourse at outfall location, 300m downstream of Section 4 & Section 5 confluence

Section 6: Afon Mŷr-gwenyn lower reaches



Turbine house and outfall arrangement



Close up of river bed at outfall location showing slate shard composition. A4 clipboard for scale

Section 6: Afon Mûr-gwenyn lower reaches



At outfall location, looking downstream toward road bridge.

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