

Determination Report

Report under the Water Resources Act 1991 (as amended) and the Environment Act 1995 of an application for a new full abstraction licence number and a new impoundment licence numbers WA/056/0064/0003 & WA/056/0046/0004

In this document, Natural Resources Wales ('NRW') means the Natural Resources Body for Wales ('the NRW') established by Article 3 of the Natural Resources Body for Wales (Establishment) Order 2012.

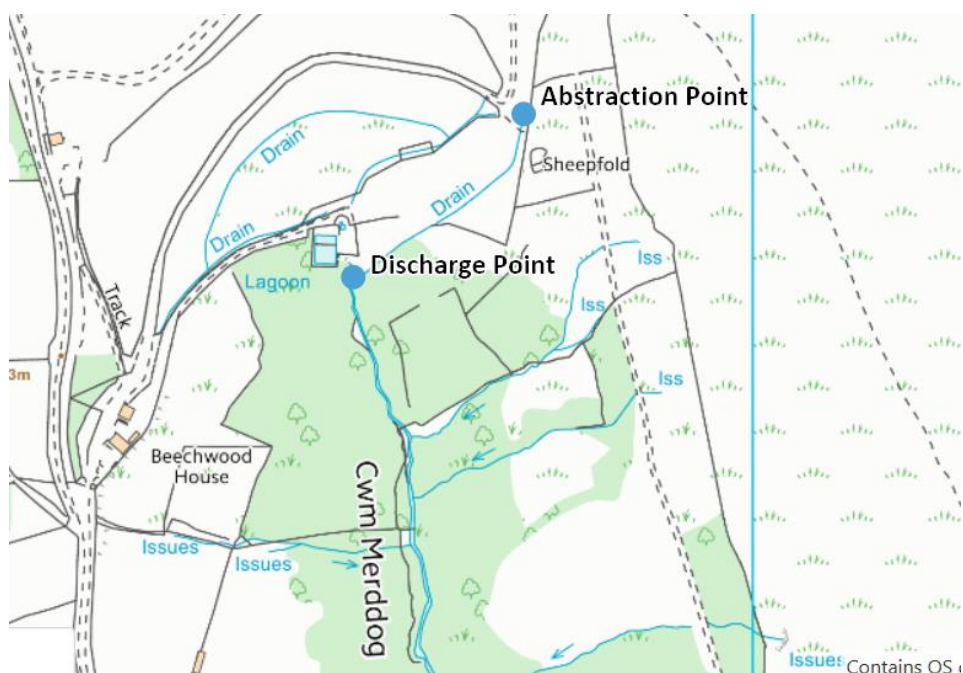
Please note that on 01 April 2013, the functions previously conducted by the Countryside Council for Wales ('CCW'), Forestry Commission Wales ('FCW'), and the functions of the Environment Agency within Wales ('EA/EAW'), (CCW,FCW and EA/EAW together 'the Legacy Bodies') were transferred to NRW.

In determining this application, NRW has exercised its duties and powers under the Water Resources Act 1991 (as amended) and the Environment Act 1995 and has taken account of guidance issued by the Legacy Bodies where relevant.

NRW has decided to issue the licence.

1. Summary of the proposal

The applicant has applied to install and operate a new hydropower scheme on a tributary of the Nant Merddog at the Silent Valley landfill site in Ebbw Vale. The electricity generated will be used to power an electric pump to take leachate from the landfill site into a leachate pond, which then drains to a sewer in Cwm Merddog. This electric pump will replace diesel pumps currently being used for this purpose. Please see location map below:



The scheme will consist of a new concrete intake structure at National Grid Reference (NGR) SO 18801 06833 built on an existing concrete lined water channel, a gravity feed pipe, a power house (not considered for the abstraction and impounding licences but required as part of the scheme to operate), tailrace and outfall structure.

The intake structure is designed to physically secure a Q95 residual flow (3 litres per second) via a Hands-off Flow notch and an abstraction of 100% of the available flow above Q95. Please see below for the proposed abstraction rates and quantities:

545,572.8 cubic metres per year
1,494.72 cubic metres per day
62.28 cubic metres per hour
17.3 litres per second

All abstracted water will be returned to the Merddog at NGR SO 18801 06833, approximately 200m downstream of the abstraction point.

1.1 Departures from application forms

Application type: Originally, only an application for an abstraction was made. As the applicant confirmed a new impoundment would be created, a subsequent impoundment application was later made (ref: PAN-0036987).

Abstraction quantities: The abstraction quantities originally submitted did not calculate correctly based on abstracting all year (365 days). The applicant resubmitted a new WRD which had updated abstraction quantities. These quantities/rates also did not add up correctly so NRW proposed updated abstraction quantities – please see below table summarising these changes:

	Original application	New application (submitted 30/11/2018)	Finalised confirmed quantities (via email on 07/03/2019)
cubic metres per year	261,965	545,565	545,572.8
cubic metres per day	1,494.7	1,494.7	1,494.72
cubic metres per hour	62.2	62.2	62.28
litres per second	17.3	17.3	17.3

Rights of Access: The original land ownership boundary map provided with the application did not have the abstraction and discharge point marked and therefore did not satisfy requirements. A revised land ownership boundary map was provided with the specified points marked on 30/11/2018 (please see DMS).

Photo survey: The original photo survey submitted with the application was missing information. An updated photo survey was provided with the application which included the requested amendments / additions on 30/11/2019 which NRW consider satisfactory (saved to DMS).

Photomontage image: No photomontage image was provided with the original application. The applicant provided a photomontage image on 30/11/2019 which NRW consider satisfactory (saved to DMS).

Application contact: The application contact changed in the initial stages of the application – (from Dave Ware to Sarah Williams) this was outlined in an email on 05/11/2019 (saved to DMS) and also on the updated Form WRA provided on 30/11/2019.

Calculations: No calculations were provided as evidence that the Hands-off-Flow notch would secure Q95. These were provided by the applicant on 04/12/2018.

Pipeline diameter: The applicant confirmed the pipeline diameter would be 160mm external diameter rather than the 175 mm stated on the application forms / design drawings (please see email dated 12/03/2019, saved to DMS).

Drawings: The technical drawings for the impoundment structure originally submitted were considered insufficient and missing significant amounts of information. The applicant provided updated drawings on 30/11/2018 which were considered satisfactory (saved to DMS). However, due to changes in design (see pipe diameter above), further updated drawings were requested to reflect these changes. Please see below table which summarises original and finalized drawings:

Original Drawings (dated 29/10/2018)	Finalized Drawings (dated 18/03/2019)
Elevation drg 01 Intake Weir	SILENT VALLEY HDYRO INTAKE WEIR – ELEVATION DGR 01C
Plan drg 02 Intake Weir	SILENT VALLEY HYDRO INTAKE WEIR – PLAN DRG 02C
	SILENT VALLEY HYDRO INTAKE WEIR – SECTION A-A REV 03C

2. Application details

Administrative details	
Applicant name and address	Blaenau Gwent County Borough Council Municipal Offices Civic Centre Ebbw Vale NP23 6XB
Application contact details*	Email: Sarah.williams@blaenau-gwent.gov.uk Phone: 01495 356005
Application reference number	Abstraction: PAN-003665 Impoundment: PAN-003987
New licence number	Abstraction: WA/056/0064/0003 Impoundment: WA/056/0064/0004
Catchment	Ebbw and Lwyd
NRW Area	South East
Date application received as complete	03/11/2018
Relevant date	03/11/2018
Determination date	30/03/2019
Agreed extended	NA

determination date	
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*Although not stated as the application contact, this Local Authority scheme had input from The Carbon Trust (Welsh Government). The contact for this was Brian Drysdale (email: brian.drysdale@carbontrust.com).

Abstraction & impoundment details	Proposal
Location of abstraction & impoundment	Silent Valley Waste Site, Ebbw Vale, Blaenau Gwent, NP23 6PZ
Source of supply	Inland water (stream) known as unnamed tributary of Nant Merddog
Point of abstraction & impoundment (NGR)	SO 18801 06833
Purpose of abstraction & impoundment	Hydro-power
Period of abstraction	All year
Period of impoundment	All year
Quantities and rates:	
cubic metres per day	1,494.72
cubic metres per year	545,572.8
litres per second	17.3
Means of abstraction	Intake works and a gravity feed pipe of an external diameter not exceeding 160 millimetres controlled by a spear valve.
Means of impoundment	New concrete weir
Measurement of abstraction	Kilo-watt hours generated

3. Case history

No formal pre-application enquiry was received for this scheme.

Date	Event
29/10/2018	Application for an abstraction licence submitted to NRW
19/11/2018	Application invalidated
30/11/2018	Requested further / revised supporting information and application for an impoundment licence received by NRW

4. Validation of the application

The applicant has submitted all the required information for a complete and valid application.

	Yes/No	Comments
Is the applicant entitled to apply for the necessary licence?	Yes	A land ownership map with abstraction and discharge points marked on has been submitted by the applicant (dated 30/11/2019, saved to DMS)
Were any supplementary reports submitted or has any additional information been requested by Natural	Yes	The applicant submitted the following in support of their application: Appendix 2 - Calculations

Resources Wales?		<p>Appendix 3 – Discharge Channel Photograph Annotated Site Map Word Appendix 1 – Titles for drawings V2 Appendix 4a – Site ownership boundary map V2 Elevation drg 01A Plan drg 02A Section A-A drg 03 Map of impoundment point Photomontage of intake weir a SV Geomorphology survey 261018 HoF Calculations (email)</p> <p>The following was submitted on 18/03/2019 SILENT VALLEY HYDRO – ELEVATION DRG 01C SILENT VALLEY HYDRO – PLAN DRG 02C SILENT VALLEY HDYRO – SECTION A-A DRG 03C</p>
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5. Water Resources (Environmental Impact Assessment Regulations) 2003 as amended by the Water Resources (Environmental Impact Assessment) (England and Wales) (Amendment) Regulations 2006.

The applicant has consulted Natural Resources Wales and it has confirmed that the proposal is not a “relevant project”, as defined by the Regulations. No environmental statement is therefore required by Natural Resources Wales to be submitted in respect of this application and project proposal.

6. Justification of requirements and water efficiency

The turbine design flow of 17.3 l/s is equal to the applicant’s Qmean estimate. The Q95 hands off flow (HoF) proposed is also in accordance with the applicant’s estimate of 3l/s. NRW’s estimates of the Qmean and Q95 differ from that proposed by the applicant, however due to both the nature of the catchment (potentially more permeable than estimated) and the scaling of flows from a neighbouring catchment, NRW recommend that the applicant’s flow estimates are used as these are more precautionary.

The applicant proposes to abstract up to 100% of water available above the HoF. Although this is not in line with NRW’s Hydropower Guidance Notes (HGN2 Flow standards guidance) in this instance a 100% abstraction is considered acceptable (please see section 10.2 for more information).

The proposed annual quantity is equivalent to 365 times the maximum daily quantity proposed which is also in accordance with HGN2. Originally this was not the case and the applicant was requested to update either the abstraction quantities being applied for or confirm the number of days the scheme will be abstracting water. The applicant confirmed the scheme will be abstracting for 365 days and updated abstraction quantities accordingly.

The net head for this scheme has been determined by the applicant as 57m. The applicant has based the electrical output on a maximum flow rate of 17.3l/s, and states that the scheme will have a maximum output of 6.1kilowatts (kW). The following equation gives an estimate of the power (P) that can be generated (in kilowatts) based on the abstraction rate (Q), acceleration due to gravity (g) and head difference:

$$P = Q \times g \times h$$

Where: Q = 0.0173 cubic metres per second g = 9.81 metres per second squared h = 57 metres

$$P = 0.0173 \times 9.81 \times 64.8 = 9.67 \text{ kW}$$

System efficiency is the product of the individual efficiencies of the scheme, and for this proposal based on the power output calculation above, the design system efficiency has been calculated as 63.1% (6.1/9.67*100) which is reasonable. The NRW considers the quantities of water applied for as fully justified and reasonable.

Condition 9.8 (abstraction) & 4.6 (Impoundment): Three-year self-destruct conditions have been included on both licences which means that both licences will effectively expire from 3 years of the date of issue unless abstraction/scheme construction has commenced. This is to prevent water resources being tied up unnecessarily.

The impoundment is required to facilitate the abstraction and control the permitted abstraction/residual flow regime.

7. Advertising

Application was advertised	Comments
Date when advertised	24/01/19
Name of local paper	Gwent Gazette
Notice served to: Statutory Water Undertaker (SWU)	Welsh Water (28/01/2019), no response received
Number of representations received in writing	None
Representation Decision Statement	NA

8. Internal consultation

Internal consultation was initially sent out on 20/12/2019 – please see ICEPack saved to DMS.

Consultee (name, date and summary of comments)
Hydrology
Date: 28/12/2018
Comments: Happy with proposal
Fisheries
Date: 02/01/2019
Comments: Happy with proposal
Biodiversity
Date: 09/01/2019
Comments: Happy with proposal

Protected Species
No comments received
Designated Sites
Date: 14/01/2019 – 16/01/2019
Comments: Happy with proposal
NRM – Environment Officer
Date: 14/01/2019 – 30/01/2019
Comments: Happy with proposal
Geomorphology
No comments received
Development and Flood Risk
Date: 27/12/2018
Comments: Happy with proposal
Planning Liaison
Date: 07/01/2019
Comments: Happy with proposal (based on further consultation with technical specialists)
NRP
Date: 08/01/2019
Comments: Happy with proposal
Bryophytes
Date: 17/01/2019
Comments: Happy with proposal
Geoscience*
Date: 01/03/2019
Comments: Happy with proposal
Pollution Prevention & Control*
Date: 04/03/2019
Comments: Happy with proposal
Site Officer*
Date: 05/03/2019
Comments: Happy with proposal

*Geoscience, PPC and the Site Officer were consulted following concerns raised by Planning Liaison regarding pollution. Please see emails saved to DMS.

9. External consultation

It was not necessary to refer the proposal to statutory consultation bodies.

In accordance with its obligations, Natural Resources Wales has consulted the following bodies about the proposal:

Consultation Bodies (name, date and summary of comments)
Local Authority
Date: 28/01/2019
Comments: The Environmental Health department at the Local Authority, Blaenau Gwent County Borough Council were consulted due to the following local wildlife sites identified within 100m of the proposed hydro-power site: Mynydd Cam-y-Cefn & Cefyn-yr-Arail. No comments were received.

10. Technical assessment of the proposal

10.1 Water Framework Directive and CAMS resource assessment, and licensing strategy

Category	Comments/Name
Catchment Abstraction Management Strategy Area (CAMS)	South East Valley CAMS
CAMS Assessment Point (AP)	AP11 Ebbw Fawr u/s Ebbw Fach
Current resource status and licensing strategy (CAMS or other strategy) for this location	In the area where the site is located, water is not available at flows lower than Q50. However, as this hydro-power scheme is non-consumptive with all water being returned to the watercourse, water availability does not need to be considered. Impoundments are dealt with on a case-by-case basis.
WFD Integrated Water Body (name/ID)	GB109056032900 Ebbw R - source to conf Ebbw Fach R *note: the location of the proposed hydro-power scheme is not within a designated WFD river waterbody – as a result the WFD river Catchment has been used.
WFD Ecological Status	Moderate

The proposal is not likely to have an impact on the CAMS status or WFD status as the following conditions will be imposed on the abstraction and impoundment licences:

Abstraction licence:

- Maximum abstraction quantities.
- Assessment and recording of abstracted quantities.
- Time limit
- Residual flow
- Fish screening (intake)
- Authorised discharge point location and discharge quantity
- Construction, operation and maintenance in accordance with the submitted specifications and drawings
- Flow maintenance during construction and subsequent maintenance

Impoundment licence:

- Construction, operation and maintenance in accordance with the submitted specifications and drawings, and prevention of leakage and obstruction
- Flow maintenance during construction, subsequent maintenance and times when abstraction is not operating
- Authorised period of construction

Natural Resources Wales have completed a Water Framework Directive Assessment for the proposed new activity (see DMS, dated 06/03/2019). NRW are satisfied that there will be no deterioration in ecological status to the identified waterbodies as a result of the abstraction authorised by the licence.

10.2 Hydrology

The abstraction will take place on an un-named tributary of the Nant Merddog which is a concrete lined channel. Water exits an underground concrete pipe (at NGR SO 18799 06833) into the concrete channel before it is abstracted. All abstracted water will be returned into the tributary of the Nant Merddog 200m downstream of the abstraction point.

The depleted reach is entirely concrete lined up to the proposed discharge point at NGR SO 186655 06691. There are no in-flows within the depleted reach.

10.2.1 Borehole construction, pump test, analysis and discussion

As this application is for a surface water abstraction, this section is not relevant.

10.2.2 Impact on flows

Abstraction/residual flow regime: The applicant has not applied in line with an abstraction regime contained within NRW's Hydropower Guidance Notes, HGN2. They have proposed a 100% abstraction above Q95 (equal to 3 l/s), up to a maximum instantaneous abstraction rate of 17.3 l/s which is equal to their assessment of Qmean. NRW are in agreement with their proposed abstraction regime. Although the proposal does not adhere to Hydropower guidance; due to the low ecological value of the depleted a 100% abstraction is acceptable at this location.

Construction, operation and maintenance: The hydropower scheme will be constructed, operated and maintained and be kept free from leakage and obstruction at all times in accordance with the drawings submitted to ensure that the abstraction/residual flow regime is physically secured in a failsafe manner. This will reduce any risk that build-up of debris may occur and affect the ability of the intake works to secure the correct and authorised flow regime. Conditions will be included on both licences accordingly, together with conditions to clearly define the term 'hydropower scheme' and 'intake works' to ensure the licence is clear and enforceable.

Purpose restriction: The Licence Holder will be required to ensure that as far as is reasonably practicable, no water flows through the turbine if they are unable to generate electricity. This is to ensure that abstraction only takes place for the authorised purpose and that the scheme is synchronised. This will prevent depletion in the river when generation is not taking place.

Return of water: In order to ensure that the proposal can be classed as non-consumptive, a condition will be included on the abstraction licence requiring all abstracted water to be returned to the un-named tributary of the Nant Merrdog at SO 18655 06691 proposed.

Construction/diversion works and maintenance: A condition will be included on the abstraction and impoundment licences stating that the Licence Holder shall ensure that during construction works and any subsequent maintenance (and when abstraction for the purpose of power generation is not taking place – impoundment only), all flow shall be allowed to pass downstream unchanged in quantity and quality at all times to protect downstream flows.

Compliance: Conditions will be included on the impoundment licence whereby the Licence Holder must contact the NRW 28 days (calendar) prior to commencement of construction works for this scheme. This is in order to ensure the scheme is constructed to the agreed specifications and to allow the arrangement of any site visit if required. The Licence Holder must contact the NRW within 28 days (calendar) before the scheme is commissioned or becomes operational. This is for the NRW's compliance process to begin and to allow a final inspection visit if required. A condition will be placed on the abstraction licence whereby the NRW will be notified in writing within seven days (calendar) after abstraction for generation first starts. This will ensure that the NRW's compliance process begins. The reason we require notification before the scheme becomes operational and then again 7 (calendar) days after abstraction begins is because the time between the scheme being operational and abstraction for generation actually taking place is unknown.

10.3 Impact on the ecology

The concrete channel where the depleted reach will be located will be of limited ecological potential, however the photo survey provided by the applicant shows that some naturalisation has evolved with gravel in the channel and an assemblage of bryophytes and lower walls visible on the concrete channel.

The bryophytes present are common species that are resilient to fluctuating water levels and therefore flow variability does not need to be protected in this instance (please see email dated 17/01/2019, saved to DMS).

10.4 Impact on fisheries

Zoning: As discussed, the abstraction regime applied for is not in line with NRW's Hydropower Guidance (HGN 2). Fisheries have confirmed this is acceptable in this instance due to there being no fish interest at this site.

Screening: A 10mm mesh screen will be included at the intake and a 10mm outfall screen will be included on the outfall (as proposed by the applicant). This will be primarily to protect the abstraction structures. Fisheries have confirmed there is no requirement to condition intake and outfall screening on the licence due to there being no fish present (please see email dated 12/03/2019, saved to DMS).

Fish passage: There is no requirement for fish passage at this site.

Eel passage: There is no requirement for eel passage at this site.

Construction: In-river working restrictions do not apply at this site.

10.5 Impact on water quality

There are no licensed abstractions or active consented discharges within the depleted reach or upstream of the abstraction. Therefore, there are no water quality impacts

expected due to this proposal. No change in water quality and/or temperature is anticipated as a result of this proposal.

10.6 Protected rights and lawful users

No licenced abstractions or deregulated abstractions were identified upstream (100m) or within the depleted reach created by this proposal. Therefore, no protected rights have been identified as being at risk of derogation as a result of this proposal.

We have considered lawful users during determination of this proposal by:

- requesting the applicant makes us aware of any local abstractions, on the application forms;
- consulting a local officer on whether they are aware of any lawful users or local issues we need to consider; and
- advertising the application in the local newspaper and on our website to allow any lawful users we may be unaware of, to contact us and make us aware of their use of water.

No lawful users were identified upstream or downstream of this proposal, during the determination of the application. Therefore, lawful uses of water have been considered and appropriate measures to safeguard them have been taken.

Screening did identify the below permitted activities (industrial) in the vicinity of the scheme:

Permit number UP3335SN at NGR SO 18460 06550 (approx. 54m north west of the scheme). Permit number MP3835SV at NGR SO 18640 06710 (approx 24m north west of the discharge point).

These permits are in relation to the Silent Valley Waste Site Landfill Operation and the associated Leachate Treatment and Disposal Facility. The Site Officer for this site has been consulted and has confirmed this proposal will have no anticipated impact on the existing permitted site operations. The scheme will be used as part of an improvement condition at the site.

10.7 Conservation impacts (designated and/or wetland sites)

Nearest Conservation Sites (Distance or downstream) and Potential Impacts			
Designation Types	Name of Site	Potential Impact	Distance & Direction
National Conservation Designations			
Special Area Conservation (SAC)	Severn Estuary (Wales)	No	Downstream of the depleted reach and outside the vicinity of the scheme
Ramsar	Severn Estuary (Wales)	No	Downstream of the depleted reach and outside the vicinity of the

			scheme
Special Protection Area (SPA)	Severn Estuary (Wales)	No	Downstream of the depleted reach and outside the vicinity of the scheme
Site of Special Scientific Interest (SSSI)	Cwm Merrdog Woodland	No	Within depleted reach
	Gwent Levels – St Brides River Usk (Lower Usk) Severn Estuary		Downstream of the depleted reach and outside the vicinity of the scheme
Other Conservation Designations			
National Nature Reserve (NNR)	Newport Wetlands	No	Downstream of the depleted reach and outside the vicinity of the scheme
Local Nature Reserve (LNR)	Silent Valley	No	Within depleted reach
Ancient Woodland	Ancient Semi Natural Woodland	Yes/No	At discharge point
	Multiple records identified		Downstream of the depleted reach and outside the vicinity of the scheme
Listed Buildings	Multiple identified	No	Downstream of the depleted reach and outside the vicinity of the scheme
Historic Monuments	Multiple identified	No	Downstream of the depleted reach and outside the vicinity of the scheme

Scheduled Ancient Monuments (SAMs)	Castell Glas Castle Mound Marine Colliery Pumping Engine	No	Downstream of the depleted reach and outside the vicinity of the scheme
World Heritage Sites	None identified	-	-
Heritage Coast	None identified	-	-
ESA	None identified	-	-
Local Wildlife Site	Mynydd Cam-y-Cefn Cefyn-yr-Arail	No	Within 100m of the depleted reach created by the scheme
	Multiple records identified		Downstream of the depleted reach and outside the vicinity of the scheme
National Landscape Designations			
National Parks	None identified	No	-
Area of Outstanding Natural Beauty (AONB)	None identified	No	-
Heritage Coast	None identified	Yes/No	-
Others			
Restoring Sustainable Abstraction Programme (RSAP)	None identified	-	-
Protected Species	Multiple identified	No	Downstream of the depleted reach and outside the vicinity of the scheme

SAC / SPA / RAMSAR:

- The Severn Estuary (Wales) SAC / SPA / RAMSAR was identified during screening but is located at the Estuary, a significant distance downstream of the proposed abstraction and impoundment which is located in the headwaters of the catchment. As all water will be returned any impact on the estuary has been ruled out. As the impoundment is located high up in the catchment, on a concrete lined tributary, impacts on the estuary have been ruled out

SSSI:

- There are no anticipated impacts on The Severn Estuary (Wales) SSSI due to reasons stated above
- Gwent Levels and River Usk (lower Usk) were also identified during screening but are also located significant distance downstream of the proposed hydro-power site at

the estuary. As all abstracted water will be returned a significant distance upstream of these SSSI and the impoundment is located high in the catchment on a concrete channel, any impact has been ruled out.

- Cwm Merrdog Woodland SSSI was identified as being 1km downstream of the proposed abstraction point and within the depleted reach for the scheme. Please refer to section 10.8

National Nature Reserve: no possible impacts as the site is located over 10km south of the proposed abstraction and all abstracted water will be returned to the watercourse within 210m of the abstraction point

Ancient Woodland: – there is no possible pathway for impacts on Ancient woodlands, all water will be returned to the watercourse upstream of any ancient woodlands.

Historic Monuments: – there is no possible pathway for impacts on historic monuments. All water will be returned to the watercourse upstream of all historic monument records identified.

Listed Buildings: there is no possible pathway for impacts on listed buildings. All water will be returned to the watercourse upstream of all listed building records identified.

Scheduled Ancient Monument: there is no possible pathway for impacts on SAMS. All water will be returned to the watercourse upstream of all SAMS records identified.

Local Wildlife Sites: The Local Authority were consulted regarding potential impacts upon Mynydd Cam-y-Cefn & Cefyn-yr-Arail sites but no concerns were raised.

Protected Species – no concerns have been raised, please refer to section 10.3 and 10.4. No records are located within the depleted reach created by the proposal.

10.8 Habitats Directive Regulations and CRoW Act

Natural Resources Wales is of the opinion that the proposal is not likely to have an any impact on sites designated under the Habitats Regulation or the CRoW Act.

The potential for the project to affect the following Natura 2000 sites was considered, but can be ruled out without further consideration:

- The Severn Estuary (Wales) SAC
- The Severn Estuary (Wales) SPA
- The Severn Estuary (Wales) RAMSAR

These sites were identified during screening but are located at the Estuary, a significant distance downstream of the proposed abstraction and impoundment which is located in the headwaters of the catchment. As all water will be returned and the impoundment is located high up in the catchment, on a concrete lined tributary, impacts on the estuary have been ruled out.

Cwm Merddog Woodlands SSSI is located within the depleted reach. The inclusion of a hands-off flow equal to Q95 , 3 l/s, ensures that flow is maintained in the concrete channel which flows through this designated site. NRW are satisfied that this proposal will not cause significant impact to this designated site. An Appendix 4 Assessment has been completed and signed by conservation officer (see DMS 29/01/2019).

10.9 Other considerations

Consideration	Impact Yes/No	Comments
Flooding	No	No concerns have been raised, permissions may be required for the turbine. The relevant authority for this is Blaenau Gwent County Borough Council.
Archaeology	No	There is no anticipated impact upon SAMs identified. Please see section 10.7.
Recreation/amenity	No	No concerns have been raised.
Subsidence and desiccation	No	No concerns have been raised.

10.10 Other consents that might be required or related to this proposal

Consents	Yes/No	Comments
Environmental Permit for water discharge activity	No	No Environmental Permit for a water discharge activity is required for this proposal.
Flood Risk Activity Permit (FRAP)	Yes	Permissions may be required for the impoundment and/or turbine house. The relevant authority for this is Blaenau Gwent county Borough council
Other	Yes	Planning permission may be required from the Local Authority (Blaenau Gwent County Borough)

10.11 Representations (and Decision Statement if applicable)

No representation has been made therefore there is no requirement for a Decision Statement.

11 Cost benefits and environmental mitigation or gain

Options considered	Option 1: issue the licences as applied for Option 2: issue the licences with appropriate conditions in accordance with policy and guidance Option 3: refuse application
Preferred option	Option 2: issue the licences with appropriate conditions in accordance with policy and guidance
Reason for choosing preferred option	The costs and risks to the environment associated with this proposal do not make a refusal a reasonable or appropriate course of action. Conditions, such as residual flow and maximum abstraction rate are considered necessary and adequate to protect the ecology of the depleted reach. All conditions placed on the licence are in accordance with current legislation and policy.
Assessment of likely benefits and costs of proposed option to:	
Water Resources/ The Environment	There is low risk of environmental damage occurring as a result of this proposal. The inclusion of flow conditions will ensure there is enough water for the environment.

	<p>The proposal accords with water resources policy and is sustainable.</p> <p>The site currently uses diesel pumps to pump leachate away from the site. Following the construction of hydro-power scheme, green energy electric pumps will replace these which are more environmentally friendly.</p>
The applicant	<p>The applicant will benefit from the availability of water for their operation.</p> <p>The applicant will incur the costs of installing and maintaining the method of abstraction and of measuring the volumes of water they abstract.</p> <p>The applicant will have to pay the application fee and advertising costs that apply.</p>
Natural Resources Wales	<p>Natural Resources Wales will incur the cost of determining the applications and enforcing the licences. These costs will be partly recovered through the application charge and annual charges, where applicable.</p> <p>In determining the licences in accordance with local and national policy, Natural Resources Wales is fulfilling its duties as a regulator.</p>
The economic and social well being of the rural community.	<p>No adverse effects upon the social and economic well being of local communities in the rural area are perceived as a result of this proposal.</p>

12. Biodiversity and sustainable development

The principles of sustainable development are embodied in the conditions attached to the licences.

13. Time limit

Abstraction: A time limit has been included in accordance with the CAMS common end date for the catchment and Natural Resources Wales's approved policy.

Impoundment: A time limit has not been included because the licence applied for is to impound water.

14. Special agreements

No special agreement has been requested or considered appropriate for this proposal.

15. Measurement of water abstracted

Flow Measurement Analysis (FMA) will be applied to the abstraction licence in accordance with the Hydropower Guidance Note 11. The Licence Holder will be required to determine the quantities of water abstracted by reference to the kilowatt-hours generated, as

measured by a kilowatt-hours meter multiplied by a site specific conversion factor determined using the calculation checklist attached to the abstraction licence.

In accordance with current guidance, records of monthly electrical output and the corresponding quantity of water abstracted will need to be submitted to the NRW on an annual basis (within 28 days of 31 March in each year) or within 28 days of the NRW requesting the records in writing. The Licence Holder will also be required to keep all records for at least 6 years and to make them available for inspection during all reasonable hours.

16. Considerations of SMNR – Compliance with our General Purpose

We are satisfied that this decision is compatible with our general purpose of pursuing the sustainable management of natural resources in relation to Wales and applying the principles of sustainable management of natural resources.

17. Conclusion and recommendations

Full and due consideration has been given to any representations made, and due regard has been taken of protected rights and other lawful interests.



The principles of sustainable development are embodied in the conditions attached to the licence.

The conditions incorporated on the licence are considered to be necessary and reasonable in the light of the available and presented evidence. The conditions are also considered to be consistent with appropriate standards for enforcement by Natural Resources Wales.

I therefore recommend approval of the application (as modified) and issue of Licence numbers WA/056/0064/0003 and WA/056/0064/0003 with with the conditions as drafted.

I therefore recommend refusal of the application for the following reasons:

18. AUTHORISATION

Report by: Jennifer Pocock Position: Permitting Officer	Date: 21 st March 2019	Signed: 
Audit by: Liz Cole Position: Permitting Officer	Date: 21 st March 2019	Signed:
Authorised by: Position: Permitting Team Leader	Date: 21 st March 2019	Signed: 

APPENDIX 1 – FULL APPLICANT DETAILS AND FINANCE MEMO

1. Enforcement – Criticality Class

Highly Critical

2. The following new licence abstract water has been granted

Licence number: Abstraction: WA/056/0064/0003 Impoundment: WA/056/0064/0004
Licence Holder name: Blaenau Gwent County Borough council Municipal Offices Ebbw Vale NP23 6XB
Registered address: Blaenau Gwent County Borough council Municipal Offices Ebbw Vale NP23 6XB
Correspondence address: As above

Area	South East
CAMS	South East Valleys
LEAP	EASLP - Eastern Valleys LEAP

3. PALS Purpose

	Primary Code	Secondary Code	Use/Loss Level
Abstraction	P: Production of Energy	ELC: Electricity	240: Hydro-electric Power Generation – Very Low
Impoundment	P: Production of Energy	ELC: Electricity	490: Unknown (Impounding)

4. Financial charge calculation

Issue date	21 March 2019
Effective date	21 March 2019
Expiry date	31 March 2029 (abstraction)
Permanent licence (Yes/No)	Yes
Two part tariff offered (Yes/No)	NA
Other agreement (Yes/No)	No
Chargeable (Yes/No)	No
Reason if non chargeable	<5MW power production

If authorised, the licence will be exempt from the payment of annual charges being one of the categories under Paragraph 6.2.1 of Natural Resources Wales’s Charges Scheme.