

Blaenau Gwent County Borough Council

**Land at Badminton Grove,
Ebbw Vale**

Preliminary Ecological Appraisal



November 2019



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Cover photographs: Left: looking north-east from western corner: Right: looking south-west from centre of site.

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Executive summary

Blaenau Gwent County Borough Council are proposing to build a new school on land at Badminton Grove, Ebbw Vale. The study area comprises the site of the former Glyncoed Comprehensive School (recently demolished). It mainly supports a mix of hard-standing and sparsely vegetated, compacted rubble, and the former areas of grassland, hedge and standard trees that made up the old school landscaping. The former sports pitches are still present, in a neglected condition, at the eastern end of the site. A large sports building at the northern corner is currently used as the Blaenau Gwent Indoor Bowls Centre.

The habitats within the site are all typical of urban and brownfield land and do not include any protected sites, or habitats that are scarce in a county context. The plants and animals observed during the habitat survey on 19 November 2019 found only common and widespread species and concluded that most of the site has no significance for nature conservation. However, additional species would almost certainly have been found if surveyed during a more favourable time of year and/ or by using more detailed survey methods.

No signs of protected species were seen during the survey but there is potential for some parts to support reptiles; particularly the areas of denser grasses and sunny slopes in some parts of the site's perimeter. There is also potential habitat for nesting birds in the spring and summer. The risk of bats roosting on the site appeared to be negligible. The only non-native invasive plant species found during the survey was Hollyberry Cotoneaster, although others might be present at very low density and not evident during November.

A series of recommendations are made to minimise disruption to wildlife during construction and to incorporate biodiversity features into the new development.

1. Introduction

Blaenau Gwent County Borough Council (BCCBC) are planning to construct a new school on brownfield land at Badminton Grove, Ebbw Vale (grid reference SO164112). This Preliminary Ecological Appraisal has been commissioned to inform the plans for the site.

The study area includes the site of the former Glyncoed Comprehensive School (now demolished), an indoor bowls centre and several former sports pitches.

The objectives for the ecology study were:

- To undertake an ecological inspection of the site and to produce a habitat map and habitat descriptions based on standard phase 1 habitat survey methods.
- To collate relevant existing data for the site through a desk study search.
- To produce a list of plant species observed during the site visit, and any incidental observations of animals and birds.
- To assess the site's potential to support protected species and make any necessary recommendations for further survey to clarify the presence of protected species or any other ecological constraints.
- To identify any features of significant value for nature conservation.
- To make broad recommendations for avoiding, minimising or mitigating potential ecological impacts, and to incorporate biodiversity enhancements within the development design.

2. Survey method

Desk study

Existing biological records for the study area and a 2km search buffer around it were obtained by BGCBC from the South-East Wales Biodiversity Records Centre (SEWBRc) (Aderyn search reference 4187925). This also included gathering information on nearby Sites of Importance for Nature Conservation. A search for statutory protected sites in and around the search area was carried out by consulting the MAGIC.gov.uk web-site.

Habitat survey

The survey was undertaken by a simple walk-over method, examining and mapping the various habitat types. Habitats were mapped by eye onto a survey plan, using a method based on phase 1 habitat mapping conventions (JNCC, 2010). Species were recorded as they were seen, noting the habitats where they were recorded.

The site inspection was undertaken on 19 November 2019. November is generally considered sub-optimal for habitat surveys, because many plants and animals are dormant or difficult to record. However, it was still possible to gather a reasonable amount of data on the habitats by using vegetative characteristics of the plants, and a few of the trees had not shed all their leaves.

The fieldwork and assessment were undertaken by Dr Peter Sturgess CEnv MCIEEM, an experienced ecologist familiar with the types of habitats and species that would be expected to occur on this site.

The weather during the survey was overcast, cold and with a light breeze. The survey date followed several weeks of cold weather, and there was a heavy frost the night before. The study area was restricted to the red line planning application boundary, with limited

observations of the immediate surroundings. The survey did not include access inside any buildings or structures.

The majority of plant species were identified in the field, but samples from a few specimens were collected for later determination (particularly to confirm species from dead leaves and other plant remnants). Some ornamental species were not confirmed to species level, but this is not considered significant because they are not species likely to be of value for nature conservation or to cause problems for a future development.

3. Survey findings

Desk study

Sites data

There are no Sites of Special Scientific Interest (SSSIs) within 2km of the site. The closest is Mynydd Llangattock SSSI, which lies approximately 2.3km to the north-east. The closest European protected site is the Usk Bat Sites Special Area of Conservation, which overlaps much of Mynydd Llangattock SSSI so is also approximately 2.3km north-east at its nearest point. These protected sites are not considered further in this report because of their distance from the study site and because they are separated from it by urban areas with little connecting habitat.

The location of Sites of Importance for Nature Conservation (SINCs) and other locally designated nature conservation areas is shown in Figure 1.

The closest Local Nature Reserve (LNR) is the Beaufort Hills Pond and Woodland LNR, which lies approximately 590m to the north-east at its nearest point. This is a large site with a mix of young woodland, grassland, heath and wetlands on a former land reclamation site. There is no direct connectivity with the current survey site and any construction activities here would not be expected to have an impact on species or habitats within the LNR. No other LNRs were present within a distance considered potentially vulnerable to possible redevelopment at Badminton Grove.

There are two locally designated SINCs within 500m of the site. The Ebbw River North Section SINC lies approximately 30m outside of the study area at its nearest point. This is designated for its fish populations (including Bullhead and Brown Trout), its use by Otters, and its breeding population of Dippers. It also supports some interesting hybrids and triple hybrids of Monkeyflower. The Ebbw is a relatively large SINC and is mostly restricted to the river and immediately adjacent riverbank habitats. In this case the river is separated from the proposed development site by Allotment Road and a steep grass slope, and there are unlikely to be any direct impacts on the SINC or its related wildlife. However, the surface water from the study area almost certainly drains to the river, so there may be potential for indirect impacts relating to water quality.

The Land at Park View SINC lies approximately 290m north of the study area. This is a large horse-grazed field with a mix of diverse marshy grassland, semi-improved grassland and scrub. There are no direct habitat connections with the current study area, so it is not considered to be at risk of any impacts from the proposed school development.

There is a steep wooded slope designated as semi-natural ancient woodland approximately 180m to the north-east. It is separated from the study area by roads and other built up land and the River Ebbw, and is therefore unlikely to be affected by the proposed works.

The other SINCs are all at least 500m away from the study area. They are not considered further because they are unlikely to be affected by works at the Badminton Grove site.

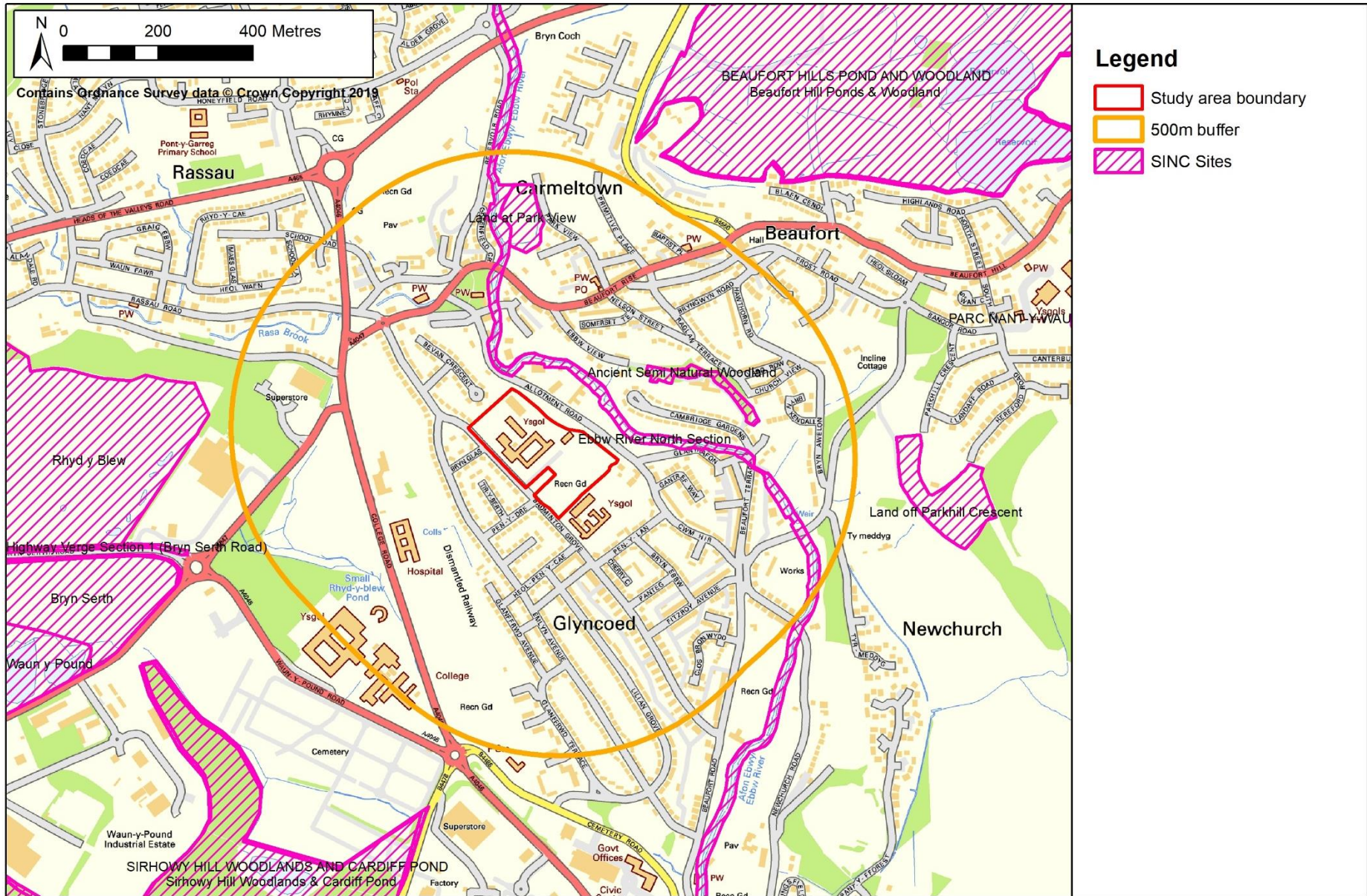


Figure 1. Sites of importance for nature conservation

Species data

The data search returned records for 435 species, with over 4500 records of species considered to be of significance for nature conservation. A summary of these is provided in Appendix 1. The most relevant records are discussed in the assessment section of this report.

Most of the data comprised records of birds, and most was collected from sites located more than 500m away from the study area, and therefore unlikely to be directly applicable to the current project. The only existing observations from within the site were records of Noctule and Pipistrelle bats which were recorded in flight in 2013 prior to the demolition of the former school buildings.

Habitat survey

The habitat plan is presented as Figure 2. Specific habitats within the site are described by Target Notes (TN) TN1 to TN19, in Table 1. Each note includes a photograph, a brief description of the habitat, the main plant species present and any other features of possible significance to wildlife. The habitat plan is based on a site boundary plan and aerial photograph. However, it should only be considered approximate because the habitat features have been plotted by eye. Figure 2 is shown on an aerial photographic background to give an indication of the habitats in the immediate surrounding area.

A list of the species recorded during the survey is presented in Appendix 2.

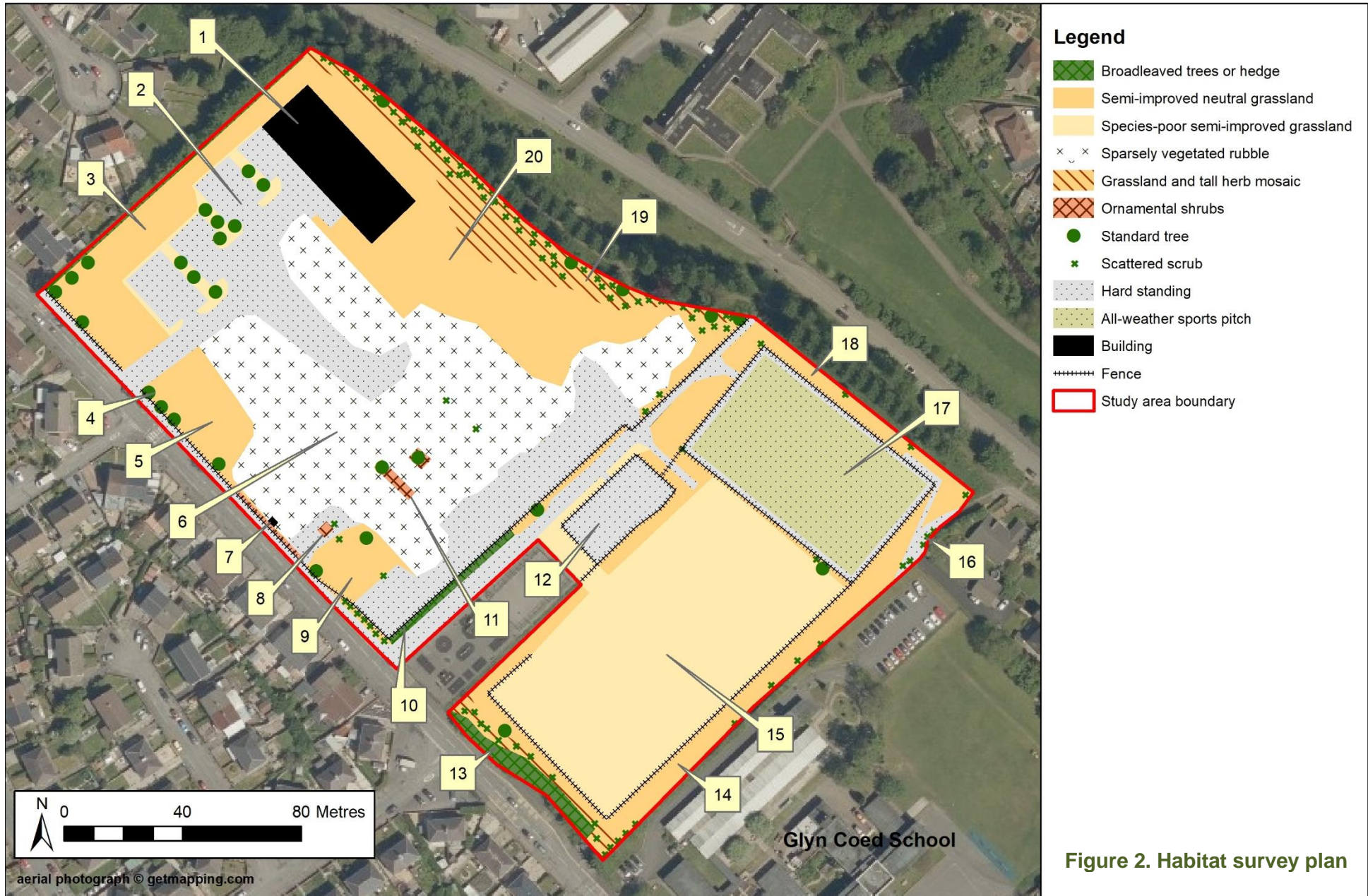
















Table 1. Habitat Survey Target Notes.

TN	Description/ photo
<p>1</p>	<p>Building. A large sports hall used as the Blaenau Gwent Indoor Bowls Centre. The inside was not accessed during the survey.</p> <p>It is a modern brick building with steel cladding and a flat roof. There did not appear to be any obvious cracks or cavities where bats might gain access for roosting.</p> 
<p>2</p>	<p>Car park. The bowls centre car-park has a series of asphalt surfaced parking bays, divided by strips of short mown grassland and young standard Lime trees. The short-mown grass is relatively species poor, with a high proportion of Red Fescue, Common Bent, Glaucous Sedge, Self-heal and mosses.</p> 




TN	Description/ photo
3	<p>Semi-improved neutral grassland. Formerly mown as part of the school grounds, this belt of rough grassland has reverted to a more tussocky structure. The main species include Red Fescue and Common Bent, with occasional Cock's-foot, Timothy and scattered Soft Rush. A trimmed Beech hedge is present along the northern boundary.</p> 
4	<p>Standard trees. Several mature standard trees are present around the western margin by Badminton Grove. Most are Downy Birch, but there are also individual Beech and Lawson Cypress, and a Cherry Laurel bush. One tree beside the gate (pictured) supported rot holes but these did not appear to be deep enough to provide potential roost sites for bats or nest sites for birds.</p> 
5	<p>Semi-improved neutral grassland. A former mown amenity grass area, supporting a dense sward of Common Bent, Red Fescue and Hairy Sedge, with small amounts of Yorksire Fog, Timothy, Soft Rush, Jointed Rush, Compact Rush, Tufted Hair-grass, Meadow Vetchling, Dandelion and Red Clover.</p> 

TN	Description/ photo
6	<p>Sparsely vegetated Rubble. An extensive area of compacted concrete rubble on the site of the former school buildings. The most frequent flora includes Common Bent, Red Clover, Colt's-foot, Dandelion, Common Cat's-ear, Yarrow, Bird's-foot Trefoil, Glaucous Sedge, Hoary Willowherb, American Willowherb, Curled Dock, Sorrel, Pendulous Sedge, Broad-leaved Dock, and a number of common mosses.</p> 
7	<p>Building. A small shed with louvre doors, beside a hedge of Garden Privet. The doors were closed (but partially broken). The structure did not appear likely to provide suitable habitat for bats or birds.</p> 
8	<p>Ornamental planting. An old raised planter with a mix of garden plants and ruderals, including Shrub Veronica, Snow-in-summer, Primrose, Pieris, Birch, Common Bent, Yorkshire Fog, Grey Willow, Red Fescue, Meadow Vetchling and Hedge Bindweed.</p> 

TN	Description/ photo
9	<p>Semi-improved neutral grassland. A former mown amenity grass area that includes a mature standard Cherry tree. There is a dense sward of Red Fescue, Hairy Sedge, Timothy and Common Bent, with occasional Soft Rush, Hard Rush and American Willowherb. A pile of garden cuttings is present beside the boundary fence.</p> 
10	<p>Broadleaved trees. An asphalt road is bordered along its northern side by a strip of young broadleaved trees including Blackthorn, Field Maple, Ash, Beech, Guelder Rose and Hawthorn. Associated ground flora includes Nettle, Bramble, Tufted Vetch, Wood Avens, Hedge Woundwort, and Grey Willow saplings. The Blackthorn scrub also extends a short distance along the road verge beside Badminton Grove.</p> 
11	<p>Ornamental planting. Several former planting beds with a mix of garden shrubs and self-sown ruderal plants. Species include Shrub Ragwort, Shrubby Cinquefoil, Japanese Anemone, Chilean Myrtle, French(?) Geranium, Hedgerow Crane's-bill, Common Knapweed, Hazel, Nettle, Ragwort, Broad-leaved Dock, several Cypress and willow trees.</p> 

TN	Description/ photo
12	<p>Disused tennis court. An asphalt surface with mosses and sparse ruderal plants around the margin. A border of species-poor semi-improved grassland dominated by Perennial Rye-grass and White Clover is present around the outside of the fence. There is a single mature Beech tree in the grass verge to the west side of the road opposite the tennis court.</p> 
13	<p>Rough grassland and tree planting. The strip of sloping ground between the old sports pitch and Badminton Grove supports young broad-leaved trees at the foot of the slope, and semi-improved grassland at the top. The trees include Hawthorn, Field Maple, Blackthorn, Cherry, Elder, Beech and Downy Birch, with Bramble, Nettle and Broad-leaved Dock dominating the ground flora. A Broad-leaved Helleborine was also noted here. The grassland is dominated by Common Bent, with patchy tall herbs including Rose-bay Willowherb and Greater Willowherb. Several anthills are present at the top of the slope.</p> 
14	<p>Semi-improved neutral grassland. A south-east facing slope between the sports pitch and the school boundary, dominated by Red Fescue, Common Bent and supporting numerous ant-hills. Other plants include Timothy, Red Clover, Germander Speedwell, Meadow Vetchling, Perennial Rye-grass, Dandelion, Black Medick, Ribwort Plantain and Wild Strawberry. The foot of the slope supports a damp ground flora including Greater Willowherb, Brooklime, Hairy Sedge, Ragged Robin and Soft Rush. The hedge just beyond the boundary includes Hawthorn, Blackthorn, Holly, Beech and Grey Willow.</p> 

TN	Description/ photo
<p>15</p>	<p>Former sports pitch. An extensive area of mown grassland on damp ground; dominated by Perennial Rye-grass, Creeping Buttercup, Dandelion, Timothy, Jointed Rush, Creeping Bent and mosses.</p> <p>The unmown sloping banks around the pitch are a little more diverse, supporting a flora that includes Red Fescue, Hairy Sedge, Tufted Hair-grass, Crested Dog's-tail, Ribwort Plantain and False Oat-grass.</p> 
<p>16</p>	<p>Eastern margin. A small section of the eastern corner adjoins an access road. The verge beyond the road supports a mix of coarse grasses, Rose-bay Willowherb, Bramble and Ivy, and there is a row of taller Cypress trees with occasional Holly and Elder adjoining the neighbouring property.</p> 

TN	Description/ photo
17	<p>All-weather sports pitch. A dis-used pitch formed from geotextile and sand is becoming colonised by sparse grasses, mosses and lichens.</p> 
18	<p>Semi-improved neutral grassland. The top of the north-east-facing bank supports tussocky grasses and tall herbs, with the most frequent species being Common Bent, Cock's-foot, Timothy, Broad-leaved Dock, Common Knapweed, Ragwort, Yarrow and Meadow Vetchling. Other species present include Hogweed, Nettle and Perforate St.John's-wort, with sparse Rowan and Bramble scrub. A belt of tall, mature Poplars lies outside the site boundary.</p> 
19	<p>Scrubby bank. The western part of the northern slope supports a mix of grassland, scrub and tall herbs. Dominant species include Common Bent, Yorkshire Fog, Bramble, Rosebay Willowherb, Creeping Thistle and Nettle. There are standard trees of Japanese Larch, Beech and Scots Pine, and several young Ash, Willow and Sycamore saplings.</p> 

TN	Description/ photo
20	<p>Semi-improved neutral grassland and tall herbs. A large patch of tussocky grasses, grading into tall herbs toward the north-eastern bank. The most frequent species include Common Bent, Cock's-foot, Red Fescue, Creeping Buttercup, Red Clover, Common Knapweed, Timothy, Creeping Thistle, Rose-bay Willowherb, Ribwort Plantain, Curled Dock, Soft Rush and Hard Rush. Part of the area includes a patch of sandy ground (possibly a former long-jump pit) with very little vegetation.</p> <p>Several piles of horse droppings indicate that this area has been grazed relatively recently, but there were no livestock present at the time of the survey.</p>



4. Ecological assessment

The following section evaluates the nature conservation value of the habitats and species within the site, based on the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017).

The main reference for evaluating the nature conservation features on and around the study area are the Wales Biodiversity Partnership criteria for selecting Wildlife Sites in Wales (2008), the Blaenau Gwent Local Biodiversity Action Plan 2015 (LBAP) and the possible presence of protected species. The various broad groups of plants and animals are discussed separately, in approximate taxonomic order.

Plants and habitats

A total of 109 species of vascular plants were identified during the survey. These are all common and widespread species in urban areas, and some have been planted as part of the school grounds. None of the species observed are included in the lists of rare plants in the Wildlife Sites guidelines. It is likely that additional species would be found if a survey were to be undertaken at a more favourable time of year, but in this case the nature of the habitats suggest that no species of nature conservation significance would be expected.

The majority of the study area supports unmanaged grassland, which was previously mown as part of the school grounds and sports pitches, and ruderal vegetation that has developed

on the rubble footprint of the former buildings. Most of this vegetation is relatively species poor and of recent origin. There are several areas of slightly older, less managed grassland, particularly around the south and east margins, which are indicated by the presence of ant-hills. However, these do not appear likely to support uncommon plant species.

The trees within the site are mostly remnants from the former school grounds, and they include a mix of native and non-native species (including the old ornamental planting beds). The trees do not appear to have any special value for nature conservation, although there is a very low risk that holes in one Birch tree (TN4) might be accessible to bats or birds. Some of the standard trees support a good covering of mosses and lichens. The species that were identified growing on the trees are all common species, but their presence and diversity probably indicates good air quality in the general area.



Abundant lichens and mosses on the standard Beech west of TN12.

Only one species of non-native invasive plants was recorded during the survey. Hollyberry Cotoneaster was seen in several locations, particularly at the site boundary near TN7 and TN19. This is discussed further under 'ecological constraints'.



Hollyberry Cotoneaster at TN7.

Fungi

The only fungus noted during the survey was Sycamore Tar-spot, which is a very common species. Many other fungi are undoubtedly present, but most would not be expected to appear following heavy frosts.

The old grassland areas within the school grounds were apparently mown regularly for several decades and might feasibly have supported waxcap fungi. However, if this were the case the current lack of grass management would have prevented them from fruiting.

Invertebrates

The mix of habitats within the site is potentially suitable for a good diversity of invertebrates, especially species associated with sparsely vegetated ground, ruderal plants and areas with long grass and scattered trees. The probability of any rare species being present is low, but cannot be discounted. However, insect communities associated with brownfield land like this are probably short-lived (reflecting the transition nature of the habitat) and unlikely to support any species with legal protection.

The sloping banks beside the sports pitch at TN13 and 14 support numerous ant-hills, indicating that they have supported sunny grassland habitat for many years. The presence of high densities of ant-hills is a factor that can be used to qualify SINC sites. In this case the population of ant-hills is not considered significant in a county context, but they may be locally important and could feasibly enhance the habitat diversity for birds, reptiles and other invertebrates.

Several insects of conservation interest were reported through the SEWBRc data search. Very few were within 500m of the boundary, and these were mainly limited to moths trapped from Cambridge Gardens to the north-west. There are several records of Dingy Skipper Butterfly from nearby SINC sites, and this species could feasibly colonise brownfield land with sparse vegetation relatively soon. Most other existing records are dragonflies and butterflies from much further away and unlikely to colonise the study area due to the nature of the habitats.

Amphibians

No amphibians were observed during the survey, and there are no potential amphibian breeding ponds within the site. The only amphibian within 500m reported through the data search was a Common Frog at Rhyd y Blew ponds (this is probably a grid reference error, because these ponds are more than 500m from the site). Common Frog, Common Toad and Palmate Newt are all known from SINC sites in the wider area, so they could feasibly colonise the site. However, the nearest ponds shown on Ordnance Survey maps are over 400m away and all are separated from the study area by roads and other built up areas. The long grass and scrub habitats could be a good foraging habitat for amphibians, but there are unlikely to be many present.

Reptiles

Reptiles would not be expected to be encountered during a cold November survey, but a provisional assessment was made of the habitat suitability for them. The tussocky grassland could be good for reptiles, especially at TN13 and 14 where there are many ant-hills. The sparsely vegetated rubble probably has insufficient cover for reptiles at present but is likely to become good potential reptile habitat if left unmanaged for another year or so.

The SEWBRc data included no records of reptiles within 500m of the site; the nearest being Common Lizards at Beaufort Hill LNR approximately 800m away. However, it is feasible that there are reptiles nearby that have not been reported, so their presence within the study area cannot be discounted. The most likely species to occur on this site would be Common Lizard or Slow Worm.

Birds

Only a few birds were observed during the survey. Those that were recorded were very common species, mostly in the hedges and trees around the site boundary.

The majority of the SEWBRc data comprised bird records. The data was mostly from regularly monitored birdwatching sites in the wider area, the closest being Rhyd-y-Blew, Bryn

Serth and Beaufort Ponds. Some of the species recorded at these sites could feasibly be found in the current study area, but many would not be expected to use it in its present condition. Two species of nature conservation significance that might feasibly use the site might be Lapwing and Skylark, which have both been recorded nesting in a number of Ebbw Vale's brownfield and industrial sites in recent years. However, there is probably too much tall vegetation and disturbance to allow Lapwings to breed successfully here.

Mammals

The only mammal seen during the habitat survey was a domestic cat. The study area probably supports a number of small mammals such as mice and voles, but a high proportion of it has insufficient vegetation cover to provide suitable habitat.

The standard trees are generally too young, or too healthy, to have cavities suitable for roosting bats, although the old Birch tree at TN4 could feasibly provide small spaces inside rot holes. The site is probably used by foraging bats, especially beside the tall trees at the north-eastern boundary. However, street lighting from the adjacent roads would probably deter any light-sensitive species.

Pipistrelle and Noctule bats were recorded over the site in 2013, and it is reasonable to suppose that they still hunt over the area. Bat records from the wider area also included Soprano Pipistrelle, Lesser Horseshoe and indeterminate *Myotis* bats. The SEWBReC data search produced several other mammal records from within 500m of the site. The closest was a record of Hedgehog from Bevan Crescent less than 50m from the site boundary in 2015. It is likely that Hedgehogs still use the site. A dead Otter was reported on a road approximately 500m to the east in 2006. However, Otters would not be expected to use the habitats within the study area. The nearest records of Badgers are more than 1km away.

Summary of nature conservation value

The nature conservation significance of the features within the site are summarised in Table 2 below. Where a feature is considered significant, its value is expressed in terms of the geographical context within which it is considered to be important (e.g. an SSSI would be nationally important, while a species-rich hedgerow might be locally important).

Table 2. Summary of nature conservation value

Feature	Summary of nature conservation importance
Habitats	<u>Ecological value within the site.</u> Limited species diversity, but moderate range of grassland, ruderal and tree habitats.
Plants	<u>Not significant.</u> Limited to common and widespread species.
Fungi	<u>Not significant.</u> Unlikely to support any notable species.
Invertebrates	<u>Potential for ecological value within the site.</u> Potentially suitable habitat for Dingy Skipper and a good diversity of other insects. Further survey would be required to clarify this.
Amphibians	<u>Not significant.</u> No suitable habitat or evidence of presence.
Reptiles	<u>Potential for ecological value within the site.</u> There is potentially suitable habitat and further survey would be required to clarify whether or not reptiles are present.
Birds	<u>Not significant.</u> Limited nesting and feeding habitat, only likely to support small numbers of common species.
Mammals	<u>Not significant.</u> May occasionally support foraging bats, but roosting is very unlikely.

5. Potential ecological constraints

Redeveloping the site will inevitably involve loss or disturbance of several habitats and a range of species. The following section summarises the potential ecological constraints relating to this project that would result from wildlife legislation. These should be taken into account during the design and construction phases of the proposed works.

Schedule 9 plants

Hollyberry Cotoneaster was found during the survey. This is a non-native invasive species included in Part II of Schedule 9 of the Wildlife and Countryside Act 1981, making it unlawful to cause it to spread in the wild.

Cotoneaster species are typically spread by seed via bird-droppings. Taking the plants to a licenced tip as controlled waste is probably sufficient to remove them. If the plants are only cut down, treating the stumps with a herbicide might be necessary to prevent them re-growing.

A re-survey in summer would help to identify whether there are any other invasive species on the site that might not have been visible in November.

Reptiles

All native British reptiles are protected under parts of the Wildlife and Countryside Act 1981, making it unlawful to kill, injure or trade in the animals. Where a project is likely to cause an impact on reptiles, reasonable measures would need to be taken to minimise the risk of killing or injuring them. In this case it is uncertain whether there are any reptiles present, but there is potentially suitable habitat for them in several parts of the site, particularly along the south and eastern boundaries. A reptile survey during the spring is recommended, to clarify whether or not any reptiles are actually present, and if so, to estimate the size of the population. The nature and extent of any mitigation for reptiles would depend on the survey findings and the future proposals. Possible options might include leaving areas with reptiles undisturbed, or if necessary, capturing and relocating them to suitable safe habitat nearby.

Nesting birds

All wild bird nests, while they are being built or used, are protected under the Wildlife and Countryside Act 1981. Damage and disturbance to nests should therefore be avoided. In this case, the potential nesting habitat is mostly limited to the trees and scrub, which are mainly at the site boundaries. However, the possibility of ground nesting species cannot be ruled out.

It is generally recommended that any clearance work should be undertaken outside the bird nesting season. If work is expected to affect potential nesting habitat between March and August inclusive, it would be appropriate to take further advice from an ecologist and to carry out a bird survey immediately before the work commences to ensure that any nests can be given appropriate protection.

Bats

All species of British bat and their roosts are protected under the Wildlife and Countryside Act 1981, and bats are classified as European Protected Species under the Conservation of Habitats and Species Regulations 2017. This makes it an offence to kill, injure or disturb a bat and to destroy any place used for rest or shelter by a bat.

The risk of bats roosting in the trees or buildings appears negligible. However, bats can utilise very small holes and sometimes only use roosts intermittently. A final preconstruction check is recommended to examine any trees or structures that may need to be removed, in case new openings have become available since this initial survey.

Other wild mammals

The scrub and tall herb habitats have the potential to support mammals such as mice and voles. All wild mammals receive protection under the Wild Mammals (Protection) Act 1996. This makes cruel ill-treatment of wild mammals an offence, so care should be taken to carry out site clearance work in such a way that allows mammals to escape unharmed and does not cause unnecessary suffering (for example, as would be caused by crushing them, or injuring them with cutting equipment). Carrying out clearance of tall vegetation gradually or in two stages could be considered as a means of reducing risk to small mammals.

Invertebrates

If the site remains undeveloped for several years there is a good chance that additional species will colonise, some of which may be S7 or LBAP species (e.g. Dingy Skipper butterflies, as mentioned above). These do not constitute the same level of constraint as species protected under the Wildlife and Countryside Act, but an invertebrate survey in summer may help to clarify the presence of any rare species and suggest possible relocation or other mitigation options.

6. Recommendations for ecological enhancement

Redevelopment of this site could present a number of opportunities to benefit wildlife, both as part of the new school buildings or the associated grounds. The following measures are suggestions of ways to benefit wildlife. Some may or may not be appropriate and the exact provision will depend on the new design. In general, the more enhancement measures that can be incorporated, the more habitat will be created for wildlife.

- Set aside specific parts of the school grounds as a wildlife resource, to incorporate a variety of habitats (trees, pond, log piles, wildflower patch, butterfly garden etc). These should remain relatively undisturbed, and mainly used in outdoor learning activities (e.g. science or conservation skills lessons).
- Retain existing trees where possible. Older trees provide a much greater amount of foliage than newly planted trees, and the communities of mosses and lichens they support will be able to continue to provide habitat for invertebrates. If the existing trees cannot be retained *in situ*, consider creating dead wood habitat piles at the site perimeter using the timber, rather than chipping and removing it.
- Incorporate new trees into the future landscaping. Trees should be chosen that will not grow too large for the site and have relatively low maintenance requirements. Ideally they should be native species or species known to be beneficial for wildlife (e.g. by providing flowers for insects and berries for birds). Examples of potentially suitable trees include Rowan, Whitebeam, Hawthorn, Apple, Pear, Alder Buckthorn, Bird Cherry, Spindle and Holly. Larger trees could probably be planted nearer the boundaries.
- Plant or retain hedges to reinforce the site boundaries where possible. Thorny species such as Firethorn, Barberry and Hawthorn can provide good habitat for birds and insects. They are also less likely to be disturbed by pupils and good for security. Existing low-diversity hedges could feasibly be diversified by interplanting additional trees and shrubs.
- Ensure that any fences or walls at the site boundaries are not barriers to movement of wildlife such as Hedgehogs or amphibians. Creating ground level gaps at corners or other strategic points may be an option if considering small fence mesh or solid panels.

- Include a small wildlife pond and / or water-feature. Even a simple bird-bath can be very useful for wildlife. A pond would be used by birds, and possibly amphibians, and if planted with native pond plants could potentially support insects including dragonflies and damselflies. The design of any pond or water feature should take account of safety and maintenance requirements.
- Include new wildlife-friendly shrub and flower planting beds around the new building. These should include a high proportion of flowering and berry-bearing shrubs / perennials known to have a benefit for insects and birds. They might include, for example, Lavender, Rosemary, Marjoram, Foxglove, Catmint, Heathers, Iceplant, Helenium, Pyracantha, or Cotoneaster (non-invasive types only). Many other species could also be considered. Ideally the plants would support a wide variety of flowers, with nectar available to insects right through the year. Useful sources of advice include the RSPB publication *Gardening for Wildlife* (Thomas, 2010) and RSPB website, and the Royal Horticultural Society Plants for Pollinators website (rhs.org.uk/science/conservation-biodiversity/wildlife/plants-for-pollinators). Where space is limited, climbing plants can provide valuable cover for birds and insects, and can be grown over walls, fences or trellises. Useful species could include Honeysuckle, Jasmine, and Ivy.
- Consideration could be given to adding green roofs to at least some of the new buildings or structures, e.g. a wildflower or *Sedum* roof covering. These would be a good biodiversity feature and also help to reduce the speed of the water draining from the site. Incorporating one or more 'rain gardens' that would help to slow down the rainfall draining from roofs and other hard surfaces could also be considered (further information from <https://raingardens.info/>.)
- If any retaining walls are required (e.g. between sports pitches or other areas of level ground), these could be designed to maximise the potential cavities and gaps for wildlife without compromising their structural function. If retaining walls have to be faced with concrete or brick they could still incorporate purpose-built cavities for wildlife, or spaces to plant climbing plants.
- Include bird nesting boxes on the new buildings or on retained trees or other trees or structures on adjacent council-owned land. Ideally they should be at least 3m from the ground, not in direct sunlight or near potential sources of disturbance. An ecologist should advise on the specification, density and positioning of the boxes.
- Include bat-boxes/ bat-bricks in the new buildings, or on retained trees or other trees or structures on adjacent council-owned land. The boxes should ideally be at least 4m from the ground, with access points free from obstructions and ideally in quiet, unlit areas. The locations and box specifications should be agreed with an ecologist.
- When selecting plant species for the soft landscaping around the school, include species that are drought tolerant and low maintenance. Grass seed mixes that include species such as clover or Bird's-foot Trefoil can provide a nectar source for bees and other insects without compromising on the structural requirements of the turf in low-wear areas.
- If any compost, mulch or soil conditioners are required for landscape planting, endeavour to use only peat-free types.
- When carrying out landscape maintenance works in the long term, reduce the potential impacts on wildlife by minimising use of herbicides or pesticides. If any are required, only non-residual types should be used.

7. Recommendations for further survey

Several suggestions are made below, outlining possible options for further survey. The most important of these is a reptile survey. The others may or may not be required, depending on the timing of the proposed construction works.

A reptile survey during the spring is recommended, to clarify whether or not reptiles are present, and if so, which species occur. The survey would also need to estimate the size of the reptile population and advise on any mitigation requirements that may be needed. The ideal time of year for a reptile survey would be between early April and June.

If any tree removal or other site clearance is scheduled between March and August inclusive a check should be carried out to confirm whether there are any bird nests present, so that appropriate mitigation can be implemented (e.g. rescheduling or relocating the work).

A check of the site in summer would be appropriate to clarify whether there are any non-native invasive plant species present that might not have been visible during November. A summer survey could also investigate the possible presence of uncommon invertebrates.

A final pre-works ecology check should be carried out immediately before the site clearance work commences. This would clarify whether there have been any changes to the habitats, and carry out checks of specific habitats that may be affected (e.g. checking any tree holes for nests or roosting bats).

In the event that the proposed development does not take place for a year or more, or the extent of the study area changes significantly, the habitat survey should be repeated (but not during the winter) and the potential ecological constraints re-assessed.

8. References

- Blaenau Gwent County Borough Council (2015). Blaenau Gwent Local Biodiversity Action Plan.
- CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Gunnell, K, Murphy, B. and Williams C. (2013). Designing for Biodiversity: A technical guide for new and existing buildings. RIBA Publishing, London.
- JNCC (2010). Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit. Joint Nature Conservation Committee, Peterborough.
- Thomas, A. (2010). RSPB Gardening for Wildlife.
- Wales Biodiversity Partnership (2008). Guidelines for the Selection of Wildlife Sites in Wales.

Appendix 1. Summary of data search species records

The following tables summarise records obtained through the data search. The data is limited to species of nature conservation significance recorded within 2km of the site boundary. The table also includes the distance of the nearest record for each species to the site boundary.

The following abbreviations are used to indicate the nature conservation status of each species:

Abbreviation	Species status
Bdir1	EC Birds Directive Annex 1 Species
Bdir21	EC Birds Directive Annex 2.1 Species
Bdir22	EC Birds Directive Annex 2.2 Species
Bern	Bern Convention on the Conservation of European Wildlife and Natural Habitats
Bonn	The Bonn Convention on the Conservation of Migratory Species of Wild Animals Species
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora Species
EPS	European Protected Species
Hdir	EU Habitats Directive Species
LBAP	Blaenau Gwent Local Biodiversity Action Plan Priority Species
LI	Locally Important Species (as identified by local specialists) in SEWBRc area.
PBA	Protection of Badgers Act
RD1	UK Red Data Book Species (based on IUCN criteria)
RD2	UK Red Data Book Species (not based on IUCN criteria)
S7	Environment Act (Wales) Section 7 Species (Priority Species in Wales)
UKBA	RSPB UK Amber listed birds (not based on IUCN criteria)
UKBAP	UK Biodiversity Action Plan Priority Species
UKBR	RSPB UK Red listed birds (not based on IUCN criteria)
WBA	RSPB Welsh Amber listed birds (not based on IUCN criteria)
WBR	RSPB Welsh Red listed birds (not based on IUCN criteria)
WCA1.1	Wildlife and Countryside Act Schedule 1 Part 1 Species
WCA1.2	Wildlife and Countryside Act Schedule 1 Part 2 Species
WCA5	Wildlife and Countryside Act Schedule 5 Species
WCA8	Wildlife and Countryside Act Schedule 8 Species
WCA9	Wildlife and Countryside Act Schedule 9 Species
WVP	IUCN Threat Listing of Welsh Vascular Plants

Protected species within 2km search buffer

(Species with European and UK Legal Protection, not including priority species)

Scientific Name	Common Name	Status	Distance (m)
<i>Alcedo atthis</i>	Kingfisher	Bdir1, Bern, UKBA, WBA, WCA1.1	1198
<i>Anguis fragilis</i>	Slow-worm	Bern, S7, WCA5	1033
<i>Austropotamobius pallipes</i>	White-clawed Freshwater Crayfish	Bern, Hdir, RD1, S7, WCA5	1120
<i>Bucephala clangula</i>	Goldeneye	Bdir2.2, UKBA, WCA1.2	1198
<i>Bufo bufo</i>	Common Toad	Bern, S7, WCA5	772
<i>Charadrius dubius</i>	Little Ringed Plover	Bern, WCA1.1	1314
<i>Chiroptera</i>	Unknown Bat	EPS, WCA5	608
<i>Falco columbarius</i>	Merlin	Bdir1, Bern, CITES, UKBR, WBA, WCA1.1	1253
<i>Falco peregrinus</i>	Peregrine	Bdir1, Bern, CITES, WCA1.1	253
<i>Fringilla montifringilla</i>	Brambling	WCA1.1	1748
<i>Hyacinthoides non-scripta</i>	Bluebell	WCA8	772
<i>Lissotriton helveticus</i>	Palmate Newt	Bern, WCA5	845
<i>Loxia curvirostra</i>	Common Crossbill	Bern, WCA1.1	1881
<i>Lutra lutra</i>	Otter	Bern, CITES, EPS, Hdir, RD2(UK), S7, WCA5	579
<i>Meles meles</i>	Badger	Bern, PBA	1010
<i>Milvus milvus</i>	Red Kite	Bdir1, CITES, WBA, WCA1.1, WCA9	637
<i>Myotis</i>	Myotis Bat Species	Bern, EPS, Hdir, WCA5	1373
<i>Nyctalus noctula</i>	Noctule Bat	Bern, EPS, Hdir, RD2(UK), S7, WCA5	61
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	Bern, EPS, Hdir, RD2(UK), S7, WCA5	61
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	Bern, EPS, Hdir, RD2(UK), S7, WCA5	1321
<i>Rana temporaria</i>	Common Frog	Bern, Hdir, WCA5,	385
<i>Rhinolophus hipposideros</i>	Lesser Horseshoe Bat	Bern, EPS, Hdir, RD2(UK), S7, WCA5	1137
<i>Turdus iliacus</i>	Redwing	Bdir2.2, UKBR, WBA, WCA1.1	1198
<i>Turdus pilaris</i>	Fieldfare	Bdir2.2, UKBR, WBA, WCA1.1	473
<i>Tyto alba</i>	Barn Owl	Bern, CITES, WBA, WCA1.1, WCA9	792
<i>Zootoca vivipara</i>	Common Lizard	Bern, S7, WCA5	845

Piority species within 2km search buffer

(Section 7 (Environment Act Wales) Species & UK BAP Priority Species.)

Scientific Name	Common Name	Status	Distance (m)
<i>Acanthis cabaret</i>	Lesser Redpoll	S7, UKBR, WBR	772
<i>Acronicta psi</i>	Grey Dagger	S7	1314
<i>Acronicta rumicis</i>	Knot Grass	S7	1233
<i>Agrochola helvola</i>	Flounced Chestnut	S7	1314
<i>Agrochola litura</i>	Brown-spot Pinion	S7	1314
<i>Agrochola lychnidis</i>	Beaded Chestnut	S7	1314
<i>Alauda arvensis</i>	Skylark	Bdir2.2, S7, UKBR, WBA	253
<i>Allophyes oxyacanthae</i>	Green-brindled Crescent	S7	1314
<i>Anthus trivialis</i>	Tree Pipit	Bern, S7, UKBR, WBA	1461
<i>Apamea remissa</i>	Dusky Brocade	S7	1135
<i>Arctia caja</i>	Garden Tiger	S7	1314
<i>Atethmia centrago</i>	Centre-barred Sallow	S7	1314
<i>Boloria selene</i>	Small Pearl-bordered Fritillary	RD1(UK)NT, S7, LBAP	1233
<i>Caprimulgus europaeus</i>	Nightjar	Bdir1, Bern, S7, UKBA, WBA	1748
<i>Caradrina morpheus</i>	Mottled Rustic	S7	1233
<i>Ceramica pisi</i>	Broom Moth	S7	1233

Scientific Name	Common Name	Status	Distance (m)
<i>Charadrius hiaticula</i>	Ringed Plover	Bern, S7, UKBR, WBA	1385
<i>Chiasmia clathrata</i>	Latticed Heath	S7	1822
<i>Chroicocephalus ridibundus</i>	Black-headed Gull	Bdir2.2, S7, UKBA, WBR	1198
<i>Cirrhia gilvago</i>	Dusky-lemon Sallow	S7	1314
<i>Cirrhia icteritia</i>	Sallow	S7	772
<i>Coenonympha pamphilus</i>	Small Heath	RD1(UK)NT, S7	772
<i>Cuculus canorus</i>	Cuckoo	S7, UKBR, WBR	1470
<i>Cygnus columbianus subsp. Bewickii</i>	Bewick's Swan	S7, UKBA	1198
<i>Diarsia rubi</i>	Small Square-spot	S7	1314
<i>Donacia aquatica</i>	Zircon Reed Beetle	RD1(UK)VU, RD2(UK)S, S7	1051
<i>Ecliptopera silaceata</i>	Small Phoenix	S7	1144
<i>Emberiza schoeniclus</i>	Reed Bunting	Bern, S7, UKBA, WBA	253
<i>Ennomos quercinaria</i>	August Thorn	S7	1314
<i>Entephria caesiata</i>	Grey Mountain Carpet	S7	1314
<i>Epirrhoe galiata</i>	Galium Carpet	S7	1314
<i>Erinaceus europaeus</i>	Hedgehog	Bern, S7, LBAP	207
<i>Eriopygodes imbecilla</i>	Silurian	S7, LI	1314
<i>Erynnis tages</i>	Dingy Skipper	RD1(UK)VU, S7, LBAP, LI	772
<i>Eugnorisma glareosa</i>	Autumnal Rustic	S7	264
<i>Euxoa nigricans</i>	Garden Dart	S7	1314
<i>Falco tinnunculus</i>	Kestrel	Bern, CITES, S7, UKBA, WBR	772
<i>Graphiphora augur</i>	Double Dart	S7	1314
<i>Helotropha leucostigma</i>	Crescent	S7	1314
<i>Hepialus humuli</i>	Ghost Moth	S7	1180
<i>Hipparchia semele</i>	Grayling	RD1(UK)VU, S7	942
<i>Hoplodrina blanda</i>	Rustic	S7	1314
<i>Hydraecia micacea</i>	Rosy Rustic	S7	1314
<i>Larus argentatus</i>	Herring Gull	Bdir2.2, S7, UKBR, WBR	772
<i>Lasiommata megera</i>	Wall	RD1(UK)NT, S7	1368
<i>Lepus europaeus</i>	Hare	S7	1035
<i>Leucania comma</i>	Shoulder-striped Wainscot	S7	1135
<i>Linaria cannabina</i>	Linnet	Bern, S7, UKBR, WBR	1067
<i>Locustella naevia</i>	Grasshopper Warbler	S7, UKBR, WBR	1368
<i>Lycia hirtaria</i>	Brindled Beauty	S7	1314
<i>Melanchra persicariae</i>	Dot Moth	S7	1233
<i>Mniotype adusta</i>	Dark Brocade	S7	1233
<i>Mustela putorius</i>	Polecat	Bern, Hdir, RD2(UK), S7, LBAP	1337
<i>Numenius arquata</i>	Curlew	Bdir2.2, S7, UKBR, WBR	1051
<i>Omphiscola glabra</i>	Mud Snail	RD2(UK)S, S7	958
<i>Orthonama vittata</i>	Oblique Carpet	S7	1314
<i>Orthosia gracilis</i>	Powdered Quaker	S7	1314
<i>Passer domesticus</i>	House Sparrow	S7, UKBR, WBA	384
<i>Perdix perdix</i>	Grey Partridge	Bdir2.1, S7, UKBR, WBR	1198
<i>Prunella modularis</i>	Dunnock	Bern, S7, UKBA	384
<i>Pyrrhula pyrrhula</i>	Bullfinch	S7, UKBA, WBR	384
<i>Scotopteryx chenopodiata</i>	Shaded Broad-bar	S7	1233
<i>Spilosoma lubricipeda</i>	White Ermine	S7	1314
<i>Spilosoma lutea</i>	Buff Ermine	S7	1314
<i>Stellaria palustris</i>	Marsh Stitchwort	RD1(UK)VU, RD1(Wales)VU, S7	1293
<i>Stilbia anomala</i>	Anomalous	S7	1233
<i>Sturnus vulgaris</i>	Starling	Bdir2.2, Bern, S7, UKBR, WBR	253
<i>Tholera cespitis</i>	Hedge Rustic	S7	1314
<i>Tholera decimalis</i>	Feathered Gothic	S7	1314
<i>Turdus philomelos</i>	Song Thrush	Bdir2.2, Bern, S7, UKBR, WBA	539
<i>Turdus torquatus</i>	Ring Ouzel	Bern, S7, UKBR, WBR	253

Scientific Name	Common Name	Status	Distance (m)
<i>Tyria jacobaeae</i>	Cinnabar	S7	748
<i>Vanellus vanellus</i>	Lapwing	Bdir2.2, S7, UKBR, WBR	253
<i>Xestia agathina</i>	Heath Rustic	S7	1314
<i>Xestia castanea</i>	Neglected Rustic	S7	1314

Other species of conservation concern within 2km search buffer

(Global Red List, British Red Data Book, Nationally Rare & Scarce & Welsh Vascular Plant Red Data List where these are not identified in Priority category.)

Scientific Name	Common Name	Status	Distance (m)
<i>Aeshna grandis</i>	Brown Hawker	LBAP, LI	772
<i>Alchemilla glabra</i>	Smooth Lady's-mantle	LBAP, LI	1767
<i>Alchemilla xanthochlora</i>	Intermediate Lady's-mantle	LI	1954
<i>Anarta myrtilli</i>	Beautiful Yellow Underwing	LBAP	1233
<i>Botrychium lunaria</i>	Moonwort	LBAP, LI	919
<i>Calystegia pulchra</i>	Hairy Bindweed	LBAP	1233
<i>Carex viridula</i> subsp. <i>Brachyrrhyncha</i>	Long-stalked Yellow-sedge	LI	1388
<i>Cordulegaster boltonii</i>	Golden-ringed Dragonfly	LBAP, LI	772
<i>Lathyrus nissolia</i>	Grass Vetchling	LI	253
<i>Lemna trisulca</i>	Ivy-leaved Duckweed	LI	1198
<i>Lestes sponsa</i>	Emerald Damselfly	LI	1012
<i>Littorella uniflora</i>	Shoreweed	LBAP, LI	829
<i>Myosoton aquaticum</i>	Water Chickweed	LI	1474
<i>Myriophyllum alterniflorum</i>	Alternate Water-milfoil	LBAP, LI	1198
<i>Myriophyllum spicatum</i>	Spiked Water-milfoil	LBAP, LI	385
<i>Nuphar lutea</i>	Yellow Water-lily	LBAP, LI	1062
<i>Nymphaea alba</i>	White Water-lily	LI	1984
<i>Orthetrum cancellatum</i>	Black-tailed Skimmer	LI	1051
<i>Orthetrum coerulescens</i>	Keeled Skimmer	LBAP, LI	1233
<i>Orthosia opima</i>	Northern Drab	LBAP	1314
<i>Plantago media</i>	Hoary Plantain	LI	772
<i>Platycnemis pennipes</i>	White-legged Damselfly	LBAP, LI	958
<i>Potamogeton berchtoldii</i>	Small Pondweed	LBAP, LI	1051
<i>Potamogeton perfoliatus</i>	Perfoliate Pondweed	LI	1198
<i>Prunus padus</i>	Bird Cherry	LBAP, LI	384
<i>Rosa mollis</i>	Soft Downy-rose	LI	942
<i>Sagina maritima</i>	Sea Pearlwort	LI	1444
<i>Salix purpurea</i>	Purple Willow	LBAP, LI	1401
<i>Sparganium emersum</i>	Unbranched Bur-reed	LI	1385
<i>Sympetrum danae</i>	Black Darter	LI	1012
<i>Sympetrum sanguineum</i>	Ruddy Darter	LI	1337
<i>Veronica agrestis</i>	Green Field-speedwell	LI	1066
<i>Veronica catenata</i>	Pink Water-Speedwell	LI	1600
<i>Viburnum lantana</i>	Wayfaring-tree	LI	1401
<i>Viscum album</i>	Mistletoe	LI	734
<i>Xylena vetusta</i>	Red Sword-grass	LBAP	1314

Appendix 2. Species list

This list presents the scientific and common names of the species observed on land at Badminton Grove, Ebbw Vale (grid reference SO164112) on 19 November 2019. This must not be regarded as a complete list due to the nature of this type of survey.

The frequency column provides a rough estimate of abundance for the vascular plant species. This uses the DAFOR scale, where D = Dominant, A = Abundant, F = Frequent, O = Occasional and R = Rare. A '+' is used to indicate the presence of other species.

Species	Common Name	Frequency
VASCULAR PLANTS		
<i>Acer campestre</i>	Field Maple	R
<i>Acer pseudoplatanus</i>	Sycamore	R
<i>Agrostis capillaris</i>	Common Bent	A
<i>Agrostis stolonifera</i>	Creeping Bent	F
<i>Alnus glutinosa</i>	Alder	R
<i>Anemone x hybrida</i>	Japanese Anemone	R
<i>Arrhenatherum elatius</i>	False Oat-grass	O
<i>Bellis perennis</i>	Daisy	R
<i>Betula pubescens</i>	Downy Birch	O
<i>Brachyglottis x jubar</i>	Shrub Ragwort	R
<i>Buddleia davidii</i>	Buddleia	R
<i>Calystegia sepium</i>	Hedge Bindweed	R
<i>Carex flacca</i>	Glaucous Sedge	F
<i>Carex hirta</i>	Hairy Sedge	F
<i>Carex pendula</i>	Pendulous Sedge	O
<i>Centaurea nigra</i>	Common Knapweed	O
<i>Cerastium fontanum</i>	Common Mouse-ear	F
<i>Cerastium tomentosum</i>	Snow-in-summer	R
<i>Chamaecyparis lawsoniana</i>	Lawson's Cypress	R
<i>Chamerion angustifolium</i>	Rose-bay Willowherb	F
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Cirsium vulgare</i>	Spear Thistle	R
<i>Corylus avellana</i>	Hazel	R
<i>Cotoneaster bullatus</i>	Hollyberry Cotoneaster	R
<i>Crataegus monogyna</i>	Hawthorn	R
<i>Crepis capillaris</i>	Smooth Hawkbit	O
<i>Cynosurus cristatus</i>	Crested Dog's-tail	O
<i>Dactylis glomerata</i>	Cock's-foot Grass	F
<i>Deschampsia cespitosa</i>	Tufted Hair-grass	O
<i>Dryopteris filix-mas</i>	Male Fern	R
<i>Epilobium ciliatum</i>	American Willowherb	F
<i>Epilobium hirsutum</i>	Greater Willowherb	O
<i>Epilobium parviflorum</i>	Hoary Willowherb	F
<i>Epipactis helleborine</i>	Broad-leaved Helleborine	R
<i>Equisetum arvense</i>	Field Horsetail	R
<i>Fagus sylvatica</i>	Beech	O
<i>Festuca rubra</i>	Red Fescue	A
<i>Fragaria vesca</i>	Wild Strawberry	O
<i>Fraxinus excelsior</i>	Ash	O

Species	Common Name	Frequency
<i>Galium aparine</i>	Cleavers	R
<i>Geranium cf endressii</i>	French Crane's-bill	R
<i>Geranium pyrenaicum</i>	Hedgerow Crane's-bill	R
<i>Geranium robertianum</i>	Herb Robert	F
<i>Geum urbanum</i>	Wood Avens	O
<i>Hebe sp.</i>	Shrub Veronica	R
<i>Hedera helix sl</i>	Ivy	R
<i>Heracleum sphondylium</i>	Hogweed	R
<i>Holcus lanatus</i>	Yorkshire Fog	A
<i>Hypericum perforatum</i>	Perforate St. John's-wort	R
<i>Hypochaeris radicata</i>	Common Cat's-Ear	F
<i>Ilex aquifolium</i>	Holly	O
<i>Juncus articulatus</i>	Jointed Rush	O
<i>Juncus conglomeratus</i>	Compact Rush	R
<i>Juncus effusus</i>	Soft Rush	O
<i>Juncus inflexus</i>	Hard Rush	R
<i>Larix kaempferi</i>	Japanese Larch	R
<i>Lathyrus pratensis</i>	Meadow Vetchling	F
<i>Ligustrum ovalifolium</i>	Garden Privet	O
<i>Lolium perenne</i>	Perennial Rye-grass	F
<i>Lonicera nitida</i>	Wilson's Honeysuckle	R
<i>Lotus corniculatus</i>	Common Bird's-foot Trefoil	O
<i>Medicago lupulina</i>	Black Medick	F
<i>Melilotus altissimus</i>	Tall Melilot	O
<i>Myrtus cf luma</i>	Chilean Myrtle (ornamental)	R
<i>Phleum pratense</i>	Timothy	F
<i>Pieris japonica</i>	Pieris	R
<i>Pilosella officinarum</i>	Mouse-ear Hawkweed	O
<i>Pinus sylvestris</i>	Scot's Pine	R
<i>Plantago lanceolata</i>	Ribwort Plantain	O
<i>Plantago major</i>	Greater Plantain	O
<i>Poa annua</i>	Annual Meadow-grass	O
<i>Poa trivialis</i>	Rough Meadow-grass	R
<i>Potentilla cf fruticosa</i>	Shrubby Cinquefoil	R
<i>Potentilla reptans</i>	Creeping Cinquefoil	F
<i>Primula vulgaris</i>	Primrose	R
<i>Prunella vulgaris</i>	Self-Heal	F
<i>Prunus cf avium</i>	Cherry	O
<i>Prunus laurocerasus</i>	Cherry Laurel	R
<i>Prunus spinosa</i>	Blackthorn	O
<i>Quercus robur</i>	Pedunculate Oak	R
<i>Ranunculus repens</i>	Creeping Buttercup	F
<i>Rosa canina</i>	Dog Rose	R
<i>Rubus fruticosus</i>	Bramble	O
<i>Rumex acetosa</i>	Common Sorrel	O
<i>Rumex conglomeratus</i>	Clustered Dock	R
<i>Rumex crispus</i>	Curled Dock	O
<i>Rumex obtusifolius</i>	Broad-Leaved Dock	O
<i>Sagina procumbens</i>	Procumbent Pearlwort	F
<i>Salix alba</i>	White Willow	R
<i>Salix cinerea</i>	Grey Willow	F

Species	Common Name	Frequency
<i>Salix viminalis</i>	Osier	R
<i>Sambucus nigra</i>	Elder	O
<i>Senecio jacobaea</i>	Ragwort	F
<i>Silene flos-cuculi</i>	Ragged Robin	R
<i>Sorbus aucuparia</i>	Rowan	R
<i>Sorbus intermedia</i>	Swedish Whitebeam	R
<i>Stachys sylvatica</i>	Hedge Woundwort	R
<i>Taraxacum</i> sp.	Dandelion	F
<i>Tilia x europaea</i>	Common Lime	O
<i>Trifolium dubium</i>	Lesser Trefoil	O
<i>Trifolium pratense</i>	Red Clover	F
<i>Trifolium repens</i>	White Clover	O
<i>Tussilago farfara</i>	Colt's Foot	O
<i>Urtica dioica</i>	Nettle	O
<i>Veronica beccabunga</i>	Brooklime	R
<i>Veronica chamaedrys</i>	Germander Speedwell	O
<i>Viburnum opulus</i>	Guelder Rose	R
<i>Vicia cracca</i>	Tufted Vetch	R
<i>Vicia sativa</i>	Common Vetch	R
BRYOPHYTES		
<i>Brachythecium rutabulum</i>	Rough-stalked Feather-moss	+
<i>Bryum</i> sp.	Thread-moss	+
<i>Bryum argenteum</i>	Silver-moss	+
<i>Bryum capillare</i>	Capillary Thread-moss	+
<i>Calliergonella cuspidata</i>	Pointed Spear-moss	+
<i>Didymodon insulanus</i>	Cylindric Beard-moss	+
<i>Frullania dilatata</i>	Dilated Scalewort	+
<i>Homalothecium sericeum</i>	Silky Wall Feather-moss	+
<i>Kindbergia praelonga</i>	Common Feather-moss	+
<i>Metzgeria furcata</i>	Forked Veilwort	+
<i>Orthotrichum affine</i>	Wood Bristle-moss	+
<i>Orthotrichum lyellii</i>	Lyell's Bristle-moss	+
<i>Pseudocrossidium hornschuchianum</i>	Hornschuch's Beard-moss	+
<i>Rhytidiadelphus squarrosus</i>	Springy Turf-moss	+
<i>Schistidium crassipilum</i>	Thickpoint Grimmia	+
<i>Syntrichia ruralis</i> var. <i>ruralis</i>	Great Hairy Screw-moss	+
<i>Tortula muralis</i>	Wall Screw-moss	+
<i>Ulota bruchii</i>	Bruch's Pincushion	+
LICHENS		
<i>Cladonia fimbriata</i>	Lichen	+
<i>Evernia prunastri</i>	Lichen	+
<i>Melanelia fuliginosa</i> ssp. <i>glabratula</i>	Lichen	+
<i>Parmelia sulcata</i>	Lichen	+
<i>Parmotrema perlatum</i>	Lichen	+
<i>Physcia tenella</i>	Lichen	+
<i>Xanthoria parietina</i>	Lichen	+
FUNGI		
<i>Rhytisma acerinum</i>	Sycamore Tar-spot	+
BIRDS		
<i>Turdus merula</i>	Blackbird	+
<i>Parus caeruleus</i>	Blue Tit	+

Species	Common Name	Frequency
<i>Larus argentatus</i>	Herring Gull	+
<i>Corvus monedula</i>	Jackdaw	+
<i>Turdus viscivorus</i>	Mistle Thrust	+
<i>Erithacus rubecula</i>	Robin	+
<i>Sturnus vulgaris</i>	Starling	+
<i>Troglodytes troglodytes</i>	Wren	+
MAMMALS		
<i>Felis catus</i>	Domestic Cat	+