

BikePark Wales Environmental Statement Vol.1

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Chapter 6: Ecology

March 2019

Prepared by: The Urbanists, in conjunction with Peter Quinn Landscape Architect, Wildwood Ecology and BikePark Wales.
Address: The Urbanists, The Creative Quarter, 8A Morgan Arcade, Cardiff, CF10 1AF, United Kingdom
Email: liam.hopkins@theurbanists.net
Website: www.theurbanists.net

Issue date	March 2019	
Drawing status	Final	
Revision		
Author	LH/HA	
Checked by	MF	

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CHAPTER 6

ECOLOGY

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6 ECOLOGY

6.1 Introduction

- 6.1.1 This chapter provides an Ecology Statement that has been prepared by Wilwood Ecology. The assessment has been prepared in accordance with published Ecological Impact Assessment (EclA) Guidelines (CIEEM, 2016).
- 6.1.2 An Ecology Assessment supports the chapter, which is included in the Appendices. The Assessment provides the outcomes of a preliminary ecological appraisal and targeted surveys. Relevant imagery referenced in this chapter is included in this documentation.
- 6.1.3 The Statement is structured as follows: context; policy, legislation and guidance; landscape character baseline; analysis of effects; cumulative effects; mitigation and residual effects.

6.2 Context

Study Area

- 6.2.1 The study area constitutes the land proposed to accommodate the development area described in Chapter 3, along with the wider BikePark Wales grounds. This includes the existing visitor centre and the bike trails to the west of the visitor centre.

6.3 Policy and Legislation

- 6.3.1 This section identifies the planning policy background, guidance and legislation against which the proposed development has been considered. The following policy, legislation and guidance documents have been the principal documents used to inform and underpin the surveys, mitigation and compensation measures advised and undertaken.

Key Planning Policies

- 6.3.2 *Planning Policy Wales Edition 10* outlines the land use planning policy for Wales set out by the Welsh Government. It provides a framework for the effective preparation of Local Planning Authorities' development plans. This is supplemented by twenty-one topic-based Technical Advice Notes (TAN). In particular, TAN 5 - Nature Conservation and Planning provides advice about how the land use planning system should underwrite the protection and enhancement of biodiversity and geological conservation.
- 6.3.3 The Local Development Plan for the area is the Merthyr Tydfil Local Development Plan. Of particular note are policies BW5 (Natural Heritage) and AS6 (Local Nature Conservation Designations).

Legislative Framework

- Conservation of Habitats and Species Regulations (2017);
- Wildlife and Countryside Act (1981);
- Protection of Badgers Act (1992);
- Environment (Wales) Act (2016);
- Well-being of Future Generations (Wales) Act (2015);
- Countryside and Rights of Way Act (2000); and

- The Hedgerow Regulations (1997).

- 6.3.4 The key piece of UK legislation is the Wildlife and Countryside Act 1981 (WCA) which consolidates (and amends) existing National Legislation in order to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Birds Directive in the UK. It is complemented by The Conservation of Habitats and Species Regulations 2017 which consolidates all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994.
- 6.3.5 These Regulations transposed the Habitats Directive into National Law. The Regulations provide for the designation and protection of 'European Sites' known as Special Protection Areas (SPA) for Birds and Special Areas of Conservation (SAC), and the protection of 'European Protected Species'. Under the Regulations, Competent Authorities, have a general duty, in the exercise of any of their functions, to have regard to the EC Habitats Directive. The Habitats Regulations define a "Competent Authority", as a Minister, a government office, a statutory undertaker or public body.
- 6.3.6 Section 6 of the Environment (Wales) Act 2016 places a duty on public authorities to 'seek to maintain and enhance biodiversity' so far as it is consistent with the proper exercise of those functions. In so doing, public authorities must also seek to 'promote the resilience of ecosystems'. The duty replaces the section 40 duty in the Natural Environment and Rural Communities Act 2006 (NERC Act 2006), in relation to Wales, and applies to those authorities that fell within the previous duty.
- 6.3.7 Public authorities will be required to report on the actions they are taking to improve biodiversity and promote ecosystem resilience.
- 6.3.8 Section 7 of the Environment (Wales) Act 2016 replaces the duty in section 42 of the NERC Act 2006. The Welsh Ministers will publish, review and revise lists of living organisms and types of habitat in Wales, which they consider are of key significance to sustain and improve biodiversity in relation to Wales.
- 6.3.9 The Welsh Ministers must also take all reasonable steps to maintain and enhance the living organisms and types of habitat included in any list published under this section, and encourage others to take such steps.
- 6.3.10 The Countryside Rights of Way Act 2000 (CRoW) increases measures for the management and protection for Sites of Special Scientific Interest (SSSI) and allows the relevant authorities to have regard to conserving and enhancing Areas of Outstanding Natural Beauty (AONB) when performing their duties.

Protected species legislation

Breeding Birds

- 6.3.11 In the UK all birds, their nests and their eggs are protected by the Wildlife and Countryside Act 1981 (as amended) (WCA). Offences under this Act include:
- Intentionally killing injuring or taking any wild bird;
 - Intentionally taking, damaging or destroying the nest of any wild bird whilst it is in use or being built; and
 - Intentionally taking or destroying the egg of any wild bird.

- 6.3.12 Birds listed on Schedule 1 of the above Act have further protection making it an offence to intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Dormice

- 6.3.13 Dormice and their resting places are fully protected by UK law under Section 5 of the Wildlife and Countryside Act 1981 (as amended) and by European Law under the Conservation of Habitats and Species Regulations 2017 making it an offence to:

- Deliberately capture, injure or kill dormice;
- Intentionally or recklessly disturb dormice while occupying a structure or place used for shelter or protection;
- Deliberately disturb, in particular affecting breeding, abundance or distribution;
- Intentionally or recklessly obstruct access to a structure or place used for shelter or protection; and
- Damage or destroy a breeding site or resting place.

Bats

- 6.3.14 All British bats are classed as European Protected Species and therefore receive protection under the Conservation of Habitats and Species Regulations 2017, making it an offence inter alia to:

- Deliberately kill, injure or capture a bat;
- Deliberately disturb bats;
- Damage or destroy a breeding site or resting place of a bat.

- 6.3.15 In addition, all British bats are also listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) which contains further provisions making it an offence to intentionally or recklessly:

- Obstruct access to any structure or place which any bat uses for shelter or protection; or
- Disturb any bat while occupying a structure or place which it uses for that purpose.

- 6.3.16 If proposed development work is likely to destroy or disturb bats or their roosts, then a licence will need to be obtained from Natural Resources Wales, which would be subject to appropriate measures to safeguard bats.

Reptiles

- 6.3.17 Adders, slow worms, grass snakes and common lizards are protected against killing and injuring under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). This legislation makes it illegal to intentionally kill or injure a common reptile. As a result, reptiles must be removed from areas of development and relocated onto suitable release sites before any site works can commence.

- 6.3.18 Smooth snakes and sand lizards are European Protected Species under Schedule 2 of the Conservation of Habitats and Species Regulations 2017. This makes it illegal to carry out the following activities:

- Deliberately or recklessly disturb, capture or kill these animals;
- Deliberately or recklessly take or destroy eggs of these animals;
- Damage or destroy a breeding site or resting place of such a wild animal; or

- Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead animal, or any part of, or anything derived from such a wild animal.

Invasive Species Legislation

- 6.3.19 The following list summarises the relevant legislation in relation to invasive plants, their treatment and disposal:
- 6.3.20 Wildlife and Countryside Act 1981 (WCA, 1981) – Under Section 14, Schedule 9 of the Act it is an offence if any person plants or otherwise causes to grow in the wild any plant which is included in Part II of Schedule 9.
- 6.3.21 Environmental Protection Act 1990 – Defines the legal framework for duty of care for waste, contaminated land and statutory nuisance; care needs to be taken when spraying or treating invasive species in the presence of a watercourse (whether occasionally dry or otherwise). Under Section 221 of the Act watercourses are deemed to be “*rivers, streams, ditches, drains, cuts, culverts, dykes, sluices, sewers and passages through which water flows*”.
- 6.3.22 Control of Pesticides Regulations 1986 – Requires any person who uses pesticides to take all reasonable precautions to protect the health of human beings, creatures and plants, and to safeguard the environment and in particular avoid pollution of water.
- 6.3.23 Hazardous Waste Regulations 2005 – Contains provisions about the handling and disposal of hazardous waste. Material containing Japanese knotweed that has been treated with herbicide may be classified as hazardous waste.
- 6.3.24 Environmental Protection (Duty of Care) Regulations 1991 – Under these Regulations, soil contaminated with Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*), rhododendron (*Rhododendron ponticum*), giant hogweed (*Heracleum mantegazzianum*) and cotoneaster (*Cotoneaster sp.*) and is classed as ‘controlled waste’ and can only be disposed of in a registered landfill site.

6.4 Methodology

- 6.4.1 The assessment has been prepared in accordance with published Ecological Impact Assessment (EclA) Guidelines (CIEEM, 2016). This guidance sets out the EclA process detailing the methodology to be implemented in undertaking EclAs for terrestrial, freshwater and coastal in the United Kingdom and Ireland.

Scope of the Assessment

- 6.4.2 The ecology section in the report sets out the key ecological constraints associated with the proposed development in order to fully inform the EclA. The EclA shared with Merthyr Tydfil County Borough Council summarised the following:
- One statutory designated site within 2km of the proposed development site;
 - Seven non-statutory designated sites within 1km of the proposed development;
 - Broad-leaved woodland, scrub, acid grassland, standing water, running water, ephemeral/short-perennial and hardstanding/paths, with mosaics indicative of fridd habitat, onsite;
 - Likely to be a range of breeding birds onsite;
 - Foraging and commuting bat species onsite;

- Likely roosting bats present within retained trees onsite;
- Presence of common lizard onsite (low-medium population estimate);
- Presence of common frog, common toad and palmate newt onsite;
- Likely presence of hedgehog onsite.

6.4.3 The scope of potential significant effects is outlined below. Plans of the extent of the Ecological Study Area considered within this EclA are included in the Appendices. .

Desk Study

6.4.4 An ecological baseline study was undertaken to review records of designated sites and protected / notable species within 2km of the site.

6.4.5 The following data sources were used, contacted and / or reviewed:

- South East Wales Biodiversity Records Centre (SEWBReC) within Acer Ecology report (May 2018);
- Rolf Brown and Richard Bedford, Merthyr Tydfil County Borough Council Ecologist and GIS and Spatial Data Officer; 30/07/2018;
- Merthyr Tydfil County Borough Council Local Development Plan (accessed July/August 2018)
- Multi-Agency Geographic Information for the Countryside (MAGIC) accessed July 2018

6.4.6 The designated sites included within the data search were as follows:

- Special Areas of Conservation (SAC);
- Special Protection Areas (SPA);
- Ramsar Sites;
- Sites of Special Scientific Interest (SSSI);
- National Nature Reserves (NNR); and
- Local Nature Reserves (LNR)
- Sites of Importance for Nature Conservation (SINC)

Ecological Surveys

6.4.7 Previous ecological surveys undertaken at the site are as follows:

- Corylus Ecology 2012 – Extended Phase 1 Habitat Survey
- Acer Ecology 2018 – Preliminary Ecological Appraisal and Great Crested Newt Survey

6.4.8 The latter survey was undertaken for an alternate proposal which encompassed a portion of the current proposal area.

6.4.9 The initial site survey (Preliminary Ecological Assessment, PEA) by Wildwood Ecology was conducted on the 22/06/2018.

6.4.10 Further surveys were undertaken for breeding birds (nightjar) on 03/07/2018; bats (transect) on the 03/07/2018, 14/08/2018 and 12/09/2018; reptile surveys between the 27/08/2018 and the 24/09/2018 (nine visits); ground-based tree assessment for bats on the 14/08/2018; 27/08/2018 and 24/10/2018; static monitoring for bats from the 03/07/2018 to the 07/07/2018; 31/08/2018 to the 07/09/2018; and 14/09/2018 to the 19/09/2018.

6.5 Assessment of Effects

Identification of Important Ecological Features

- 6.5.1 It is impractical and inappropriate for an assessment of the ecological effects of a proposed development to consider every species and habitat that may be affected. As such the EcIA focuses on Important Ecological Features (IEFs). IEFs are species and habitats present within the zone of influence of the proposed development. They are considered to be of sufficiently high value for further consideration as detailed within this chapter.
- 6.5.2 The value of sites, populations of species, species assemblages and habitats was evaluated regarding both their importance in terms of 'biodiversity conservation' value and legal status. The biodiversity conservation value relates to the need to conserve representative areas of different habitats and to maintain the genetic diversity of species populations.
- 6.5.3 For the purpose of this assessment, sites, species populations, species assemblages and habitats were valued using the following geographical scale:
- International;
 - United Kingdom;
 - National;
 - Regional;
 - County;
 - Local; and
 - Less than local, within the zone of influence only (Site).
- 6.5.4 The valuation of sites makes use of established value systems (e.g. SSSIs are of national importance, SINCs are of county importance). Professional judgement is required for the valuation of sites and species of less than district value. The valuation of species population assemblages of species and habitats uses accepted criteria, examples are provided in Table 6.1.

Table 6.1: Examples of criteria used to evaluate ecology receptors

Level of Value / Sensitivity	Examples of Definitions
International (European) Very High	Habitats An internationally designated site or candidate site (SPA, provisional SPA, SAC, candidate SAC, Ramsar Site, Biogenetic/Biosphere Reserve, World Heritage Site) or an area that would meet the published selection criteria for designation. A viable area of a habitat type listed in Annex I of the Habitats Directive, or smaller areas of such habitat, which are essential to maintain the viability of a larger whole. Species Any regularly occurring population of internationally important species, threatened or rare in the UK (i.e. a UK Red Data Book species). A regularly occurring, nationally significant population/number of an internationally important species.
National (UK) High	Habitats A nationally designated site, SSSI, NNR, Marine Nature Reserve (MNR) or a discrete area, which would meet the published selection criteria for national designation (e.g. SSSI selection guidelines). Species A regularly occurring, regionally or county significant population /

	number of an internationally / nationally important species. Any regularly occurring population of a nationally important species, threatened or rare in the region or county (listed under Section 7 of the (Environment (Wales) Act 2016).
Regional Medium	Habitats Sites that exceed the County-level designations but fall short of SSSI selection criteria. Species Any regularly occurring, locally significant population of a species listed as being nationally scarce, which occurs in 16 of 100 10km² squares in the UK. A regularly occurring, locally significant population / number of a regionally important species. Sites maintaining populations of internationally / nationally important species that are not threatened or rare in the region or county.
County Medium	Habitats Sites recognized by local authorities, e.g. SINCS. County sites that the designating authority has determined meet the published ecological selection criteria for designation, including LNR. A viable area of habitat identified in LBAP. A diverse and/or ecologically valuable hedgerow network. Semi-natural ancient woodland greater than 0.25ha. Species Any regularly occurring, locally significant population of a species listed in a LBAP due to regional rarity or localisation. A regularly occurring, locally significant population of a county/district important species. Sites supporting populations of internationally / nationally / regionally important species that are not threatened or rare in the region or county and not integral to maintaining those populations. Sites / features scarce in the county or that appreciably enrich the county habitat resource.
Local Low	Habitats Areas of habitat that appreciably enrich the local habitat resource (e.g. species-rich hedgerows, ponds). Sites that retain other elements of semi-natural vegetation that, due to their size, quality or the wide distribution within the local area, are not considered for the above classifications. Species Populations / assemblages of species that appreciably enrich the biodiversity resource within the local context. Sites supporting populations of county / district important species that are not threatened or rare in the region or county, and are not integral to maintaining those populations.
Site Low	Habitats Areas of heavily modified or managed vegetation of low species diversity or low value as habitat to species of nature conservation interest. Species A good example of a common or widespread species.

6.5.5 In addition to the above, the following criteria (Table 6.2) has been used specifically to assess the impacts / effects on breeding birds, following the Birds of Conservation Concern (BoCC, 4) traffic light system of highlighting species of nature conservation concern (Eaton et. al., 2015).

Table 6.2: An outline of the BoCC criteria defining the conservation status of breeding birds

BoCC Criteria	Status
Red List Criteria	Globally threatened Historical population decline in UK during 1800–1995 Severe (> or =50%) decline in UK breeding population over last 25 years Severe (> or =50%) contraction of UK breeding range over last 25 years
Amber List Criteria	Historical population decline during 1800–1995, but recovering; population size has more than doubled over last 25 years Moderate (25-49%) decline in UK breeding population over last 25 years Moderate (25-49%) contraction of UK breeding range over last 25 years Moderate (25-49%) decline in UK non-breeding population over last 25 years Species with unfavourable conservation status in Europe (SPEC = Species of European Conservation Concern) Five-year mean of 1–300 breeding pairs in UK > or =50% of UK breeding population in 10 or fewer Sites, but not rare breeders > or =50% of UK non-breeding population in 10 or fewer Sites > or =20% of European breeding population in UK > or =20% of NW European (wildfowl), East Atlantic Flyway (waders) or European (others) non-breeding populations in UK
Green List Criteria	No identified threat to the population's status

6.5.6 In this assessment, nature conservation sites, species populations, species assemblages and habitats are considered to qualify as an IEF where they are within the zone of influence and likely to be affected by the development and are at least of Site importance. It is considered that no significant effect can occur to features of lesser importance than those within the site.

6.5.7 Due consideration will be given to non-valued ecological receptors which carry legal protection (i.e. those nature conservation sites, species and habitats below site importance). In these cases the impacts have been considered alongside the impact assessment of the IEFs.

Establishing Magnitude of Impacts

6.5.8 Ecological receptors are usually nature conservation sites, habitats, species assemblages or communities, or populations or groups of a species. Impacts can be permanent or temporary, direct or indirect and can be cumulative. These factors are brought together to assess the magnitude of the impact on particular IEFs and wherever possible, the magnitude of the impact is quantified. Professional judgement is then used to assign the effects on the receptors to one of four classes of magnitude, defined in Table 6.3.

6.5.9 It should be noted that this step in the impact assessment procedure builds on the procedure described within the CIEEM guidelines (CIEEM, 2016). It has been included to allow comparison between other environmental disciplines which attribute a magnitude of impact. It also provides transparency in how decisions over whether a resultant effect is significant have been reached.

Table 6.3: Definition of the Magnitude of Ecological Impacts

Magnitude of Impact	Description
High	A permanent or long-term impact on the extent, size or integrity of a site, habitat, species assemblage or community, population or group. If adverse, this is likely to threaten its sustainability; if beneficial, this is likely to enhance its conservation status.
Medium	A permanent or long-term reversible impact on a site, habitat, species assemblage or community, population or group whose magnitude is detectable but would not threaten its integrity.
Low	A short-term, reversible impact on the extent or size or integrity of a site, habitat, species assemblage or community, population or group that is within the normal range.
Negligible	No impact or an impact which is beneath the level of perception, within normal bounds of variation or within the margin of error of the ecological assessments.

Defining Significance of Effect

6.5.10 The ecological impact assessment has used a different approach to determining significance to that set out in the standard methodology of EIA best practice guidance. The approach set out below has been used as it is better suited to assessing the value of ecological receptors, particularly when considering the complexity of habitats and the potential range of effects on their integrity. It is also a widely adopted standard for assessing ecological effect / impact significance.

6.5.11 Significance is assessed as Adverse, Beneficial or Not Significant on the integrity of an IEF and / or the conservation status of IEFs within a given geographical area.

6.5.12 If an effect is found not to be significant at the level at which the resource or feature has been valued, it may however still be significant at a smaller geographical scale. For example, an IEF may be of National value, but an effect could be considered to be significant only at a smaller geographical scale, such as County, Local or Site level.

6.5.13 Any effect that was assigned a significance at a level below the assigned threshold level (i.e. Site level) has been scoped out of the assessment (i.e. that receptor is not considered further), unless there are legal implications associated with the effect, in which case these have been clearly stated.

6.5.14 In considering the integrity and conservation status of the receptor the key considerations are:

- Will any site / ecosystem processes be removed or changed or subject to disturbance?
- What will be the effect on the nature, extent, structure and function of component habitats?
- What will be the effect on the average population size and viability of component species?

6.5.15 In determining the significance of a potential effect, the above factors and the value of the receptor, magnitude of the potential impact, and the duration of the impact have been considered.

Cumulative Effects

6.5.16 The cumulative assessment includes (subject to the availability of information) the following developments:

- Approved but uncompleted projects;
- Consented but not yet implemented permissions; and
- Sites included / allocated in development plans / documents.

6.5.17 A justification for excluding any projects from the assessment despite having met the above criteria is provided where relevant. The assessment considered the potential for these projects and allocations to have cumulative effects with the proposed development where relevant. The assessment considers the potential for these projects and allocations to have cumulative effects with the proposed development at the construction and operation stage.

- Environmental impacts from temporary land take, such as for construction compounds; and
- Effects on environmental resources resulting from increased development pressures in the area.

6.5.18 Cumulative impacts arising from the proposal in combination with other known proposed developments have been considered in the assessment. Where cumulative environmental impacts arising from the proposed development itself have the potential to impact on identified resources or receptors have also been identified. The temporal scope of the cumulative assessment comprises the commencement of construction in 2019, through to 15 years post completion when the landscape mitigation will have matured. The spatial scope of the cumulative assessment has been limited to within ~1 km of the site as the predicted effects are localised and generally occur within this distance from the proposed development site.

6.6 Baseline Conditions

Desktop Review

6.6.1 A desk study has been undertaken to identify key species and habitats within the ecological study area. The results are presented in the following sections.

Designated Sites

Statutory Designated Sites

6.6.2 One statutory designated site was found within 2km of the site. No sites designated for their bat populations were within 10km. Details are provided in Table 6.4 below.

Table 6.4: Statutory Designated Sites

Site Name	Brief Description	Important Ecological Value	Distance
Cwm Glo a Glyndyrys SSSI	Cwm Glo a Glyndyrys is of special interest for its extensive areas of marshy grassland, species-rich neutral grassland and acid grassland, and for the association of these habitats with others including woodland and heath. It is also of special interest for its outstandingly diverse assemblage of grassland fungi, including 32 species of waxcap <i>Hygrocybe</i> spp, making it one of the best sites in Britain.	High	0.946km

Non-Statutory Designated Sites

6.6.3 In total, seven non-statutory designated sites (all SINCs) were found within 1km of the site, Table 6.5 below:

Table 6.5: Non-Statutory Designated Sites

Site Name	Brief Description	Important Ecological Value	Distance
Abercanaid Fields (20)	Series of fields laying either side of the A470 containing mainly species-rich semi-improved grasslands and marshy grasslands. Also some small areas of semi-natural oak/birch woodland, scattered scrub and trees. Site also includes Webber's pond, a private nature reserve with well-developed marginal emergent vegetation, a section of the Glamorganshire Canal and an adjacent disused railway embankment which supports unimproved and semi-improved acid grassland, bracken slopes and trees.	Medium	onsite
Graig Gethin (30)	Wooded ffridd slopes, supporting extensive ancient semi-natural woodland and bracken slopes with large trees, together with some scree areas supporting lichen heath. The bracken slopes support abundant bluebell. Also includes an area of wet heathland which extends along a ride within a conifer plantation and supports plant species of interest. The site supports a good range of breeding bird species and brown hare has also been recorded.	Medium	onsite
Rhydycar West (36)	Very extensive mosaic of ffridd enclosures supporting complex of semi-upland and lowland habitats, partly contained within conifer plantation. Main components are ancient semi-natural woodland fragments, other semi-natural woodlands, wet heathland, dry heathland, marshy grassland and semi-improved neutral grasslands. Also there are some bracken slopes, scrub, small ponds, streams and sections of dismantled railway. There are areas of semi-improved acid grasslands to the south especially. The habitats intergrade to form a complex mosaic, and may therefore also include some small areas of improved or low diversity semi-improved grassland, but any such areas are a very minor component. Great crested newt occurs in small pools; noctule and pipstrelle bats have both been recorded. Nationally rare and scarce invertebrates are varied and common throughout the area.	Medium	0.07 km
Gethin Forest (61)	Mosaic of upland and semi upland habitats comprising conifer plantation, semi natural broad leaved, wet and replanted ancient woodland, heathland, acid grassland, water courses, standing open water, flushes and supporting scrub, neutral grassland and ffridd.	Medium	0.22 km
Cwm Woods (37)	Area of ancient semi-natural woodland within a much larger conifer plantation. The grassy field layer has locally abundant bluebell. Also includes some associated areas of bracken, dry heathland,	Medium	0.45 km

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	scrub, marshy grassland and acid grassland. A range of localised bird and moth species have also been recorded.		
Buarth-Waunydd (26)	Series of semi-upland fridd fields containing a mosaic of several locally important habitats, notably acid and marshy grasslands, wet heaths, acid flushes, bracken slopes and semi-natural broadleaved woodlands. There are also areas of neutral grassland and scrub.	Medium	0.56 km
Afon Taf (58)	The major river in the County Borough. Includes areas of bankside habitats, particularly towards the south where the river corridor is less industrialised than further north. Associated habitats are chiefly semi-natural woodland, including areas of ancient semi-natural woodland and linear wet woodlands. There are also numerous neutral grasslands, scrub patches and bracken stands, as well as small areas of marshy grassland and tall herb vegetation. Notable features of the river course include cobble banks which support localised plants. Otter occurs throughout the length of the river which is known to be of value to a wide variety of birds, fish, bats and reptiles.	Medium	0.63 km

Birds

- 6.6.4 Sixteen species of birds typically associated with nesting habitats found onsite were returned within 1km of the site (Acer Ecology 2018). Table 6.6 outlines these results.

Table 6.6: Bird Species Records associated with onsite habitats within 1km

Species		Schedule 1	Section 7 list	Red list	Amber list
Bullfinch	<i>Pyrrhula pyrrhula</i>		Yes		Yes
Common crossbill	<i>Loxia curvirostra</i>	Yes			
Cuckoo	<i>Cuculus canorus</i>		Yes	Yes	
Curlew	<i>Numenius arquata</i>		Yes		Yes
Dunnock	<i>Prunella modularis</i>		Yes		Yes
Goshawk	<i>Accipiter gentilis</i>	Yes			
House sparrow	<i>Passer domesticus</i>		Yes	Yes	
Kestrel	<i>Falco tinnunculus</i>		Yes		Yes
Lesser redpoll	<i>Acanthis cabaret</i>			Yes	
Nightjar	<i>Caprimulgus europaeus</i>		Yes		Yes
Pied flycatcher	<i>Ficedula hypoleuca</i>		Yes	Yes	
Song thrush	<i>Turdus philomelos</i>		Yes	Yes	
Spotted flycatcher	<i>Muscicapa striata</i>		Yes	Yes	
Starling	<i>Sturnus vulgaris</i>		Yes	Yes	
Tree pipit	<i>Anthus trivialis</i>		Yes	Yes	
Wood warbler	<i>Phylloscopus sibilatrix</i>		Yes	Yes	

- 6.6.5 The PEA survey undertaken by Acer Ecology found willow warbler (amber listed), dunnock (amber listed), tree pipit (red listed, section 7 listed), song thrush (red listed, section 7 listed), kestrel (section 7 listed), pied flycatcher (red listed, section 7 listed), spotted flycatcher (red listed, section 7 listed), wood warbler (red listed, section 7 listed), and meadow pipit (amber listed).

Dormouse

- 6.6.6 No records of dormouse were returned within the data search.

Bats

- 6.6.7 A total of eight bat roost records were returned within 2km of the site, along with 81 incidental records of bats in flight.

- 6.6.8 The roosts were as follows: An unknown tree roost within Abercanaid Fields SINC, common pipistrelle maternity roost within the town of Abercanaid, brown long-eared hibernation roost at over 1km away, unspecified species roosts over 1km from the site.

- 6.6.9 Species known to forage/commute within the locality were common pipistrelle, soprano pipistrelle, noctule, brown long-eared and unspecified bat species.

Reptiles

- 6.6.10 Records of common lizard, slow worm and grass snake are known within 1km of the site.

Amphibians

- 6.6.11 Great-crested newts are known within 1.1km of the site, though a 2018 GCN assessment and survey of the two nearby ponds (Webber's Pond and a pond within Rhydycar West SINC), found only palmate newt present.

Other species of conservation concern

- 6.6.12 Otter are present on the Afon Taf corridor to the east of the site, approximately 0.6 km away.

- 6.6.13 Marsh fritillary records are present within the nearby SSSI - Cwm Glo a Glyndyrys, found 0.95 km to the north of the site.

- 6.6.14 Records were also returned for west European hedgehog, brown hare and polecat within 2km of the site.

Phase 1 Habitat Survey

- 6.6.15 The site was classified according to the following habitat types: Broad-leaved woodland, scrub, acid grassland, standing water, running water, ephemeral/short-perennial and hardstanding/paths.

Broad-leaved woodland (A.1.1.1)

- 6.6.16 This habitat type is found from the centre of the site, southwards, and surrounding the site boundary also.

- 6.6.17 Species included pedunculate oak, sessile oak, ash, birch sp, willow sp, hazel, alder, sweet chestnut, sycamore, cherry, beech, holly, hawthorn and crab apple, with a common nettle, bramble, bracken, wood sorrel, bluebell, ivy, comb fern, rough meadow-grass, hogweed and herb Robert understorey mix. The understorey in most places was scattered/open, with denser section on steeper topography.

Scrub (dense/continuous) (A.2.1)

- 6.6.18 Areas of scrub are found along the woodland margins, as understorey (particularly to the south-east) and encroaching within the acid grassland area.

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- 6.6.19 Predominantly bramble with alder, hazel, ash, bracken, rowan, creeping buttercup, sow thistle, foxglove, hogweed, common knapweed, heath bedstraw, common centaury, yellow pimpernel, hawkbit sp, gorse sp, lady's mantle and hoary plantain.

Semi-improved acid grassland (B.1.2)

- 6.6.20 Area of acid grassland with encroaching scrub and bracken. Previously areas were plantation forestry (cleared before 2013) with successional growth.

- 6.6.21 Species present were hedge woundwort, great willowherb, bramble, meadow thistle, Yorkshire fog, sorrel, creeping cinquefoil, hazel, alder, willow, herb bennett, silverweed, compact rush, cleavers, crested dogtail, pedunculate oak, soft rush, common nettle, red clover, ribwort plantain, creeping buttercup, catstail, figwort, cocksfoot, perennial rye grass, rosebay willowherb, creeping thistle, herb Robert, dandelion, common ragwort, tormentil, purple loosestrife, jointed rush, flowering rush, square-stalked willowherb, bracken, meadowsweet, black medick, orchid sp (*Dactylorhiza* sp.), butterfly bush, bird's-foot trefoil, meadow vetchling, cherry, hemp agrimony, lesser trefoil, field woodrush, white clover, spear thistle, self-heal, mare's tail, sweet vernal grass, perforate St John's wort, devil's bit scabious.

Standing water (G.1)

- 6.6.22 New reedbed filtration system installed to the immediate west of the site with small area of open water present.

Running water (G.2)

- 6.6.23 Drains (man-made) running through the acid grassland are present (dry during the PEA survey); also stream and land drains within woodland to the south-east, culverted under the main access road

Ephemeral/short perennial (J.1.3)

- 6.6.24 Small areas of this habitat type present around the edges of the car parks, with species including daisy, hoary plantain and scarlet pimpernel.

Survey Results

Breeding Bird Surveys (nightjar)

- 6.6.25 Nightjar (at least two churring males) were heard offsite to the south-west of the site within the Gethin Forest/Graig Gethin SINC. No nightjars were heard or seen onsite during the nightjar survey, or any other survey undertaken.

- 6.6.26 Incidental records of swallow, robin, wren, dunnock, goldcrest, chiffchaff, blackcap, blackbird, magpie, nuthatch, goldcrest, chaffinch, common whitethroat, great spotted woodpecker and tawny owl were obtained during the surveys at the site.

Bats

Ground-Based Tree Surveys

- 6.6.27 A total of seven trees were assessed – two alder, one crab apple, one birch and three oak. Table 6.7 outlines the results.

Table 6.7: Results of the ground-based tree surveys

Species	Findings (visit 1 – 14/08/18)	Findings (visit 2 – 27/08/18)	Findings (visit 3 – 24/10/18)
Alder	Low roost suitability – snag ends with upward facing wounds	n/a	n/a
Crab apple	Moderate roost suitability – cavities on south and north facing aspects (linked); extensive fungus growth (white rot) apparent. No signs of bats present, or bats themselves	As before – no bats or their signs noted	n/a
Birch sp	Moderate roost suitability – fluting on main stem present on all aspects. No bats or their signs observed.	As before – no bats or their signs noted	n/a
Alder (T1588)	n/a	n/a	Low roost suitability – snag ends with some small features and decay on limbs; some ivy covering
Oak 150 (1)	n/a	n/a	Negligible
Oak 200	n/a	n/a	Negligible
Oak 150 (2)	n/a	n/a	Negligible

Building survey

- 6.6.28 The existing visitor centre and security lodge were assessed as having negligible suitability for roosting bats.

Transect Activity Surveys

- 6.6.29 Transects followed a route through the differing onsite habitats.
- 6.6.30 Species recorded during the transects were *Myotis sp*, noctule, brown long-eared, common pipistrelle and soprano pipistrelle.
- 6.6.31 The earliest passes were noted within the central woodland (both common and soprano pipistrelle) with roosts likely to be present within the larger trees to the eastern part of this woodland.

Static monitoring

- 6.6.32 There were several nights during the recording periods where no bat activity was recorded (3 out of 19 nights), and several nights recordings had only a few bat calls.
- 6.6.33 Species recorded in July were noctule, *Myotis sp*, common pipistrelle, soprano pipistrelle and brown long-eared bat. The earliest/latest recordings were from common and soprano pipistrelles (earliest at 20 minutes after sunset; last activity at 1 hour before sunrise).
- 6.6.34 Species recorded in August/September were noctule, *Myotis sp*, and common pipistrelle with some pipistrelle social calls. The earliest and latest activity was from common pipistrelle at 20 minutes after sunset and 25 minutes before sunrise).

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6.6.35 Species recorded in September were pipistrelle social calls and noctule, with the latest activity recorded for noctule at 30 minutes before sunrise. All other calls were recorded in the middle of the night.

Reptiles and amphibians

6.6.36 The reptile survey found common lizard present onsite within the northern edge of the acid grassland. This population was estimated to be of a low-medium size.

6.6.37 Incidental records of common toad and palmate newt were noted during the reptile refugia checks; and common frog was observed during the bat activity transects.

Ecosystem Services

6.6.38 Ecosystems contribute to people's well-being and act as reservoirs of biodiversity that provide biological production. The site is considered to provide the following ecosystem services relevant to the ecology of the site;

- Genetic resources, genes and genetic information provided by the flora and fauna diversity of the site;
- Pollination;
- Habitat; and
- Nutrient cycling (including carbon sink).

6.7 Assessment of Effects

6.7.1 The methodology used to identify and characterise potential impacts and assess the significance of these impacts are described in the Methodology Chapter. The assessment has considered the likely significant effects of the development both during the construction and operational stages based on the parameters provided in Chapter 4 Development Description.

6.7.2 The assessment of impacts is based on potential impacts on ecological receptors evaluated as being of Site level or above only. No consideration is given to those ecological receptors valued below Site level or those scoped out of this assessment (see Table 1).

Site Preparation / Construction

6.7.3 The potential impacts of the site preparation, construction and operation of the proposed development on the IEFs are as follows:

- Loss of established habitat assemblages;
- Habitat loss, fragmentation, degradation, damage and disturbance;
- Direct mortality and / or injury of notable and protected species;
- Indirect disturbance / mortality and / or injury to notable and protected species;
- Direct loss and indirect damage and disturbance to designated sites; and
- Loss, damage and disturbance of priority habitats.

Operational

6.7.4 Following the construction of the proposed development the following operational impacts will be likely to occur:

- Direct and indirect disturbance to protected and notable species;

- Direct and indirect disturbance to designated sites and retained habitats;
- Potential mortality and / or injury to protected and notable species;
- Direct and indirect damage to designated sites and retained habitats; and
- Potential degradation of existing / retained habitats.

Table 6.9: Ecological Effects in the absence of mitigation

IEF	Impact – construction and operational
Bat species	Moderate adverse – loss of foraging habitat through habitat loss and connectivity during construction; potential loss of roost viability due to disturbance issues with development in proximity to retained roosts Moderate adverse – increase in lighting onsite causing fragmentation of population and habitats; potential loss of roost viability due to disturbance issues with development in proximity to retained roosts
Reptiles (common lizard)	High adverse – direct killing and injury during construction; habitat loss and fragmentation of populations resulting in genetic diversity reduction Moderate adverse – potential killing and injury during operation; lack of suitable habitat and habitat degradation
Nesting birds	High adverse – killing and injury of birds nesting; loss of nesting and foraging habitat; disturbance of nesting birds Moderate adverse – disturbance of nesting birds during operational phase; continued degradation of retained habitats through inadequate access controls and management
West European hedgehog	Moderate adverse – killing and injury of hedgehogs during construction phase; loss of habitat for nesting, foraging; loss of habitat connectivity Minor adverse – habitat degradation due to inadequate management during operational phase
European badger	Minor adverse – construction related impacts including killing and injury due to lack of sensitive construction methods (e.g. open trenches, chemicals and fuel stored improperly) Negligible – no perceived impacts during operational phase
European otter	Minor adverse – construction related impacts including killing and injury due to lack of sensitive construction methods (e.g. open trenches, chemicals and fuel stored improperly) Negligible – no perceived impacts during operational phase
Invertebrates	Moderate adverse – direct killing and injury; loss of habitat and connectivity Moderate adverse – habitat degradation and lack of compensation for habitat loss may cause impacts within the local population area
Common dormouse	Minor adverse – whilst it is unlikely that dormice are present onsite, a lack of sensitive construction methodology may result in loss of habitat connectivity across the local landscape and direct impacts on dormice. Negligible – no perceived impacts during operational phase
Amphibians	High adverse – direct killing and injury during construction; habitat loss and fragmentation of populations resulting in genetic diversity reduction and inability to reach breeding ponds Moderate adverse – potential killing and injury during operation; lack of suitable habitat and habitat degradation

Fungi	Minor adverse – loss of habitat during construction Minor adverse – lack of management will result in no suitable grassland areas for fungi; removal of any deadwood will result in no suitable features for woodland fungi
Craig Gethin SINC	Minor adverse – loss of a small area of the SINC which is not in a optimal ffridd habitat state; encroachment of scrub and lack of management resulting in further SINC degradation
Abercanaid Fields SINC	Moderate adverse – loss of small areas of woodland and grassland areas of the SINC which are not in optimal condition; encroachment of scrub and lack of management resulting in further SINC degradation

6.8 Mitigation Measures

Bats

- 6.8.1 All larger trees highlighted as having suitable roost features for bats will be retained and remain unlit.
- 6.8.2 Five Schwegler Type 2FN bat boxes will be installed within wooded areas on trees that do not already have bat features on them. The project ecologist will provide on the ground guidance for the elevation and height of installation.
- 6.8.3 Dark corridors will be retained across the site at night with no lighting of any tree, vegetated corridor, water feature or bat feature (enhancement or otherwise).
- 6.8.4 Any lighting that is present will be low level, low wattage and with no upward spill in line with ILP and BCT (2018) guidance.

Common dormice

- 6.8.5 Precautionary vegetation removal methods advised with works completed under ecological supervision.
- 6.8.6 Removal of vegetation to be undertaken outside of the bird breeding season (i.e. after mid September) with only above ground level vegetation removed in the winter period. A check will be made by a licenced dormouse ecologist. If there are any rootballs present and suitable for use by small mammals, these will be left in situ until temperatures are regularly above 10°C (May). They may then be removed following a further ecologist-led check.

European otter, badger and other mammals

- 6.8.7 All excavations or trenching will that are not covered will include a means of escape for any animals that may fall into them. This may be a plank set at 30° to allow escape.
- 6.8.8 All chemicals and fuel will be stored safely away from any area which may be accessible to animals such as badger, for example, within a locked store.

Amphibians

- 6.8.9 Herpetofauna-proof fencing installed around the perimeter of the site prior to works being completed.
- 6.8.10 Precautionary works as for reptiles (see below), including translocation.

Nesting birds

- 6.8.11 Any vegetation clearance will take place outside of the bird nesting season, i.e. after 31st August and before 1st March. Some species of birds are known to nest outside of these dates in suitable conditions and so caution is advised during clearance. Where any active nests are identified, these should be protected until the young have fledged. Where a Schedule 1 species (as defined in the Wildlife and Countryside Act - <http://www.jncc.gov.uk/page-3614>) is involved, compensation for impacts, e.g., loss of nesting sites, should be devised and implemented.
- 6.8.12 Creation of habitat piles (see reptiles below) will also provide additional opportunities for bird species in terms of additional foraging resources.

Reptiles

- 6.8.13 A reptile mitigation strategy will be agreed and followed. This will include receptor site enhancement (habitat piles, structural management of vegetation to encourage tussocks); vegetation management to encourage reptiles to move to discrete areas to aid translocation; reptile fencing to prevent offsite reptiles entering the construction zone after translocation; translocation to an offsite area to the east, and an onsite area to the north; management during construction (maintaining fencing and prevention of impact on retained habitats) and post-construction monitoring to measure the success of the translocation process.

Invertebrates

- 6.8.14 Compensation management is recommended, with natural regeneration of the northern onsite "reptile area" and over-seeding with devil's bit scabious.

Fungi

- 6.8.15 Woodland (saprophytic) fungi growth will be promoted by retained deadwood piles within woodland areas, and also within the habitat piles part of the reptile mitigation.
- 6.8.16 Grassland fungi will be allowed to grow onsite (where existing soil conditions are appropriate and suitable spores are likely already to be present) with management tailored for promotion of fungal growth. This will involve no fertiliser to be used on grassed areas; cuttings removed from site (can be used to create and enhance habitat piles); no removal of mosses (i.e. no scarification). No cuts will be undertaken in late summer or autumn to allow fruiting bodies to grow.

6.9 Residual Effects

- 6.9.1 Based on the above mitigation, the residual effects of the proposed development are identified below:

Table 6.10: Residual Ecological Effects

IEF	Impact	Residual Impacts
Bat species	Medium	Minor
Reptiles (common lizard)	High	Minor
Nesting birds	High	Minor
West European hedgehog	Medium	Minor
European badger	Minor	Negligible
European otter	Minor	Negligible
Invertebrates	Medium	Minor
Common dormouse	Minor	Negligible
Amphibians	High	Minor
Fungi	Minor	Minor

Craig Gethin SINC	Minor	Minor
Abercanaid Fields SINC	Medium	Minor

6.10 Cumulative Effects

- 6.10.1 The cumulative assessment is based on the proposed development and the development identified in Chapter 3. This includes the existing BikePark Wales centre, trails, parking areas and structures as consented within planning permissions to date. In considering the cumulative impact, the Statement operates on the worst-case scenario, as not all ecological effects have been fully quantified or are available in writing for previous stages of development.
- 6.10.2 The previous (2012) survey of the site found that the two dominant habitat types present were semi-improved grassland and broad-leaved woodland. This can be compared with the site's PEA undertaken in 2018, after the initial development works had been undertaken.
- 6.10.3 The main difference is the increase in hardstanding areas and trails through the woodland/grassland habitats, as well as an increase in scrub. There is a decrease in the woodland as a result of the increase in parking areas, though there also appears to be an increase in the grassland area, through management of scrub.
- 6.10.4 Overall the grassland has increased in diversity since the 2012 survey, with the sward being tussocky and varied in height now, compared with a closely cropped sward in 2012. The species mix is also greater, with a range of species indicative of acid grassland. The western woodland has also grown as expected from a sparse open coniferous area to a scrubby and mixed woodland edged habitat leading into Craig Gethin SINC. The former open habitat appears to be more indicative of a ffridd structure, with the denser structure at present less so.
- 6.10.5 There have been trails through the site for many years (historical aerial imagery notes access tracks in 1945) for vehicular access, and paths, with additional trails added for bikes in 2012.
- 6.10.6 Whilst the presence of the BikePark has resulted in increased hardstanding and activity, wider changes in landscape have shown an increase in biodiversity quality for the acid grassland onsite within the Abercanaid Fields SINC (previously scrub). Conversely, a lack of wider management has resulted in an increase in woodland which has resulted in a decline in the ffridd habitat of the Craig Gethin SINC due to the canopy closing.
- 6.10.7 The new proposals will result in the loss of a small area of grassland, scrub and woodland understorey which is part of the Abercanaid Fields SINC. The trees of value will be kept, retaining a wooded area without a significant understorey, but with a canopy. The grassland within the SINC is marginal along the woodland edge.
- 6.10.8 The total area of Abercanaid Fields SINC within the proposal boundary is 8711.177m² with its total area being 245,862.943m². This SINC is designated due to both the woodland and grassland elements with the latter being arguably more valuable.
- 6.10.9 The Abercanaid Fields SINC area has undergone changes since 2012, with some forestry operation adjacent to the area likely to have impacted semi-natural woodland edges through exposure to wind etc, on its removal. The main operation of BikePark Wales is outside of the SINC area, with the central wooded area having some new trails through it. This area (prior to 2012) was more open, with new

growth since this time causing canopy closure. This is evidenced by the large amount of same-aged growth and leggy specimens present.

- 6.10.10 Whilst there has been a loss of grassland within the SINC area since the site has operated as BikePark Wales, this will be partially offset by the retention of an area of grassland to the north of the site along with scrub management to create new acid grassland in this area also. This area is mainly outside of the SINC boundary, through removal of scrub and new growth (low value) woodland within the SINC, recreating grassland areas, will provide habitat reinstatement of greater value than is currently present.
- 6.10.11 The Craig Gethin SINC is onsite within an area of 2413.931m², with a total area of 369,820.578m². The onsite area is woodland and access track, with the sites designation being for ffridd mosaic. The onsite area has been in a very similar state since prior to the BikePark Wales construction, with additional traffic and access likely since this time along the main access road. Aerial imagery from 1945 shows this area to be more open with more scattered trees and open canopy, with imagery from 2001 having a canopy layer more or less enclosed, though the small areas of grassland present at this time were not visible in 2012.
- 6.10.12 To provide mitigation for the loss of an area of the Craig Gethin SINC, opening up scrub and removal of some low value trees, as before, will be of benefit as it will create new open areas as ffridd. This is a transient habitat type and requires management to retain its mosaic over time. This management will benefit reptiles also, which are likely to have seen a loss of habitat due to the shading out of the ground and reduction in mosaic.
- 6.10.13 Equivalent areas of both SINC's to be lost will be mitigated as above, which will elevate the quality of the SINC habitat onsite above the present state. A lack of this management going forward will result in scrub encroachment and loss of grassland within the Abercanaid Fields SINC; and continued loss of ffridd within Craig Gethin SINC.
- 6.10.14 The onsite grassland in 2012 was not documented to support any devil's bit scabious. The 2018 surveys by Wildwood Ecology and Acer Ecology found this species to the east of the site (offsite) within Abercanaid Fields SINC. One devil's bit scabious plant was found onsite within the northern grassland also (no marsh fritillary association with this was observed). The nearest SSSI (Cwm Glo a Glyndyrys) is known to support marsh fritillary butterflies. The previous application and the current proposals will not impact upon this species as there is no loss of habitat known to be used. There will be additional seeding of devil's bit scabious to provide an additional area and potential stepping stone resource.
- 6.10.15 There has been no removal of trees which have supported bat roosts since 2012, and the majority of the site is unlit at night, providing dark corridors for bats within the woodland areas. The lit areas may have become a barrier for more light intolerant species however, since lights were installed. The additional of further lighting is likely to impact upon *Myotis* and brown long-eared bats that use the site, along with invertebrates. As such a sensitive lighting plan will be created to demonstrate best practice planning with respect to wildlife.
- 6.10.16 The likely cumulative effects of the development alongside that of the existing BikePark Wales site are summarised below Note, that given the residual effects of the proposed development are identified to

be minor or negligible, the moderate cumulative effects and high cumulative effect identified are considered to be associated with the previous stages of development

Table 6.11: Likely effects on IEFs through existing development

IEF	Likely Cumulative Impact
Bat species	Minor adverse – no trees with roosting suitability were documented to be removed; with likely impacts restricted to a small amount of additional lighting present on the visitor centre building.
Reptiles (common lizard)	Minor adverse – in relation only to increased activity onsite Moderate positive – change in management has increased habitat suitability within northern acid grassland section
Nesting birds	High adverse (in nesting season)– opening up additional trails will likely have meant that suitable nesting habitat has decreased Moderate adverse (outside of nesting season) – loss of some scrub foraging and cover habitat
West European hedgehog	Moderate adverse – reduction in suitable nesting habitat due to scrub removal
European badger	Negligible – no evidence of badger use of the site was noted during previous surveys
European otter	Negligible – no evidence of otter use of the site was noted during previous surveys
Invertebrates	Minor adverse – in relation only to increased activity onsite Moderate positive – change in management has increased habitat suitability within northern acid grassland section
Common dormouse	Negligible – no evidence of dormouse use of the site was noted during previous surveys, and further survey effort for this species was scoped out
Amphibians	Moderate adverse – it is likely that the removal of scrub and understorey in wetter areas will have impacted on available amphibian habitat Moderate positive – the increase in grassland quality has likely increased the value for the area for amphibian species
Fungi	Minor adverse – the closely cropped nature of the northern grassland area possibly had a management practice more suited to some grassland fungi in 2012 (though no surveys were completed to evidence this) Minor positive – the retention of brash and deadwood through opening trails has provided woodland fungi with reserves previously unavailable
Craig Gethin SINC	Minor adverse – due to increased activity and lack of ffridd management Minor positive – some open areas are encouraging of the ffridd habitat
Abercanaid Fields SINC	Minor adverse – reduction in scrub and woodland understorey due to increase in activity and trails Low positive – increase in grassland quality within northern section

6.11 Summary

- 6.11.1 This ecology statement has been by Wilwood Ecology, in accordance with published Ecological Impact Assessment (EcIA) Guidelines (CIEEM, 2016).
- 6.11.2 The Ecological Statement presents the likely ecological effects of the proposed development on the ecological baseline of the development site and surrounding area. The Statement identifies that the proposed development would result in some moderate adverse effects on important ecological features if suitable mitigation is not proposed. To address this, the assessment recommends a series of mitigation measures that will be incorporated into the scheme design. Following the implementation of these measures, the Statement concludes that the effects would be minor or negligible. In respect of the SINCs partially present on site, the Statement concludes that the mitigation measures could allow for their enhancement, and prevent a further decline over time.
- 6.11.3 The Statement also considers the cumulative impact of the proposed development alongside that of the current BikePark Wales centre. In considering the cumulative impact, the Statement operates on the worst-case scenario, as not all ecological effects have been fully quantified or are available in writing for previous stages of development. The Statement identifies that the majority of the effects would be negligible or minor adverse, but some would be moderate adverse (hedgehog and amphibians) and one high adverse (nesting birds). However, given the residual effects of the proposed development are identified to be minor or negligible, the moderate cumulative effects and high cumulative effect are considered to be associated with the previous stages of development. The Statement also identifies likely positive cumulative effects on funghi habitats and the Craig Gethin SINC and Abercaraid Fields SINC.

