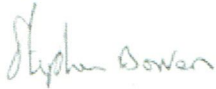


Subject: FW: Malt House Garthmyl BN/2017/1123/
Date: Thursday, 30 August 2018 at 14:49:48 British Summer Time
From: Steve Bowen
To: 'Steve Barker'
CC: 'Philip Humphreys'

Steve,

For inclusion with NRW application.

Regards



STEPHEN BOWEN
FRICS, Dip.Proj.Man (RICS), IMAPS

BOWEN PROPERTIES LTD

- Merchants House, High Street, Newtown, Powys, SY16 2NR
- Tel: 01686 625455

From: Steve Andrews (CSP - Building Control) [mailto:stephen.andrews@powys.gov.uk]
Sent: 30 August 2018 14:43
To: Steve Bowen
Cc: Carwyn Jones (CSP - Environmental Health)
Subject: Malt House Garthmyl BN/2017/1123/

Good afternoon Steve.

I write to confirm our site meeting of 15th August 2018 at the above site.

It was agreed that your proposals for dealing with the foul drainage from the development located within the curtilage of the property would be acceptable to building control if consent from the NRW is obtained for reducing the distance of the treatment plant outlet pipes to less than ten meters from the canal. This is on the basis that all the remaining criteria to comply with building regulations are met and suitable porosity tests are forwarded and a suitable design agreed.

Thank you very much
Dio!ch yn fawr iawn

Steve Andrews BSc. MCIQB, FRACS.
Building Control Surveyor.
Chartered Construction Manager.
Tel: 07876 216732
Email: stephen.andrews@powys.gov.uk

Powys Building Standards Consultancy.
Powys County Council
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Mid Wales & Shropshire
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www.metrorod.co.uk

Email: metrorodmidwales@hotmail.co.uk

Bowen Consultants Limited
Merchants House
High Street
Newtown
Powys
SY16 2NR

Attn: Steve Bowen

21st February 2018

Re: Malt House, Garthmyl, Montgomery, SY15 6RS

Please find the results for the above site, as per drain tracing of the septic tank outlet.

Scope of Work:

Supply all plant and labour to enable the following works:

Drain Tracing.

We attended the above site on Wednesday 14th February 2018, where we carried out drain tracing from the septic tank outlet connection to the soakaway, this was then located coming out in the canal alongside the property.

We therefore recommend that a treatment plant is installed at the above site, as this would be more environmental friendly, to discharge in to a water course.

Yours Sincerely

Adrian Taylor (Operations Director)

Metro Rod (Mid Wales & Shropshire)

Greenscape Environmental Ltd

BOWEN

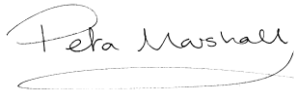


**ENVIRONMENTAL APPRAISAL
INCLUDING
PHASE 2 SURVEYS FOR BATS**

**MALTHOUSE
GARTHMYL
MONTGOMERY
SY15 6RS**

JULY 2017

1827 001R

Report by Peta Marshall BSc (hons)

Report Classification:		Environmental Appraisal	
Report Status:		Final	
Report Reference:		1827 001R	
	Name	Signature	Date
Report by:	P. Marshall BSc(Hons) MCIEEM PIEMA Principal Consultant		July 2017
Reviewed by:	L. Maggs BSc(hons) Lead Consultant		July 2017
Final check by:	B. Jones BSc(hons) MSc Consultant		July 2017

Greenscape Environmental Ltd: Registered Office Long Acres, Lyth Bank, Shrewsbury, Shropshire SY3 0BW. Company Reg no 5364283

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The report should be read in its entirety.

Questions arising from the survey report should be directed to the author of this report who will be pleased to clarify any technical issues raised.

Whilst the surveyors make every reasonable effort, Greenscape Environmental Ltd cannot guarantee that all protected species have been identified and survey results are definitive. Many species are cryptic and transitional in habit.

Reports are considered valid for 2 years for planning purposes after which time further survey information may be required.

Table of Contents

1	SUMMARY.....	4
1.1	PURPOSE OF THE REPORT.....	4
1.2	METHODOLOGY	4
1.3	KEY ISSUES	4
1.4	IMPACTS AND MITIGATION MEASURES	4
1.5	CONCLUSIONS	4
2	INTRODUCTION.....	5
2.1	PROJECT BACKGROUND.....	5
2.2	PURPOSE OF THE REPORT.....	5
2.3	PLANNING POLICY AND LEGISLATION	5
2.4	SITE CONTEXT AND LOCATION.....	6
3	METHODOLOGY	7
3.1	DESK STUDY	7
3.2	FIELD SURVEY- METHODOLOGY.....	7
3.3	SPECIES	8
3.4	CONSTRAINTS OF THE SURVEY	9
4	SITE DESCRIPTION	10
4.1	DESKTOP SURVEY.....	10
4.2	PHASE 1 DESCRIPTION AND OBSERVATIONS	10
4.3	PHASE 2 SURVEYS FOR BATS.	13
5	EVALUATION OF RESULTS	14
5.1	POTENTIAL IMPACTS ON DESIGNATED SITES AND RECORDED SPECIES.....	14
5.2	HABITATS ON SITE	14
5.3	ECOLOGICALLY IMPORTANT SPECIES	14
6	IMPACTS AND MITIGATION MEASURES.....	16
6.1	PROTECTION OF CANAL	16
6.2	BATS.....	16
7	CONCLUDING REMARKS	18
	APPENDICES	19
A	ORDNANCE SURVEY MAP ABSTRACT	
B	SITE PLAN.....	
C	BIBLIOGRAPHY	

Table of Figures

Figure 1.	An OS map showing the site. Scale 1:3000. Map courtesy of Magic Maps	6
Figure 2.	A map showing the JNCC phase 1 habitat classification codes for the site.....	10
Figure 3:	Hole in gable end visible.....	11
Figure 4:	Interior of the roof features and gable end	11
Figure 5:	Flat roofed section	12
Figure 6:	Canal	12
Figure 7.	Schwegler 3FF bat box.....	16

1 Summary

1.1 Purpose of the Report

Greenscape Environmental Ltd was commissioned by Mr S Bowen to conduct a survey to determine the presence of protected species and potential for the damage or destruction of habitats of ecological value as part of the planning application for the conversion of the former malthouse at Garthmyl to residential. The project will involve internal alterations and the building being reroofed.

This document outlines the potential impacts as ascertained from the ecological assessment, and recommends measures to avoid, reduce or manage negative effects.

1.2 Methodology

The appraisal of the site included a desktop survey of the area, reviews of other surveys conducted in the area by Greenscape Environmental and a phase 1 environmental appraisal and phase 2 surveys for bats.

The phase 1 ecological appraisal was undertaken at the site, OS grid reference SO1940 9907 on 14th June 2017 by Peta Marshall. Phase 2 bat activity surveys were conducted on the 19th June 3rd and 17th July with the assistance of B Jones.

1.3 Key Issues

The site is immediately adjacent to an arm of the Montgomery Canal SAC and SSSI) and this will need protecting from damage or disturbance during development.

The building is of solid brick construction with a plane unlined slate roof. No internal evidence of bats could be seen, with the whole roof visible throughout. A small gap was seen under the ridge tile on one aspect of the building. This was examined during phase 2 surveys for bats as the building was so close to water. No emergence of bats was recorded. The conversion to residential can occur without an offence being committed.

The canal was examined for potential for water vole but none was found in the close vicinity of the building. No negative impact is expected.

1.4 Impacts and Mitigation Measures

Care will be taken to protect the canal with the erection of a temporary bund to capture dust and debris.

It is recommended that the site is enhanced with the erection of a bat box post development.

1.5 Conclusions

It is considered the development can proceed without the loss of habitat of significant value and without the loss of favourable conservation status of any protected species. As there is no evidence of protected species within and around the development site, there is no requirement to address the three tests under Regulation 53 of the Conservation of Habitats and Species Regulations 2010).

The SAC will be protected throughout development. There are no further ecological constraints to the development as planned.

2 Introduction

This report has been compiled by Peta Marshall who has over 10 years' experience conducting ecological appraisals. It has been reviewed in line with Greenscape's Quality Management System. Peta is a member of Chartered Institute of Ecology and Environmental Management (CIEEM) and as such is bound by the code of professional conduct.

Greenscape Environmental Ltd was commissioned by Mr S Bowen to conduct a survey to determine the presence of protected species and potential for the damage or destruction of habitats of ecological value, as part of the planning application for the conversion of the warehouse at Garthmyl to residential. The building is grade II listed.

2.1 Project Background

The project involves whatever the project involves internal alterations of the building. It will need to be re-roofed and internal alterations conducted. No ground work is expected around the footings of the building. Electricity and drainage are already in the building.

2.2 Purpose of the Report

The aim of this type of survey is to locate and describe, as far as reasonably practicable, evidence of wildlife, including all protected and BAP species, which may be disturbed or lost in the event of development.

The purpose of the report is to:

1. Identify the key ecological constraints to the proposed development
2. Inform planning to allow significant ecological effects to be minimised or avoided wherever possible
3. Allow any necessary mitigation or compensation measures to be developed

The application site meets the trigger point for requiring a bat survey since it involves modification and conversion, of buildings and structures involving the following: Pre-1914 buildings within 400m of woodland and/or water.

2.3 Planning Policy and Legislation

The relevant planning policy and legislation to the current development is:

The Wildlife and Countryside Act 1981(as amended) – as listed in:

- Schedule 1. Birds protected by special penalties at all times
- Schedule 5. Protected animals

The Conservation of Habitats and Species (Amendment) Regulations 2010 – as listed in:

- Schedule 2. European protected species of animals

Countryside and Rights of Way Act (2000)

Natural Environment and Rural Communities Act 2006 (NERC 2006)

Section 7 of the Environment Act (Wales) 2016

2.4 Site Context and Location

The site is located adjacent to a stretch of canal at Garthmyl. It is in a rural setting with good connectivity to woodland and areas of open water.

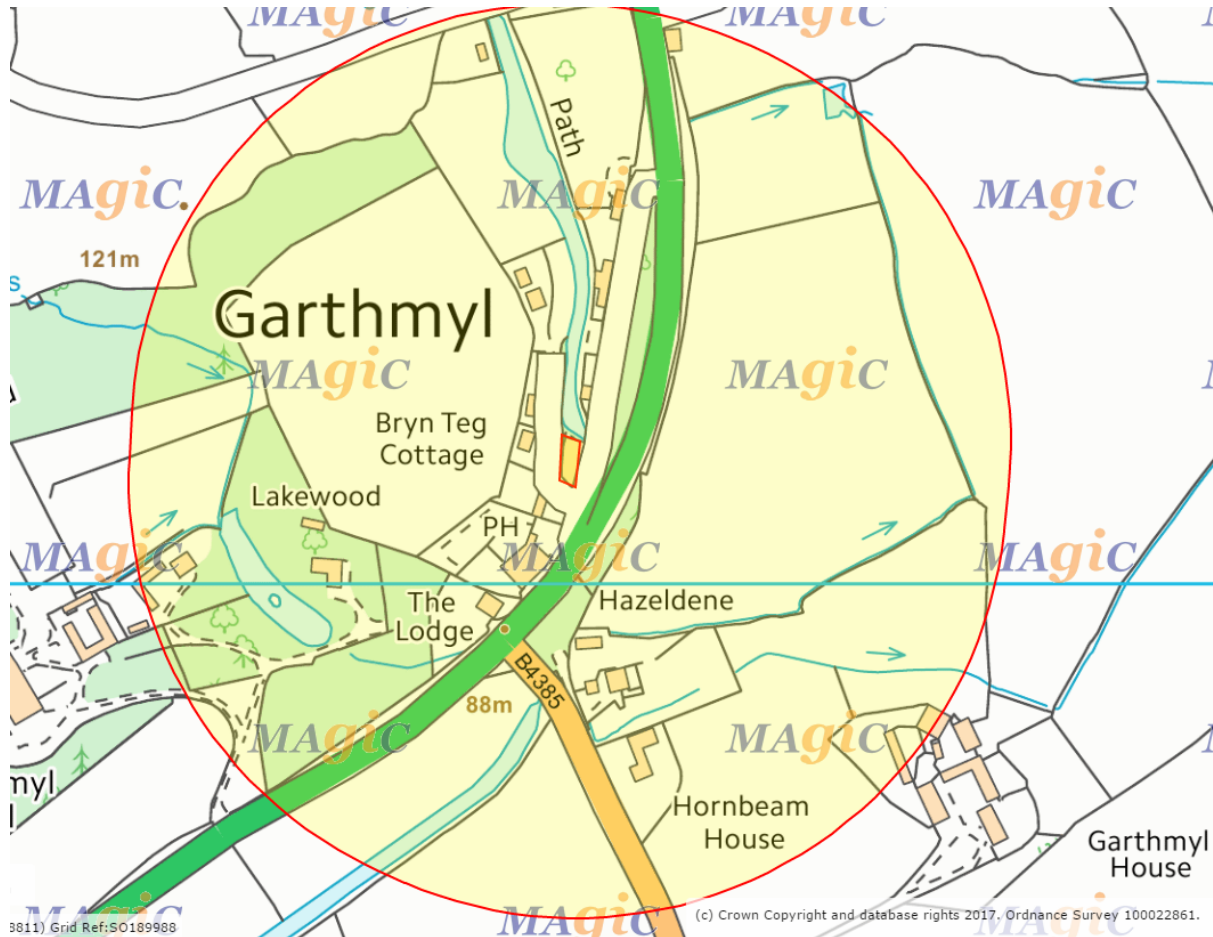


Figure 1. An OS map showing the site. Scale 1:3000. Map courtesy of Magic Maps

3 Methodology

3.1 Desk Study

The desk study provides contextual information such as the site's proximity to designated areas and known records of protected/notable species. This assists with the evaluation of the ecological value of the site.

3.2 Field Survey- Methodology

3.2.1 Details of Surveyors

Name	Membership of associations/ experience	Licenses
Peta Marshall BSc(hons)MA	MCIEEM PIEMA 10+ years' experience surveying for protected species. Peta has a degree in Applied Biology and has been working in commercial environmental assessment for over 10 years. As a member of the CIEEM she is bound by professional conduct	Holder of survey licenses for bats and newts in England and Wales Registered Consultant for Low Impact Class Licence for Bats England 2015-12200-CLS-CLS Bats RC084 BLICL 2015-18939-CLS-CLS GCN Wales Bats-67442:OTH:CSAB:2015 GCN-67660:OTH:SA:2015
Ben Jones BSc(hons) MSc	Consultant 2 years' experience assisting with preliminary environmental appraisals and phase 2 surveys for bats and newts in England and Wales Ben has a degree in Marine and Freshwater biology and a Master's degree in "Managing the Environment".	Holder of survey licenses for bats and newts England 2017-29112-CLS-CLS Bats 2016-25209-CLS-CLS GCN Wales: Bats – 76324:OTH:CSAB:2017 GCN - 74760:OTH:SA:2017
Logan Maggs BSc(hons)	Lead Consultant Logan has a degree in Conservation and Land Management. He has 8 years' experience assisting with bat and newt surveys in England and Wales, as well as attending courses on different survey techniques.	Holder of survey licenses for bats and newts in England and Wales England 2016-24901-CLS-CLS Bats 2017-29218-CLS-CLS GCN Wales 70802:OTH:CSAB:2016 Bats

3.2.2 Location, Date of Survey and conditions

The phase 1 ecological appraisal was undertaken at the site, OS grid reference SO1940 9907 on 14th June 2017 by Peta Marshall BSc (hons) MA. Phase 2 surveys were conducted with the assistance of Ben Jones.

Date	Time	Temp °C Start- Finish	Sunset / Sunrise	Condition
14/06/17	20:00	21	21:37	70% high cloud, <F1 breeze, warm conditions
19/06/17	21:00-23:30	21-19	21:40	F1 breeze, 80% high cirrus clouds
03/07/17	21:15-22:45	19-17	21:38	Overcast, light breeze
17/07/17	21:00-23:00	21	21:24	30% high cirrus cloud <F1 breeze

3.3 Species

3.3.1 Bats

The building was assessed for potential for bat roosts, foraging and commuting.

An external assessment of the building was undertaken to determine potential roost features (PRF) The potential suitability of the structures assessed was assigned a rating of low to high in accordance with table 7.1 of Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd edition, Collins (2016).

An internal assessment of the building was undertaken by a Natural Resources Wales licensed surveyor for evidence of roosting bats such as droppings, feeding remains and staining.

Daytime surveys were conducted with the aid of a strong torch.
Evidence for the presence of bats includes:

- Holes, cracks and rot holes used as roosts, marked by streaks of urine and faeces.
- Smoothed, darkened edges where bats have rubbed and left natural body oils when entering and exiting a space.
- Faeces under a roof access point, a well-used feeding point or a resting spot.
- Feeding signs such as discarded insect wings under a feeding point.
- Lack of cobwebs around eaves, roof spaces, beams or ceilings where routes are kept clear by bats.
- Presence of roosting or dead bats in or behind any object.

Phase 2 bat activity surveys were conducted to reinforce the findings Anabat SD1 and 2, Wildlife Acoustics Echo Meter Touch.. Activity surveys are conducted to establish the presence of bats within a structure, what species they are, approximately how many are present, and if possible, where they are exiting a roost.

Methodology used is in accordance with recommendations by BCT, Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd edition, Collins (2016).

3.3.2 Badgers

Surveys were conducted using guidance from Scottish Natural Heritage commissioned Report No 096 (2003).

Daytime surveys for badgers involved looking for

- Scrapings where badgers have dug for food or used as latrines.
- Signs of a sett, including signs of use such as presence of badger hair
- Tracks and prints.

3.3.3 Water Vole

An assessment of habitat suitability for water vole and otter was conducted by methods adapted from Harris *et al.*, (2009). The standard survey methodology; Strachan and Moorhouse (2006), was used for surveying for water vole. This involved searching for latrines, burrows, footprints, runs, feeding remains or lawns. Signs of otter and mink are also recorded.

3.3.4 Birds

Evidence of nesting birds, including barn owls using a building, hedge or tree involved looking for:

- Presence of nests
- Collections of droppings and/or feathers
- Highly distinctive droppings or splats under roosting points.
- Presence of owl pellets/feathers

3.4 Constraints of the Survey

All areas were accessible for this survey. It was conducted at an optimal time of the year for the assessment of flora and fauna. Standard techniques were followed. No specific constraints have been identified.

4 Site Description

4.1 Desktop Survey

4.1.1 Designated Sites

The map from Natural England presented in Appendix A shows the site is adjacent to the Montgomery Canal, a SSSI and SAC in Wales.

This is important for its assemblage of floating and submerged aquatic plants. Care will have to be taken that there is no damage or disturbance of the canal.

4.2 Phase 1 Description and Observations

The building is of brick construction with an unlined slate roof. It is adjacent to the canal, but with hard standing to each side. Removal of a metal framed warehouse will ensure some grassland will be made available.

The habitats on and around the site can be summarised as follows:

	Habitat	JNCC code
i.	Hardstanding/bare ground	J4
ii.	Buildings	J3.6
iii.	Standing water	G1

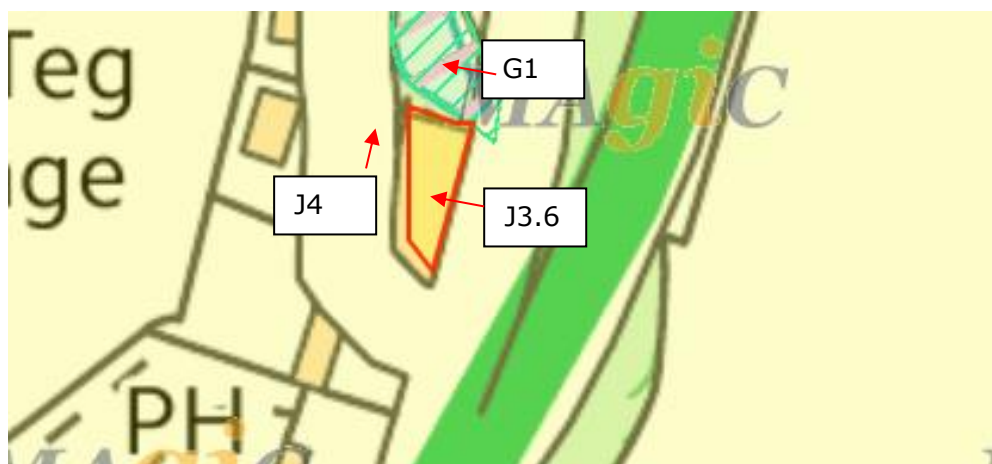


Figure 2. A map showing the JNCC phase 1 habitat classification codes for the site

4.2.1 Building

The two storey building is constructed of solid brick with an unlined slate roof. To the rear is a single storey extension with a flat roof. This section has a cavity wall.

The walls were seen to be in good condition with no potential roost features. one small gap at a gable end was seen and this was considered to have potential to support bats on the wall plate.



Figure 3: Hole in gable end visible

The slate roof is visible from the interior and only small sections of the original lime torching exist. No bat droppings were found on the floor or on the gable walls. No bats were seen by the central ridges.



Figure 4: Interior of the roof features and gable end

No evidence was seen. The building is well sealed with no open or broken windows providing bat access.

There is one flat roofed section. There was very little potential for bat roosts in this area. The bargeboard was observed with a strong torch. No bats were seen.



Figure 5: Flat roofed section

The banks in the close vicinity of the building was examined for potential for water vole



Figure 6: Canal

4.3 Phase 2 surveys for bats.

Phase 2 surveys for bats were conducted as there was seen to be minor low potential for bat to be present under a ridge tile at a gable end.

Bats recorded during the emergence surveys included soprano pipistrelle bats and noctules. No emergence was recorded on any occasion. But foraging along the tow path and canal was.

5 Evaluation of Results

5.1 Potential Impacts on Designated Sites and Recorded Species

5.1.1 Designated Areas

The Montgomery Canal SSSI/SAC is immediately adjacent to the site. There is considered to be no negative impact post development, during development there is a slight risk of damage to or dust entering the canal.

It is recommended that the banks of the canal are protected from damage with the erection of a bund. This will be plastic lined so that dust and debris can be collected on an annual basis.

5.2 Habitats on Site

Determination of Ecological Value is based on the general criteria provided by IEEM (IEEM 2006).

Ecological Value	Description and Examples
High	Habitats or features that have high importance for nature conservation, such as statutory designated nature conservation sites of international or national importance or sites maintaining viable populations of species of international or national importance (e.g. Red Data Book species; European protected species).
Medium	Sites designated at a county or district level, e.g. Local Wildlife Site (LWS), ancient woodland site, ecologically 'important' hedgerows or ecological features that are notable within the context of a region, county or district (e.g. a viable area of a Priority Habitat on the county BAP or a site that supports a viable population of a county BAP species).
Low	Sites of nature conservation value within the context of a parish or neighbourhood, low-grade common habitats, such as arable fields and improved grasslands and sites supporting common, widespread species.

The building itself is considered to be of low ecological value, but the canal to the immediate north is of high ecological value. This will be protected throughout development.

5.3 Ecologically Important Species

Species	Observations	Impact without consideration
Mammals		
Bats	No suitable habitat on site	No negative impact
Water vole	No evidence on canal banks	No negative impact
Otter	No suitable habitat on site	No negative impact
Birds		
Nesting birds	No house martins observed	no negative impact

5.3.1 Bats

All bat species are protected under the Conservation of Habitats and Species (Amendment) Regulations 2012 which implements the EC Directive 92/43/EEC in the United Kingdom. It is an offence, with certain exceptions, to:

- deliberately capture or kill any wild animal of a EPS;
- deliberately disturb any such animal;
- damage or destroy a breeding site or resting place of such a wild animal;
- keep (possess), transport, sell or exchange, or offer for sale or exchange, any live or dead wild animal or plant of a EPS, or any part of, or anything derived from such a wild animal or plant.

A person found guilty of an offence is liable on summary conviction to imprisonment for a term not exceeding six months or to an unlimited fine or to both.

To allow a development that might result an offence, a derogation licence can be sought via the implementation of a European Protected Species Licence. This is provided by Natural Resources Wales.

Work can be conducted under derogation licence from NRW providing suitable compensation and mitigation is provided and the "three tests" can be met. These are:

1. Regulation 53(2)(e) states: a licence can be granted for the purposes of "preserving public health or public safety" or other imperative reason of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.
2. Regulation 53(9)(a) States: the appropriate authority (Natural England) shall not grant a licence unless they are satisfied "that there is no satisfactory alternative"
3. Regulation 53(9)(b) states that the appropriate authority shall not grant a licence unless they are satisfied "that the action licensed will not be detrimental to the maintenance of the population of the species concerned at favourable conservation status in its natural range."

No bats were seen emerging from the building and it is considered to have very low potential for bat roosts. An offence is considered highly unlikely if this development is undertaken. An EPS licence for development will not be needed.

5.3.2 Water vole

The water vole is a European protected species and is fully protected under Schedule 5 of the Wildlife and Countryside Act 1981. This makes it illegal to:

- Capture, kill, disturb or injure water vole (on purpose or by not taking enough care)
- Damage or destroy a breeding or resting place (deliberately or by not taking enough care)
- Obstruct access to their resting or sheltering places (deliberately or by not taking enough care)
- Possess, sell, control or transport live or dead water vole, or parts of water vole

No evidence of water vole was found along the banks of the canal. No negative impact would be expected from this development.

6 Impacts and Mitigation Measures

To reduce or minimise negative impact on biodiversity, the following recommendations have been made.

6.1 Protection of canal

1. The canal will be protected with a bund throughout development so that there is no dust or debris allowed to enter it.

6.2 Bats

1. The conversion can proceed with out an EPS licence.
2. As a precaution, it is recommended that if a bat is found at any time when the roof is being replaced then work will stop immediately and the consultant contacted for advice.
3. NRW will be contacted and the requirement for an EPS licence considered.
4. Work which can be conducted immediately planning permission has been granted includes:

6.2.1 Enhancements for Bats

1. It is recommended that provision will be made for roosting opportunities for bats with the erection of a Schwegler 3FF bat box on the gable end of the building. This will be erected at a height of 3-4m on the northern gable end facing the canal.



Figure 7. Schwegler 3FF bat box

6.2.2 Lighting

1. A lighting scheme will be included with the plans.
2. There will be no direct illumination of the canal.
3. All external lighting will be below 1 lux, orientated towards the ground and set on a short timer, controlled by PIR (Passive Infra-Red).

7 Concluding Remarks

No bats were seen to be roosting in the building so an offence is considered unlikely to occur during the conversion of this building.

There is a minor risk to the canal of damage from silt or dust and debris during development. This will be mitigated with the erection of a temporary bund.

There are no further ecological constraints to the development.

Appendices

A Ordnance Survey Map Abstract

Sheet(s): 1

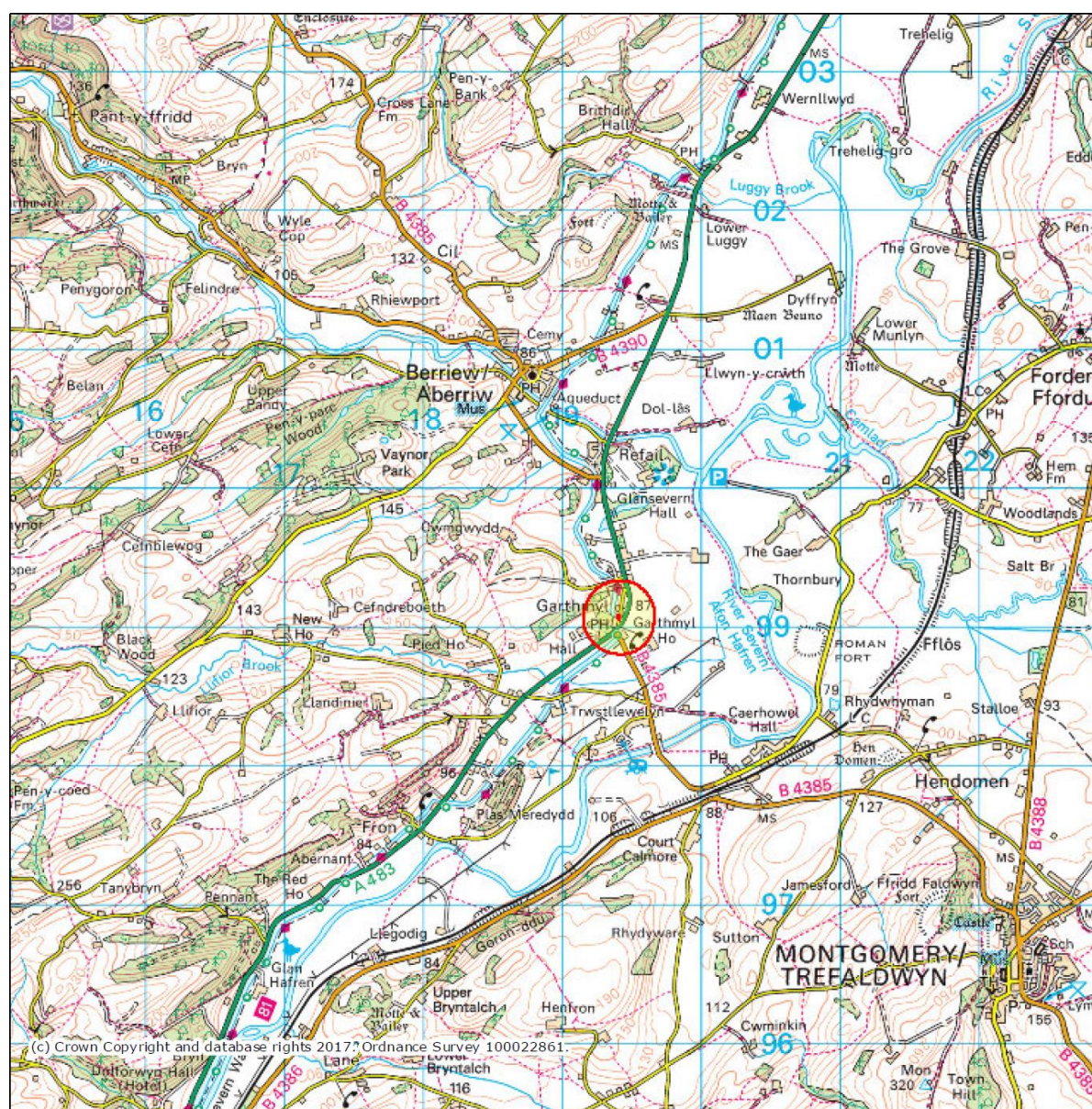
B Site Plan

Sheet(s): 1

C Bibliography

Sheet(s): 1

A Environmental Map



Legend

- Local Nature Reserves (England)
- National Nature Reserves (England)
- Ramsar Sites (England)
- Sites of Special Scientific Interest (England)
- Granted European Protected Species Applications (England)**
 - Amphibian
 - Bat
 - Cetacean
 - Invertebrate
 - Other Mammal

Projection = OSGB36

xmin = 308900

ymin = 294700

xmax = 329000

ymax = 304200

Map produced by MAGIC on 23 July, 2017.

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An environmental map for Garthmyl taken from - Nature on the Map- Magic Maps
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B Site Plans



C Bibliography

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Bat Conservation Trust

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JNCC

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10 (4), 43-155

Natural Environment and Rural Communities Act 2006:

<http://www.legislation.gov.uk/ukpga/2006/16/contents>

Strachan, R., Moorehouse, T., Gelling, M. (2011) Water vole Conservation Handbook 3rd Edition, Wildcru

12/04/2018

Er sylw / For the attention of: Bryn Pryce

**Cyngor Sir Powys County Council
The Gwalia
Ithon Road
Llandrindod Wells
LD1 6AA**

Annwyl / Dear Bryn,

BWRIAD / PROPOSAL: Change of use from malt house to dwelling, construction of single storey extension and formation of parking area. The Malt House, Garthmyl, Montgomery.

Thank you for consulting Natural Resources Wales (letter dated 27/02/2018) and email dated 13/03/2018 regarding the above.

In our previous response of 22/01/2018 (CAS-44854-Q0M8 & CAS-44870-Z9T1) we expressed significant concerns and stated we would object if the scheme did not meet *Requirement 1: The applicant to provide sufficient information to demonstrate there will be no deterioration to the water quality of the Montgomery Canal SAC and SSSI.*

We have reviewed the supplementary information and we recommend that you should only grant planning permission if you attach the following condition.

Our comments below, refer only to the additional information received in respect of foul drainage and likely significant effect on the Special Area of Conservation. All other comments on Pollution Prevention, Protected Species made in our original response, remain valid.

Summary of Conditions

Condition 1 - Water quality: No development shall commence until the Local Planning Authority is satisfied that measures to maintain an acceptable level of water quality are secured.

Montgomery Canal Special Areas of Conservation and Foul drainage

Any competent authority, before deciding to undertake, or give consent, permission or other authorization for a plan or project, need to carry out a test of likely significant effects under regulation 63 of the Conservation of Habitats and Species Regulations 2017.

The screening for this proposal was carried out on 20/11/2017 and the conclusion at the time was that likely significant effect could not be ruled out.

Since the screening was undertaken and in response to the concerns raised in our previous letter, additional information has been provided by the applicant to address our concerns, namely:

- A letter from MetroRod dated 21/02/2018 about Drain Tracing
- The Handbook for a BA-BC BioDisc by Kingspan Environmental (013103).
- Desludge procedure leaflet (013382-01 October 2012)
- Biodisc BA, BAX, BB,NB installation manual, by Kingspan Environmental;
- Performance Results certificate, by PIA
- A BA-BL Biodisc process levels customer drawing (DS0866P – 22/07/2010)
- A BA-BB-BAX BioDisc Gravity Sales Drawing (DS1146P)
- Guidelines for BA-BG Biodisc with Chemical Dosing (GL0095P)

Given the absence of *Luronium natans* at the location of discharge (nearest record 200m away) and the treatment efficiency of the proposed biodisc the proposal is unlikely to undermine the conservation objectives for the Montgomery Canal SAC.

The applicant will also need to apply for a discharge permit from NRW. The comments above relate only to the SAC, when applying for a permit, full consideration will also be given to any other likely environmental impacts on the water environment. We advise the applicant to apply for a discharge permit as soon as possible. The grant of planning permission does not guarantee that a permit to discharge will also be granted.

Scope of NRW Comments

Our comments above only relate specifically to matters that are included on our checklist “Natural Resources Wales and Planning Consultations” (March 2015) which is published on our website: (: <https://naturalresources.wales/media/5271/150302-natural-resources-wales-and-planning-consultations-final-eng.pdf>). We have not considered potential effects on other matters and do not rule out the potential for the proposed development to affect other interests, including environmental interests of local importance. The applicant should be advised that, in addition to planning permission, it is their responsibility to ensure that they secure all other permits/consents relevant to their development.

Yn gywir / Yours sincerely

Cinzia Sertorio

Cinzia Sertorio - Development Planning Advisor, Species

Habitats Regulations Assessment Screening Report

`Natura 2000 Site for consideration	Montgomery Canal SAC
Plan or Project Name	P/2017/0933
Brief description of project or plan	
Full planning application for change of use from malt house to dwelling, construction of single storey extension and formation of parking area	
Is the project or plan directly connected with or necessary to the management of the site?	No
Description of the Natura 2000 site:	
<p>Montgomery Canal (36KM for near Aberbechan to Llanymynech. This is the largest and the most extensive population of floating water-plantain <i>Luronium natans</i> in Britain and is a highly significant lowland population. In favourable management conditions the species can be dominant over kilometre lengths of canal, carpeting the shallow bed and flowering and setting seed in abundance. This is a semi-natural population, having colonised from drift material or seed but needing periodic human disturbance for continued growth; in this respect the canal is a substitute for the species' former slow-moving, mesotrophic river niche, which has been largely destroyed in lowland Britain. <i>Luronium natans</i> prefers neutral to slightly basic mesotrophic water, with periodic disturbance.</p>	

Vulnerability:

- Water quality – Core Management Plan states that poor water quality needs to be investigated. Thorne (2006) identified fertilizer run-off and eutrophication as an issue. High levels of nutrients (nitrogen and phosphorus) in water can lead to eutrophication, leading to excessive growth of a few plants that out compete less tolerant species such as *Luronium natans*.
- Heavy metals and other toxic chemical compounds. In urban areas industrial effluent, urban run-off, sewage effluent. In rural areas mining and farming including agricultural run-off, pesticides and veterinary medicines. In severe cases these can effect plants.
- Organic matter – sewage works, septic tanks livestock waste, sediments from agriculture and urban areas lead to eutrophication.
- Silt – Agriculture – ploughing, over grazing, channel bank erosion. Increased water turbidity can cause declines in aquatic plants. Sediments can carry also carry nutrients, especially phosphorus.
- Dredging – silting up means that shallow water and competing marginal species restrict availability of open water and early successional conditions that *Luronium natans* needs to survive.
- Domination by *Elodea sp.* – *Elodea sp* can out compete *Luronium natans* (water quality/eutrophication)
- Spread of tall marginal vegetation (including woody species) due to lack of grazing and/or increased nutrient levels (Brown Moss)
- Loss of substrate (puddle clay over limestone blocks) in canals, this factor applies to the canal off-line reserves and may be a factor contributing to the lack of success in relocation of *Luronium natans*.
- Accidental pollution (control effects of pollution by having inflow control on the canal and buffer zones)

Assessment Criteria	
<i>Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the European Site.</i>	
Potential for impacts to the Montgomery Canal SAC during the construction activities of the proposed development from release of materials during excavation activities, presence of potentially harmful materials including chemicals and fuel materials which have potential to significantly affect the Montgomery Canal and its population of <i>Luronium natans</i> through impacts to water quality.	
<i>Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura 2000 site by virtue of:</i>	
<ul style="list-style-type: none"> Size and scale 	<p><i>The proposed development is for conversion of the existing building from a storage building to residential building. Work involves re-roofing the building, provision of new concrete floors, insulating walls and roof and fitting out as a four bedroom dwelling. There will be a small flat roof extension on the canal side of the building which will be constructed in blockwork, clad timber and formation of parking and garden area.</i></p> <p><i>The extension, parking area and garden that are to be constructed is on the North of the proposed development site, which is the area that immediately joins the SAC.</i></p> <p>Revised plans have been submitted on 1st November 2017. The revised plans show that instead of utilising the existing septic tank a new biodisc treatment plant and reed bed system will be installed to manage foul water drainage for the site. Discharge from the treatment plant and reed bed will discharge into the canal subject to NRW permit.</p>
<ul style="list-style-type: none"> Land-take 	<i>No land take is required from the SAC.</i>
<ul style="list-style-type: none"> Distance from the Natura 2000 site or key features of the site 	<i>The proposed development site is immediately adjacent to the SAC.</i>
<ul style="list-style-type: none"> Resource requirements 	<p><i>No resources are required from the SAC.</i></p> <p>It is proposed that discharge from the treatment plant and reed bed will discharge into the canal subject to NRW permit.</p>
<ul style="list-style-type: none"> Emissions (disposal to land, water, air) 	<i>Construction activities have the potential to release materials that if not properly managed could enter the Montgomery SAC including sediments and fuel from</i>

	<p><i>machinery used. The potential pollutants being silt/dust, cement/concrete/lime, fuel spillage .</i></p> <p><i>The Environmental Appraisal dated July 2017 produced by Greenscape Environmental Ltd the impacts of the proposed development on the Montgomery Canal SAC was considered to be no negative impact post development, during development there is a slight risk of damage to or dust entering the canal.</i></p> <p><i>It was therefore recommended that the banks of the canal are protected from damage with the erection of bund. This will be plastic lined so that dust and debris can be collected on an annual basis.</i></p> <p><i>Submitted proposed architectural plans illustrates a bund being constructed along the adjoining land to the SAC. Along with adherence to measures identified in the submitted Pollution Prevention Plan produced by Philip Humphreys Architects dated September 2017 - in relation to the proposed development and associated works it is considered risks of negative impacts to the SAC through emissions as a result of the construction phase of the proposed development are unlikely.</i></p> <p><i>Revised plans have been submitted on 1st November 2017. The revised plans show that instead of utilising the existing septic tank a new biodisc treatment plant and reed bed system will be installed to manage foul water drainage for the site. Discharge from the treatment plant and reed bed will discharge into the canal subject to NRW permit.</i></p>
<ul style="list-style-type: none"> Excavation requirements 	<p><i>There will be no excavation requirements within the Montgomery Canal SAC.</i></p> <p><i>There will be excavations requirements in relation to the proposed development. These works will be located on the land immediately adjacent to the SAC, however in considering the proposed formation of the bund along the boundary adjoining the SAC and the identified pollution prevention measures it is considered that the risk of negative impact to the SAC as a result of excavation requirements is unlikely.</i></p>
<ul style="list-style-type: none"> Transportation requirements 	<p><i>There will be no transportation</i></p>

	<i>requirements from the Montgomery Canal SAC.</i>
<ul style="list-style-type: none"> Duration of construction, operation etc. 	<p><i>It is anticipated that construction will commence as soon as planning permission has been granted.</i></p> <p><i>Once construction is complete is anticipated that the development will remain in use in perpetuity.</i></p>
<ul style="list-style-type: none"> Other 	N/A
<i>Describe any likely changes to the site arising as a result of:</i>	
<ul style="list-style-type: none"> Reduction of habitat area 	<i>There will be no reduction in the habitat area of the SAC as a result of the proposed development</i>
<ul style="list-style-type: none"> Disturbance to key species 	<p><i>The proposed development is located immediately adjacent to the Montgomery Canal SAC.</i></p> <p><i>An ecological survey of the proposed developed land was undertaken by Greenscape Environmental Ltd dated July 2017.</i></p> <p><i>The closest record of Luronium natans is approximately 181m from the proposed development. No works are proposed within the canal itself and therefore direct disturbance is not likely, pollution prevention measures have been identified to prevent indirect disturbance to the Luronium natans population.</i></p> <p><i>As a section of the Montgomery canal is situated at the immediate north of the proposed development site the section of the canal within the vicinity of the site was surveyed for the presence of bats (canal and exiting building), otter, water vole and nesting birds. No evidence otters, water voles or nesting birds were found was found. Foraging and commuting activity of bats were recorded and appropriate mitigation proposed.</i></p> <p><i>Revised plans have been submitted on 1st November 2017. The revised plans show that instead of utilising the existing septic tank a new biodisc treatment plant and reed bed system will be installed to manage foul water drainage for the site. Discharge from the treatment plant and reed bed will discharge into the canal subject to NRW permit.</i></p> <p><i>No details regarding quality or quantity of discharge produced by the</i></p>

	<p>biodisc treatment plant have been provided. It is understood that water flow in this reach of the canal is particularly slow. The discharge from the treatment plant is likely to contain ammonia which can promote eutrophication which could result in negative impacts to the <i>Luronium natans</i> population for which the Montgomery canal SAC is designated.</p> <p>Therefore due to lack of details regarding foul water management the potential for disturbance to key species cannot be ruled out.</p>
<ul style="list-style-type: none"> Habitat or species fragmentation 	<p><i>No Habitat or Species fragmentation to the SAC is anticipated.</i></p> <p><i>Given the existing land is immediately adjacent to the SAC no barrier will be formed as part of the development and movement of species can continue within the SAC along the tow path, banks and within the water course.</i></p> <p><i>The closest records of Luronium natans are approximately 181m from the proposed development. No works are proposed within the canal itself and therefore there would be no direct fragmentation of the Luronium natans population, pollution prevention measures have been identified to prevent indirect fragmentation to the Luronium natans population through pollution incidents.</i></p> <p>Revised plans have been submitted on 1st November 2017. The revised plans show that instead of utilising the existing septic tank a new biodisc treatment plant and reed bed system will be installed to manage foul water drainage for the site. Discharge from the treatment plant and reed bed will discharge into the canal subject to NRW permit.</p> <p>No details regarding quality or quantity of discharge produced by the biodisc treatment plant have been provided. It is understood that water flow in this reach of the canal is particularly slow. The discharge from the treatment plant likely to contain ammonia which can promote eutrophication which could result in</p>

	<p>negative impacts to the <i>Luronium natans</i> population for which the Montgomery canal SAC is designated.</p> <p>Therefore due to lack of details regarding foul water management the potential for habitat and species fragmentation cannot be ruled out.</p> <p>In addition there are concerns regarding the introduction of garden plants on the banks of the SAC. Further information to provide reassurance that the banks will remain in their natural state and there will be no planting of invasive garden varieties on the banks and/or not tipping of garden waste on the bank of the canal.</p>
<ul style="list-style-type: none"> • Reduction in species density 	<p><i>No reduction in species density of the SAC is anticipated.</i></p> <p><i>The closest records of Luronium natans are approximately 234m from the proposed development. No works are proposed within the canal itself and therefore there would be no direct reduction in species of the Luronium natans population, pollution prevention measures have been identified to prevent indirect impacts that could result in reduction of the species density of the Luronium natans population through pollution incidents.</i></p> <p><i>Given the existing land is immediately adjacent to the SAC no barrier will be formed as part of the development and movement of species can continue within the SAC.</i></p> <p>Revised plans have been submitted on 1st November 2017. The revised plans show that instead of utilising the existing septic tank a new biodisc treatment plant and reed bed system will be installed to manage foul water drainage for the site. Discharge from the treatment plant and reed bed will discharge into the canal subject to NRW permit.</p> <p>No details regarding quality or quantity of discharge produced by the biodisc treatment plant have been provided. It is understood that water flow in this reach of the canal is</p>

	<p>particularly slow. The discharge from the treatment plant is likely to contain ammonia which can promote eutrophication which could result in negative impacts to the <i>Luronium natans</i> population for which the Montgomery canal SAC is designated.</p> <p>Therefore due to lack of details regarding foul water management the potential for reduction in species density cannot be ruled out.</p>
<ul style="list-style-type: none"> Changes in key indicators of conservation value (water quality etc.) 	<p><i>The proposed development is located immediately adjacent to the Montgomery Canal SAC.</i></p> <p><i>The Environmental Appraisal dated July 2017 produced by Greenscape Environmental Ltd the impacts of the proposed development on the Montgomery Canal SAC was considered to be no negative impact post development, during development there is a slight risk of damage to or dust entering the canal.</i></p> <p><i>It was therefore recommended that the banks of the canal are protected from damage with the erection of bund. This will be plastic lined so that dust and debris can be collected on an annual basis.</i></p> <p><i>Submitted proposed architectural plans illustrates a bund being constructed along the adjoining land to the SAC. Along with adherence with the Pollution Prevention Plan produced by Philip Humphreys Architects dated September 2017 - the measures identified in the submitted plans are considered to be acceptable and in line with national guidance on this matter.</i></p> <p><i>It is therefore considered that the construction activities will not result in significant negative impacts to key indicators i.e. water quality of the Montgomery Canal SAC.</i></p> <p>Revised plans have been submitted on 1st November 2017. The revised plans show that instead of utilising the existing septic tank a new biodisc treatment plant and reed bed system will be installed to manage foul water drainage for the site. Discharge from the treatment plant and reed bed will</p>

	<p>discharge into the canal subject to NRW permit.</p> <p>No details regarding quality or quantity of discharge produced by the biodisc treatment plant have been provided. It is understood that water flow in this reach of the canal is particularly slow. The discharge from the treatment plant is likely to contain ammonia which can promote eutrophication which could result in negative impacts to the <i>Luronium natans</i> population for which the Montgomery canal SAC is designated.</p> <p>Therefore due to lack of details regarding foul water management the potential for changes in key indicators of conservation value (water quality etc.) cannot be ruled out.</p>
<ul style="list-style-type: none"> Climate change 	None anticipated
Describe any likely impacts on the European Site as a whole in terms of:	
<ul style="list-style-type: none"> Interference with the key relationships that define the structure of the site 	<p>Potential for interference with the key relationships that define the structure of the site cannot be ruled out due to insufficient information regarding foul water management and impacts of proposed discharge from biodisc treatment plant into Montgomery Canal SAC.</p> <p>No details regarding quality or quantity of discharge produced by the biodisc treatment plant have been provided. It is understood that water flow in this reach of the canal is particularly slow. The discharge from the treatment plant is likely to contain ammonia which can promote eutrophication which could result in negative impacts to the <i>Luronium natans</i> population for which the Montgomery canal SAC is designated.</p>

<ul style="list-style-type: none"> Interference with key relationships that define the function of the site 	<p>Potential for interference with the key relationships that define the structure of the site cannot be ruled out due to insufficient information regarding foul water management and impacts of proposed discharge from biodisc treatment plant into Montgomery Canal SAC.</p> <p>No details regarding quality or quantity of discharge produced by the biodisc treatment plant have been provided. It is understood that water flow in this reach of the canal is particularly slow. The discharge from the treatment plant is likely to contain ammonia which can promote eutrophication which could result in negative impacts to the <i>Luronium natans</i> population for which the Montgomery canal SAC is designated.</p>
<p><i>Indicate the significance as a result of the identification of impacts set out above in terms of:</i></p>	
<ul style="list-style-type: none"> Loss 	Likely Significant
<ul style="list-style-type: none"> Fragmentation 	Likely Significant
<ul style="list-style-type: none"> Disruption 	Likely Significant
<ul style="list-style-type: none"> Disturbance 	Likely Significant
<ul style="list-style-type: none"> Change to key elements of the site 	Likely Significant
<p><i>Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known.</i></p>	

Having reviewed the revised information submitted with regards to the proposed development it is considered that a likely significant effect to the Montgomery Canal SAC and/or it's associated features either alone or in combination with other plans or projects cannot be ruled out due to insufficient information regarding foul water management and impacts of proposed discharge from biodisc treatment plant into Montgomery Canal SAC.

No details regarding quality or quantity of discharge produced by the biodisc treatment plant have been provided. It is understood that water flow in this reach of the canal is particularly slow. The discharge from the treatment plant is likely to contain ammonia which can promote eutrophication which could result in negative impacts to the *Luronium natans* population for which the Montgomery canal SAC is designated.

Outcome of screening stage (delete as appropriate)

Likely Significant Effect cannot be ruled out – Appropriate Assessment required.
NRW will need to be consulted with regards to scope of Appropriate Assessment and information required to be submitted to inform the AA

	Author
<i>Name</i>	Ebonie Gethin-Thomas
<i>Organisation</i>	Powys County Council
<i>Date</i>	20/11/2017
<i>Signature</i>	E.B.G-Ts