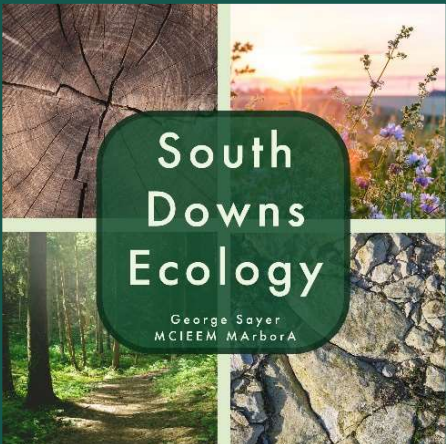




**Ecological Impact  
Assessment**

**Land at Shimmings  
Farm, Petworth**



**South  
Downs  
Ecology**

George Sayer  
MCIEEM, MARBORA

# Ecological Impact Assessment

Land at Shimmings Farm, off A272, Petworth

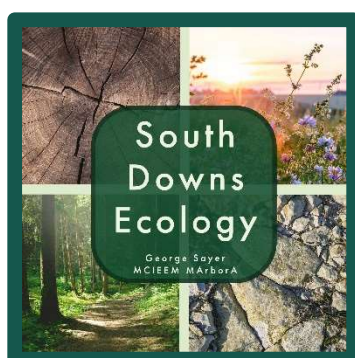
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## Summary

The applicant has commissioned a Preliminary Ecological Appraisal and Ecological Impact Assessment of proposals for the continued use of the application site for hacking, cross-country schooling, Pony/Riding Club/Adult Equestrian rallies/training, riding for the disabled and up to four unaffiliated hunter trials per year. The proposals include retention and use of an existing barn and parking area.

A Preliminary Ecological Appraisal and Preliminary Bat Roost Assessment was carried out on the 4<sup>th</sup> December 2023 by George Sayer (*BSc (Hons) Environmental Sciences, PgDip Endangered Species Recovery, MA ArborA, MCIEEM, NE Licence Holder – Bats Level 2 and GCN - Ecologist*).

The proposal areas consist of existing grassland and sparsely vegetated ground, surrounded by native hedges, scrub and trees and a stream with wet woodland. The grassland and sparse vegetation are of **site value only** with hedges and trees of local-district value.

The proposals are not anticipated to have any significant impact upon ecology; the grassland offers some potential for reptiles and small mammals with potential for dormice, badgers, birds and bats to use the hedges and trees; the proposed continued use stands a 'negligible' chance of disturbing wildlife. No further surveys are currently recommended at the site for these proposals.

The proposals are not considered to have a negative impact upon habitats or protected species in accordance with planning policy. The wider estate including the boundary hedges have been subject to ongoing enhancement which would have resulted in a steady and significant gain to the local environment. The proposals would therefore accord with the relevant South Downs National Park Local Plan Policies, the NPPF (2023) and relevant legislation.

## 1.0 Introduction

- 1.1 The applicant has commissioned a Preliminary Ecological Appraisal and Ecological Impact Assessment of proposals for the continued use of the application site for hacking, cross-country schooling, Pony/Riding Club/Adult Equestrian rallies/training, riding for the disabled and up to four unaffiliated hunter trials per year.
- 1.2 A Preliminary Ecological Appraisal and Preliminary Bat Roost Assessment was carried out on the 4<sup>th</sup> December 2023 by George Sayer (BSc (Hons) Environmental Sciences, PgDip Endangered Species Recovery, MArborA, MCIEEM, NE Licence Holder – Bats Level 2 and GCN - Ecologist).
- 1.3 The following ecological impact assessment report has been completed by George Sayer. The purpose of the assessment has been to identify whether any potential impacts upon protected species, habitats or designated sites might have occurred or might occur through continued use, and to propose mitigation or avoidance measures where necessary.
- 1.4 Based on the results of the appraisal, recommendations for potential ecological enhancements have been provided.

### Site Description and Surrounding Area

- 1.5 The site consists of three areas forming part of Shimmings Farm, itself part of the larger Moor Farm. To the north is a barn and a parking area. To the west is a small cross country area, and to the south-east is a larger cross country area. The immediate surroundings are almost entirely pastoral land, with woodland further east, Petworth Park to the north-west and the built up area of Petworth to the south-west.
- 1.6 Petworth is a typical town of the South Downs, surrounded by large expanses of agricultural land, the parkland of Petworth Park and areas of woodland to the east and south-west.
- 1.7 There are two wildlife ponds on the edges of the site, an area of wet woodland connected to a stream on the western edge of site and a number of fishery ponds in the wider farm ownership.

### Proposals

- 1.8 The proposals are for the continued use of the application site for hacking, cross-country schooling, Pony/Riding Club/Adult Equestrian rallies/training, riding for the disabled and up to four unaffiliated hunter trials per year. The proposals include retention and use of an existing barn (with toilet facilities) and parking area.

## 2.0 Scope of Assessment

1. *Categorise habitats present on the site;*
2. *Identify habitat which may have potential for protected species;*
3. *Identify whether any signs of protected species are present on-site;*
4. *Recommend whether further surveys are required, or whether there are any relevant constraints with regards to protected species;*
5. *Identify impacts of the proposed development either historic or potential and set out appropriate avoidance, mitigation and compensation measures;*
6. *Provide recommendations as to how the site and proposals could be enhanced with regards to protected species and habitats.*

- 2.1 This appraisal and assessment is deemed to be relevant for a maximum of 18 months due to the possibility of changes in the habitats on-site. Should the site or proposals alter, the ecologist should be consulted to confirm that the appraisal is still valid.

### 3.0 Planning Policy and Legislation

#### National Planning Policy

- 3.1 The National Planning Policy Framework (NPPF) 2023 sets out the government planning policies for England and how they should be applied. 'Chapter 15: Conserving and Enhancing the Natural Environment' states that development should be 'minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.'
- 3.2 The Government Circular 06/2005, which is referred to by the NPPF, provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system.

#### Local Planning Policy

- 3.3 The site sits within the South Downs National Park; The South Downs Local Plan (2014-2033) includes the following relevant policies:
- Core Policy SD2: Ecosystem Services 1. Development proposals will be permitted where they have an overall positive impact on the ability of the natural environment to contribute goods and services. This will be achieved through the use of high quality design, and by delivering all opportunities to: a) Sustainably manage land and water environments; b) Protect and provide more, better and joined up natural habitats; c) Conserve water resources and improve water quality; d) Manage and mitigate the risk of flooding; e) Improve the National Park's resilience to, and mitigation of, climate change; f) Increase the ability to store carbon through new planting or other means; g) Conserve and enhance soils, use soils sustainably and protect the best and most versatile agricultural land; h) Support the sustainable production and use of food, forestry and raw materials; i) Reduce levels of pollution; j) Improve opportunities for peoples' health and wellbeing; and k) Provide opportunities for access to the natural and cultural resources which contribute to the special qualities. 2. Development proposals must be supported by a statement that sets out how the development proposal impacts, both positively and negatively, on ecosystem services;

- Strategic Policy SD9: Biodiversity and Geodiversity 1. Development proposals will be permitted where they conserve and enhance biodiversity and geodiversity, giving particular regard to ecological networks and areas with high potential for priority habitat restoration or creation. Prior to determination, up-to-date ecological information should be provided which demonstrates that development proposals: a) Retain, protect and enhance features of biodiversity and geological interest (including supporting habitat and commuting routes through the site and taking due account of any use by migratory species) and ensure appropriate and long-term management of those features; b) Identify and incorporate opportunities for net gains in biodiversity; c) Contribute to the restoration and enhancement of existing habitats, the creation of wildlife habitats and the creation of linkages between sites to create and enhance local and regional ecological networks; d) Protect and support recovery of rare, notable and priority species; e) Seek to eradicate or control any invasive non-native species present on site; f) Contribute to the protection, management and enhancement of biodiversity and geodiversity, for example by supporting the delivery of GI and Biodiversity Action Plan targets and enhance Biodiversity Opportunity Areas (BOA); and g) Comply with the mitigation hierarchy as set out in national policy.
- Development Management Policy SD11: Trees, Woodland and Hedgerows 1. Development proposals will be permitted where they conserve and enhance trees, hedgerows and woodlands. 2. Development proposals that affect trees, hedgerows and woodland must demonstrate that they have been informed by a full site survey, including an Ecological Survey, Arboricultural Method Statement and associated Tree Protection Plan, and include a management plan. 3. The removal of protected trees, groups of trees woodland or hedgerows will only be permitted in exceptional circumstances and in accordance with the relevant legislation, policy and good practice recommendations. Where protected trees are subject to felling, a replacement of an appropriate number, species and size in an appropriate location will be required. 4. Development proposals must provide adequate protection zones and buffers around hedgerows and other woodland and trees to prevent damage to root systems and taking account of future growth. A minimum buffer of 15 metres will be required between the development and ancient woodland or veteran trees. 5. A proposed loss or damage of non-protected trees, woodland or hedgerows should be avoided, and if demonstrated as being unavoidable, appropriate replacement or compensation will be required. 6. Development proposals must demonstrate that appropriate protection measures are in place prior to any work on site throughout the development process as part of a comprehensive landscaping plan, and that suitable opportunities for the restoration, enhancement or planting of trees, woodland, and hedgerows are identified and incorporated. 7. Opportunities should be identified and incorporated for planting of new trees, woodlands and hedgerows. New planting should be suitable for the site conditions, use native species and be informed by and contribute to local character, and enhance or create new habitat linkages.

- Strategic Policy SD45: Green Infrastructure 1. Development proposals will be permitted where they demonstrate that they: a) Maintain or enhance GI assets, GI links and the overall GI network; and b) Provide new GI, or improvements to existing green assets and green linkages, which are integrated into the development design, that meets the needs of communities both within and beyond the site's boundaries. 2. GI proposals must contribute to multifunctional landscapes which: a) Strengthen connectivity and resilience of ecological networks; b) Incorporate GI measures that are appropriate to the type and context of the development proposal as part of an overall landscape design; c) Maximise opportunities to mitigate, adapt and improve resilience to climate change; d) Maximise opportunities for cycling and walking, including multi user routes and, where possible, facilitate circular routes; and e) Support health and wellbeing and improve opportunities for understanding and enjoyment of the National Park and its special qualities. 3. Development proposals that will harm the GI network must incorporate measures that sufficiently mitigate or offset their effects. 4. Where appropriate, the Authority will seek to secure via planning condition or legal agreement provision for the future management and/or maintenance of GI.

3.4 The South Downs National Park Authority released a Technical Advice Note (TAN) in January 2022 detailing how proposals should seek to enhance ecology.

#### Legislation

3.5 Legislation relating to wildlife and biodiversity of particular relevance to this EclA includes:

- The Conservation of Habitats and Species Regulations 2017;
- The Wildlife and Countryside Act 1981 (as amended);
- The Natural Environment and Rural Communities (NERC) Act 2006;
- The Hedgerow Regulations 1997;
- The Protection of Badgers Act 1992;
- The Protection of Mammals Act 1996.

3.6

3.7 All species of bat and their roosts are protected under The Conservation of Habitats and Species Regulations 2017 and The Wildlife and Countryside Act 1981. It is an offence to intentionally kill, injure or handle a bat, to possess a bat (live or dead), disturb a roosting bat, or sell or offer a bat for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by bats for shelter, whether they are present or not.

3.8 All UK bird species are protected against disturbance whilst occupying a nest under the Wildlife and Countryside Act 1981. Developments that could predictably disturb, kill or injure nesting birds could result in an offence. Furthermore, a number of bird species are targets of UK and Local Biodiversity Action Plans and listed as Species of Principle Importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. This obligates



local authorities to have regard to the purpose of conserving biodiversity with particular emphasis on targeted species.

- 3.9 All other mammals receive general protection against cruelty, inhumane killing or injuring under the Protection of Mammals Act 1996.
- 3.10 All widespread reptiles are protected against killing and injury under the Wildlife and Countryside Act 1981, with rarer reptiles receiving further protection under EU regulation. Reptiles must also be given consideration under the NERC Act 2006 as part of the planning process.
- 3.11 Great crested newts (GCN) are protected under The Conservation of Habitats and Species Regulations 2017. It is an offence for anyone to intentionally kill, injure or disturb a GCN or to damage, destroy or block access to areas of suitable habitat.
- 3.12 Badgers are protected under the Protection of Badgers Act 1992. It is an offence to harm badgers or disturb badgers and their setts.
- 3.13 Water voles are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 and is a priority conservation species. It is an offence to intentionally capture, kill or injure water voles, damage, destroy or block access to their places of shelter or protection (on purpose or by not taking enough care), disturb them in a place of shelter or protection (on purpose or by not taking enough care), possess, sell, control or transport live or dead water voles or parts of them (not water voles bred in captivity).
- 3.14 In the UK, dormice are legally protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and have significant further protection as a European Protected Species under the Conservation of Habitats and Species Regulations 2017 (as amended). Dormice are also a 'Species of Principal Importance for the conservation of biodiversity' listed under section 41 of the Natural Environment and Rural Communities Act 2006 (NERC). It is an offence for anyone to intentionally kill, injure or disturb a dormouse or to damage, destroy or block access to areas of suitable habitat.
- 3.15 All other mammals receive general protection against cruelty, inhumane killing or injuring under the Protection of Mammals Act 1996.

## 4.0 Methodology

### Desktop Study

- 4.1 A desktop study was conducted using the government 'MAGIC' Map GIS tool; a search was carried out for all international statutory designated sites (Ramsar, SAC, SPA) within 12.0 km of the site; national statutory designated sites (SSSI, NNR, LNR) within 2.0 km of the site; and non-statutory designated sites (SNCI) and priority habitats within 1.0 km of the site. Any sites of relevance to the proposals are summarized below and their significance considered in the context of the development proposals. Given the nature of the proposals only sites which might be impacted are considered below and this is not an exhaustive list of all sites.
- 4.2 A search was carried out to identify features of ecological interest in the area, such as water bodies and ancient woodland. Given the overall scale and nature of the site and the proposals, a full data search from SxBRC was not considered appropriate. This is in accordance with CIEEM current guidance for such projects.

### Site Visit

- 4.3 A site visit was conducted on 4<sup>th</sup> December 2023. Habitats were recorded broadly according to the UK-Habs Classification System as described within the UK Habitats Manual v2.01 (UKHab Ltd 2023). All habitats present on-site were recorded on a UKHab map (Figure No. 01 – Site Habitat Plan).
- 4.4 During the survey any constraints with regard to protected species were considered; the site was considered for its potential for protected species even when signs of these species were not noted at the time of survey.
- 4.5 The building was assessed by an experienced, licenced bat surveyor (*George Sayer 2018-34434-CLS*) for its potential to hold roosting bats; roof voids were assessed where relevant, and access points identified using high power torch; endoscope and binoculars as appropriate. Any evidence of bats such as grease marks, bat droppings, urine splashes were noted. Trees have not been assessed fully but have been subject to initial scoping for suitable features such as knot holes, deadwood and cavities. The bat roost assessment was conducted following the Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines (2023).
- 4.6 Due to the site visit being carried out over one day, it is possible that some signs of protected species may not be apparent within this short timeframe. This is a constraint recognised within the Survey Guidelines and all reasonable effort has been made to identify evidence of protected species.

### Ecological Impact Assessment

- 4.7 The methodology for Ecological Impact Assessment (EcIA) follows best practice guidelines set by the Chartered Institute of Ecology & Environmental Management (CIEEM): 'Guidelines for Ecological Impact Assessment' (CIEEM, 2018). This includes identifying the baseline conditions on the site and subsequently rating the potential effects of the development based on the sensitivity and value of the resource affected, combined with the magnitude, duration and scale of the impact (or change). This is initially assessed without mitigation measures, and then assessed again after allowing for the proposed mitigation measures; this provides the residual effects. The assessment is divided into construction effects and longer-term operational effects.
- 4.8 Each ecological feature within the site has been considered within a defined Geographic context such as:
- International and European;
  - National;
  - Regional;
  - County;
  - District;
  - Local;
  - Site Level;
  - Negligible.
- 4.9 Based upon CIEEM guidance, value was determined with reference to the following factors:
- Its inclusion as a Designated Site or other protected area;
  - The presence of habitat types of conservation significance, e.g. Habitats of Principal Importance (NERC 2006);
  - The presence (or potential presence) of species of conservation significance e.g. Species of Principal Importance (NERC 2006);
  - The presence of other protected species e.g. those protected under The Wildlife and Countryside Act 1981;
  - The sites social and economic value.

## 5.0 Baseline Ecological Conditions and Protected Species Assessment

### Desktop Study

#### *Designated Sites and Habitats*

- 5.1 The following information is included so that the site can be considered within the ecological context of the surrounding area, guiding decisions related to habitat change and protected species; these sites are not necessarily representative of the habitat on or surrounding the site and may not be influenced by the proposals.

Table No 01: Statutory Protected Designated Sites

<b>Site</b>	<b>Description</b>	<b>Location</b>
South Downs National Park	<i>1,600km<sup>2</sup> of high-value lowland landscape, including farmland, river valleys, ancient woodland and lowland heaths containing a number of small villages and market towns.</i>	Site Within Designation
The Mens SAC	<i>An extensive area of mature beech <i>Fagus sylvatica</i> woodland rich in lichens, bryophytes, fungi and saproxylic invertebrates, and is one of the largest tracts of Atlantic acidophilous beech forests in the south-eastern part of the habitat's UK range. It is developing a near-natural high forest structure. The site is also designated for Annex II bat species of barbastelle <i>Barbastella barbastellus</i>.</i>	3.2 km E
Ebernoe Common SAC	<i>Ebernoe Common has an extensive block of beech <i>Fagus sylvatica</i> high forest and former wood-pasture over dense holly <i>Ilex aquifolium</i>, and has a very rich epiphytic lichen flora, including <i>Agonimia octospora</i> and <i>Catillaria atropurpurea</i>. It represents Atlantic acidophilous beech forests in the south-eastern part of the habitat's UK range. The beech woodland is associated with other woodland types, open glades and pools, which contribute to a high overall diversity. The woods are important for a number of bat species, in particular Bechstein's bat <i>Myotis bechsteinii</i> and barbastelle <i>Barbastella barbastellus</i>.</i>	3.6 km N

Duncton to Bignor Escarpment SAC, SSSI	An example of mature beech <i>Fagus sylvatica</i> woodland located on the steep scarp face of the South Downs. The site has developed over chalk which is overlain in places by a clay-with-flints capping. Beech dominates in a mosaic with ash <i>Fraxinus excelsior</i> woodland, scrub and grassland. Much of the beech woodland is high forest but with some old pollards.	6.0 km S
Arun Valley SAC, SPA, Ramsar	Consists of three SSSIs in an area of wet meadows on the floodplain of the River Arun between Pulborough and Amberley, subject to occasional flooding, dissected by a network of ditches, several of which support rich aquatic flora and invertebrate fauna. The site is of outstanding ornithological importance for wintering waterfowl and breeding waders. It supports seven wetland invertebrate species that are listed as threatened in Britain, one of which is endangered, and there are four nationally rare and four nationally scarce plant species. Designated an SPA for the population of Bewick's swan <i>Cygnus columbianus bewickii</i> . Designated an SAC for the population of Ramshorn snail <i>Anisus vorticulus</i> .	7.7 km SE
Singleton and Cocking tunnels, SSSI, SAC	A 1.3 ha area noted for its importance as a roost for Barbastelle and Bechstein's bats.	12.0 km SW

- 5.2 The site is within the 6.5 km Key Conservation Area of the Mens SAC and Ebernoe Common SAC, whereby any impacts upon bats must be considered (SDNPA and NE 2018).

Table No. 02 – Non-statutory Protected Sites

Site	Location
Chichester District Council Bat Movement Network	Hedges and stream on the west
Petworth Park SSSI	500.0 m W
Flexham Park SSSI	1.44 km E

## Habitats

### *Desk Study*

- 5.3 Within 1.0km of the site there are Priority Habitats of Woodpasture and Parkland, Deciduous Woodland, Ancient Woodland, Traditional Orchard and Lowland Dry Acid Grassland. Nearby fields are designated as Lowland Dry Acid Grassland under stewardship management to the east, but not adjacent the site.

### *Site Assessment*

- 5.4 The site is given over to the existing building and surrounding garden, habitats of **low value** which are discussed further below.

### *U1c 81 – Artificial Unvegetated, Unsealed Surface with Ruderal*

- 5.5 There is an existing hardcore access and parking area, leading south from the A272 to the barn. The area is regularly topped up with aggregate but is currently being colonised by grasses. The habitat offers **negligible ecological value**.

### *G4 102 106 504 - Modified Grassland (Frequently Mown and Sheep Grazed, Waterlogged)*

- 5.6 The site areas are generally formed of grassland, dominated by perennial rye-grass *Lolium perenne* and to the south east cocksfoot *Dactylis glomerata*, with few forbs such as white clover *Trifolium repens* noted. The western portion of the grassland, adjacent the stream and pond is heavily waterlogged, forming a natural gradient between river, wetland and grassland.
- 5.7 The grass is generally well-used and lacking in diversity. The habitat offers **site ecological value**.

### *G4 16 128 504 - Modified Grassland (Tall Sward with Tall Forbs, Waterlogged)*

- 5.8 The western portion of the grassland, adjacent the stream and pond is heavily waterlogged, forming a natural gradient between river, wetland and grassland. A margin of this adjacent the pond has been left uncut, resulting in a taller sward with creeping thistle *Cirsium arvense* and broadleaved dock *Rumex obtusifolius* emergent. The habitat offers **negligible ecological value**.

### *H2a5 32 203 204 - Species-rich Native Hedgerow (Priority Habitat) with Scattered Trees, Mature Trees and Veteran Trees*

- 5.9 The eastern, western and southern boundaries are lined with dense and relatively high mature hedges, with species including holly *Ilex aquifolium*, field maple *Acer campestre*, blackthorn *Prunus spinosa*, hazel *Corylus avellana* and old elders *Sambucus nigra*. The hedges are of **local ecological value**.
- 5.10 The eastern boundary hedge contains a single mature oak *Quercus robur*. The southern boundary contains semi-mature oak, sweet chestnut *Castanea sativa*, and wild cherry *Prunus avium*. The western boundary contains mature oaks, including two with veteran features. The semi-mature trees are of **site ecological value**. The mature and veteran trees are of **local ecological value**.

*H2a6 32 - Other Native Hedgerow (Priority Habitat)*

- 5.11 The north-eastern boundary is lined with a hedge formed largely of blackthorn, hawthorn, and field maple. The hedge relatively dense and wide, with some natural outgrowth. is a priority habitat with some connectivity and offers **local ecological value**.
- 5.12 The southern boundary consists of a hawthorn *Crataegus monogyna* hedge with interspersed trees such as sycamore *Acer pseudoplatanus* and ash *Fraxinus excelsior*. The hedges is a priority habitat with limited connectivity and offers **site-local ecological value**.

*H2a6 - Other Native Hedgerow (Priority Habitat)*

- 5.13 The north-eastern boundary is lined with a hedge formed largely of blackthorn, hawthorn, and field maple. The hedge relatively dense and wide, with some natural outgrowth. is a priority habitat with some connectivity and offers **local ecological value**.

*R1g - Other Standing Water*

- 5.14 There are several water jumps installed within the north-western field. These are spring-fed and therefore there is some water flow. The sides are created from timber sleepers. The water is 15-25cm deep and clear with gravel and mud sediment. Sparse duckweed *Lemna minor* is present, as are individual small water plantains *Alisma plantago-aquatica* and hard rush *Juncus inflexus*. These features are of **site ecological value**.
- 5.15 There are 2no. ponds on-site; a small ponds to the east of the small jumps area, and a larger pond to the west.
- 5.16 The small pond P1 is steeply banked with hard - rush and reedmace *Typha latifolia* in places. Several goat willows *Salix caprea* are also present. Water is relatively turbid due to recent rainfall. It is unlikely that the pond forms a priority habitat.
- 5.17 The larger pond P2 has been enlarged for biodiversity purposes from a natural depression adjacent the stream, with shallow grassy banks and dense reedmace in the centre. The pond is functionally linked to the stream and is considered a priority habitat.

*R2a6 - Other Priority Habitat Rivers*

- 5.18 There is a natural stream running south-west then south along the western edge of site. This is lined with mature trees such as sycamore *Acer pseudoplatanus*, as well as bramble *Rubus fruticosus* and shrubs such as dog rose *Rosa canina* and field maple. The margin contains long grasses. The river is a priority habitat of **local value**.

*W1d – Wet Woodland*

- 5.19 To the north-west there is a large wide meander of the stream which has formed a wet woodland. Species such as oak, goat willow and blackthorn are noted but access is very limited. The woodland forms part of the stream feature and is of **local value**.

*H3d – Bramble Scrub*

- 5.20 There is large area of bramble scrub just off-site to the north of the large jumps field. The habitat is of **site value**.

## 6.0 Protected Species Assessment

### Bats

#### *Desk Study*

- 6.1 The site is within the Key Conservation Area of the South Downs Bat SACs, designated for significant hibernation roosts as well as Bechstein's and Barbastelle bats. The western hedges and stream are part of the Chichester District Council Bat Movement Network. 3no. EPSML licences are recorded within 2.0 km of site, for common pipistrelle, soprano pipistrelle and brown long-eared. West Sussex contains at least 15 native bat species with 14 species recorded at Petworth Park. The site's western hedges and stream are on the Chichester District Council Bat Movement Network.
- 6.2 The site is located between The Mens SAC, Petworth Park SNCI and Singleton and Cocking Tunnels SAC. All three are designated for their bat assemblages, with the latter for their hibernation roosts. It is likely therefore that bats including the SAC qualifying features commute past the site.

#### *Site Assessment*

- 6.3 The barn B1 consists of a historic barn of brick construction, with a timber roof holding modern corrugated metal panels. The northern end has been segregated for barn owls; the central section contains the toilet, and the southern section is an open area with health and safety documents. The building displayed no evidence of bats such as droppings, feeding remains, grease marks, urine splashes. Many of the bricks are partly-hollow, the majority were timbers contained small numbers of cracks and crevices. Given the suitable location the building is of **low bat roost potential**.
- 6.4 There are several mature and veteran trees on the western boundary offering bat roost potential. Given the lack of impacts these were only subject to visual external inspection and are classified as FAR – further assessment required. Several displayed large hollows which might allow them to host larger roosts. The trees are likely of **site value** to roosting bats.
- 6.5 The immediate surroundings are rural and highly suitable for bats as described above. The grassland is considered of **site potential** for foraging and commuting bats. The animals here are organic and as such their droppings might harbour insects for foraging bats. The hedges with trees are considered of **local-district value** to bats.



## Birds

### *Desk Study*

- 6.6 Numerous bird species are present in the local area, including a number of farmland species and woodland specialists.

### *Site Assessment*

- 6.7 The grassland is too enclosed, regularly used, and the sward generally too dense to support ground nesters such as skylark. The hedges are suitable for birds such as house sparrow and blackbird, and the oaks would be suitable for nuthatch and treecreeper. A little egret was noted in the waterlogged grassland, and blue tits, long-tailed tits, wrens and blackbirds were noted in trees and hedges. The site would also be suitable for barn owl. A barn owl box is sited in the north of the barn with anecdotal evidence from the landowner that this has been used to raise young. Barn owl pellets would reinforce this finding. Several bird nests of pigeon and blackbird were noted in the barn. The habitats are of **site value** with the barn owl box of **local value**, as barn owls are faithful to nest sites.

## Reptiles

### *Desk Study*

- 6.8 There are records of widespread reptiles within 2.0km of the site. Local heathlands such as Lavington Common support rarer reptiles including sand lizard, adder and smooth snake.

### *Site Assessment*

- 6.9 The grassland is relatively short and lacking in structural or species diversity. It is likely to support slow worms. The pond and surroundings to the west likely support grass snake. Habitats are of value at the **site level**.

## Amphibians

### *Desk Study*

- 6.10 There are no records of Great Crested Newts (GCN) within the immediate surroundings, nor are there any GCN survey or licence returns (positive or negative) with the nearest being c.4.0 km east. This suggests either limited survey effort due to lack of local development, or lack of suitable ponds due to the geology.

### *Site Assessment*

- 6.11 The grassland is relatively short and unlikely to support amphibians. The longer grass and hedges are suitable with the ponds being relatively suitable for potential breeding. The grassland is currently waterlogged and unlikely to support hibernation but the surrounding hedges and scrub may do. The habitats are of **site value**.

Dormice

*Desk Study*

- 6.12 There are limited records of dormice in the immediate vicinity. Suitable habitats within this area of the South Downs are likely to support dormice which are probably under-recorded due to lack of development surveys.

*Site Assessment*

- 6.13 The hedges are relatively well connected to other hedges and treelines, albeit this is truncated by Petworth to the west. The site offers **moderate potential**. The habitats are of **local value**.

Badger

*Desk Study*

- 6.14 Badger Records are confidential, but they are known to be present locally.

*Site Assessment*

- 6.15 The hedges contain numerous excavations, but given their size and presence of droppings are generally (where accessible) confirmed to be rabbits. The site offers **moderate potential**. The habitats are of **site value**.

Other

- 6.16 No potential for or evidence of any other protected species such as water vole, rare plants or notable invertebrates was recorded. There is potential for hedgehogs to forage in the grass given its size and the surroundings. No impacts upon other protected species are considered likely and have not been assessed further.

## 7.0 Evaluation of Impacts and Mitigation

### Designated Sites

#### *Potential Impacts*

- 7.1 The proposals would not have any direct impact upon statutory sites given its nature. The site is within the key conservation area of the South Downs Bat SACs. No impact from the installation of the jumps would have occurred. No hedges or trees have been removed, and the proposal would only slightly alter the site and on a temporary basis. No external lighting or sound is or has been used.
- 7.2 The building B1 offers low bat roost potential, but the installation and use of a toilet in the centre would not have impacted bats should they be present, which would be existing in timber and brick gaps which have not been altered. Overall, use of the jumps would have no impact upon bat roosting, commuting or foraging habitats.
- 7.3 No impacts upon local sites are predicted.

#### *Mitigation and Compensation*

- 7.4 The hedges have, over the course of the last 15 years been subject to gapping-up and have been allowed to fill out naturally. All trees and hedges have been given generous buffers from the jumps and water jumps.

#### *Residual Impacts*

- 7.5 The impacts will be negligible. The enhancement of the hedges represents a **significant positive impact** upon the connectivity of the South Downs Bat SACs.

### Habitats

#### *Potential Impacts*

- 7.6 The proposals are based on heavily modified grassland. The change from intensive grazing to lower-intensity winter grazing and use for jumps has likely had no significant impact on the habitats. This change has likely reduced nutrient runoff into the priority habitat pond and stream, a **positive impact**.
- 7.7 The jumps are largely formed of untreated timber, which allows insects such as stag beetle to burrow inside, fungi to grow and small mammals to burrow beneath. The installation of these timber jumps has resulted in some minor increases in habitat diversity. The water jumps also provide standing open water, which would be of benefit to amphibians, birds, small mammals and invertebrates, particularly in summer.

#### *Mitigation and Compensation*

- 7.8 Where practical, dung shall continue to be collected and taken away from the site to minimise runoff of nutrients. Habitats shall be maintained in the same manner. The hedges have, over the course of the last 15 years been subject to gapping-up and have been allowed to fill out naturally.

*Residual Impacts*

- 7.9 Once mitigation is taken into account, the impacts will be negligible. Infilling of hedges and planting of trees has resulted in a **significant gain in linear habitat condition**.

Bats*Potential Impacts*

- 7.10 The building B1 offers low bat roost potential, but the installation and use of a toilet in the centre would not have impacted bats should they be present, which would existing in timber and brick gaps which have not been altered.
- 7.11 No impact from the installation of the jumps would have occurred. No hedges or trees have been removed, and the proposal would only slightly alter the site and on a temporary basis. No external lighting or sound is or has been used.

*Mitigation and Compensation*

- 7.12 Trees and hedges shall be retained with appropriate buffers into the future. Declining veteran trees shall be retained as long as possible.
- 7.13 The hedges have, over the course of the last 15 years been subject to gapping-up and have been allowed to fill out naturally. All trees and hedges have been given generous buffers from the jumps and water jumps.

*Residual Impacts*

- 7.14 The overall impact of the proposals would likely be **positive for bats**, with hedges being enhanced and gapped-up.

Nesting Birds*Potential Impacts*

- 7.15 It is considered highly unlikely that any nesting birds would have been disturbed through the proposals. The proposals do not significantly alter the potential for birds. The barn owl nest is unaffected by the toilet or limited use of the barn, with segregation of the nesting area. The habitats on-site remain suitable for foraging barn owls. The water jumps are likely suitable for birds such as grey wagtail as well as for bathing birds.

*Mitigation and Compensation*

- 7.16 Trees and hedges shall be retained with appropriate buffers into the future. Declining veteran trees shall be retained as long as possible. The barn shall remain segregated, and the barn owl box checked and cleaned as necessary to prevent parasite build-up. Hedges shall continue to be cut on rotation, outside of the bird nesting season (March-August inclusive).

*Residual Impacts*

- 7.17 The overall impact of the proposals would likely be **positive for birds**, with hedges being enhanced and gapped-up creating more nesting and foraging potential.

### Reptiles and Amphibians

#### *Potential Impacts*

- 7.18 The proposals do not materially alter the suitability for these species, with the suitability remaining low due to ongoing use of the fields. The proposals do not impact the ponds but may result in reductions in nutrient input, a **positive impact**. Use of the jumps would have no impact upon bat roosting, commuting or foraging habitats. The water jumps might also provide some suitable habitat for amphibians.

#### *Mitigation and Compensation*

- 7.19 Ongoing cutting of any areas shall be undertaken with due regard to reptiles, operating in a directional manner to allow reptiles to disperse.

#### *Residual Impacts*

- 7.20 The overall impact of the scheme will be negligible.

### Dormice

#### *Potential Impacts*

- 7.21 The proposals would have had no significant impact upon dormice.

#### *Mitigation and Compensation*

- 7.22 The hedges have, over the course of the last 15 years been subject to gapping-up and have been allowed to fill out naturally. All trees and hedges have been given generous buffers from the jumps and water jumps.
- 7.23 Hedges shall continue to be cut in a rotation, over winter when dormice would not be present higher in the hedge, ensuring uncut sections are always present for shelter.

#### *Residual Impacts*

- 7.24 The overall impact of the scheme will be **significantly positive** for dormice, with better connectivity and much better foraging and nesting potential in existing hedges.

Other

*Potential Impacts*

- 7.25 The proposals would have had no significant impact upon badgers, water voles or hedgehogs. The proposals would increase the opportunities for small mammals and invertebrates through the addition of timber features and water jumps to the grassland.

*Mitigation and Compensation*

- 7.26 None required. Jumps when they reach end-of-life should be placed to the edges of fields to natural rot down as deadwood features. Posts can be partially buried to create stag beetle habitat.

*Residual Impacts*

- 7.27 The overall impact of the scheme will be positive for small mammals and invertebrates.

## 8.0 Ecological Enhancements

8.1 In accordance with current South Downs National Park Policy, the proposals should aim to achieve a gain of some form. The wider farm is largely under stewardship schemes with the he farm recently winning the Farming and Wildlife Group Southeast's Woodpecker Award for their work for conservation in 'delivering exceptional conservation benefits to the local environment'. To this end, enhancements should focus on the ongoing good management of the wider farm property, with gapping up of hedges, planting of trees and creation of ponds in past years all contributing to the biodiversity gains.

8.2 The most beneficial enhancements which could complement the existing situation would involve the following:

- Leaving of a 1-2m strip of grassland along each hedge to allow reptiles to forage, dormice to hibernate and small mammals to proliferate; this should be cut every other year such that a thatch develops for the mammals, supporting barn owls further;
- Installation of further log piles to the corner of the fields;
- Reseeding of any bare patches with a wildflower grassland to increase species diversity.

## 9.0 Conclusions

- 9.1 Overall, the proposals are considered to represent a 'negligible' impact upon ecology and no further surveys are recommended. The proposal area consists of low value grassland surrounded by hedge and trees, scrub, stream and woodland of higher value.
- 9.2 The proposals are not anticipated to have any significant impact upon ecology; there is potential for numerous protected and notable species as well as priority habitats being present; none of these have been or would be impacted by the proposals.
- 9.3 No significant effects are anticipated upon the South Downs Bat SACs, or any other designated site. Enhancement to hedgerows in recent years represents an improvement in connectivity to the SACs.
- 9.4 When ongoing management and enhancements to the site and the wider surroundings have been taken into account, the proposals are not considered to have a negative impact upon habitats or protected species in accordance with planning policy, and the management of the land over recent years would represent a significant net gain. The proposals would therefore accord with the relevant local and national planning policies and the relevant legislation.



## 10.0 References

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## 11.0 Species Lists

### Modified Grassland

Common Name	Scientific Name	DAFOR
Broadleaved Dock	<i>Rumex obtusifolius</i>	O
Cocksfoot	<i>Dactylis glomerata</i>	D
Common Mouse-ear	<i>Cerastium fontanum</i>	R
Cow Parsley	<i>Anthriscus sylvestris</i>	R
Creeping Buttercup	<i>Ranunculus repens</i>	A
Creeping Thistle	<i>Cirsium arvense</i>	LF
Ground Ivy	<i>Glechoma hederacea</i>	O
Perennial Rye-grass	<i>Lolium perenne</i>	D
Tall Fescue	<i>Schedonorus arundinaceus</i>	O
White Clover	<i>Trifolium repens</i>	A
Yorkshire Fog	<i>Holcus lanatus</i>	O

### Trees, Scrub and Hedges

Common Name	Scientific Name	DAFOR
Blackthorn	<i>Prunus spinosa</i>	LA
Bramble	<i>Rubus fruticosus agg.</i>	LD
Dog Rose	<i>Rosa canina</i>	R
Elder	<i>Sambucus nigra</i>	LD
Field Maple	<i>Acer campestre</i>	LF
Goat Willow	<i>Salix caprea</i>	LF
Hawthorn	<i>Crataegus monogyna</i>	LD
Hazel	<i>Corylus avellana</i>	O
Holly	<i>Ilex aquifolium</i>	O
Pedunculate Oak	<i>Quercus robur</i>	A
Sycamore	<i>Acer pseudoplatanus</i>	LF

**12.0 Appendix A - Site Photos**

Photo 1 – B1 as viewed from the north-east.



Photo 2 – Barn owl box in north of B1.



Photo 3 – Looking north to the toilet in B1.



Photo 4 – Smaller western jumps area.



Photo 5 – Smaller water jump.



Photo 6 – Larger water jump.



Photo 7 – Waterlogged Grassland.



Photo 8 – Pond P1.



Photo 9 – River and wet woodland beyond.



Photo 10 – Pond P2.



Photo 11 – Larger eastern jumps area.



Photo 12 – Larger eastern jumps area from the south-east corner.





Photo 13 – Southern boundary hedge.



Photo 14 – Mature and veteran trees on the west boundary.



13.0 Figure No. 01 – Site Aerial



14.0 Figure No. 02 – Site Habitat Plan

