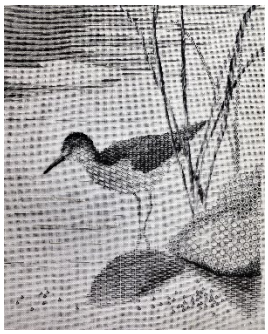
Biodiversity Mitigation and Enhancement plan

Smock Alley
Haglands Lane
West Chiltington



Spatial Ecology

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1 Introduction

This Biodiversity Mitigation and Enhancement Plan (BMEP) has been produced by the Spatial Ecology to set out the ecological mitigation, compensation and enhancement measures for the residential development at Smock Alley (see **figure 1.1)** granted planning permission under DC/24/1619 and to discharge conditions 7, 8, 9 and 10.

Condition 7-No development shall commence until a Biodiversity Enhancement Strategy has been submitted to and approved in writing by the Local Planning Authority. The content of the Biodiversity Enhancement Strategy shall include the following:

i. Purpose and conservation objectives for the proposed enhancement measures;
ii. Detailed designs to achieve stated objectives;
iii. Locations of proposed enhancement measures by appropriate maps and plans;
iv. Persons responsible for implementing the enhancement measures;
v. Details of initial aftercare and long-term maintenance (where relevant).

The works shall be implemented in accordance with the approved details and shall be retained in that manner thereafter.

Condition 8: The development hereby approved shall not commence until the following biodiversity construction details have been submitted to and approved in writing by the Local Planning Authority. The details shall be limited to the following measures:

a) Risk assessment of potentially damaging construction activities.
b) Identification of "biodiversity protection zones".
c) Practical measures (both physical measures and sensitive working practices) to avoid or reduce impacts during construction (may be provided as a set of method statements).
d) The location and timing of sensitive works to avoid harm to biodiversity features.
e) The times during construction when specialist ecologists need to be present on site to oversee works.
f) Responsible persons and lines of communication.
g) The role and responsibilities on site of an ecological clerk of works (ECoW) or similarly competent person.
h) Use of protective fences, exclusion barriers and warning signs.

The approved CEMP shall be adhered to and implemented throughout the construction period strictly in accordance with the approved details, unless otherwise agreed in writing by the local planning authority

Condition 9: No development shall take place until a Reptile Mitigation Strategy addressing the mitigation and translocation of reptiles has been submitted to and approved in writing by the Local Planning Authority. The Reptile Mitigation Strategy shall include the following.

i. Purpose and conservation objectives for the proposed works.
ii. Review of site potential and constraints.
iii. Detailed design(s) and/or working method(s) to achieve stated objectives.

iv. Extent and location/area of proposed works on appropriate scale maps and plans.
v. Type and source of materials to be used where appropriate, e.g. native species of local provenance.
vi. Timetable for implementation demonstrating that works are aligned with the proposed phasing of development.
vii. Persons responsible for implementing the works.
viii. Details of initial aftercare and long-term maintenance of the Receptor area(s).
ix. Details for monitoring and remedial measures.
x. Details for disposal of any wastes arising from works.

The Reptile Mitigation Strategy shall be implemented in accordance with the approved details and all features shall be retained in that manner thereafter.

Condition 10: No development shall commence until a lighting design scheme for biodiversity has been submitted to and approved in writing by the local planning authority. The scheme shall identify those features on site that are particularly sensitive for bats and that are likely to cause disturbance along important routes used for foraging; and show how and where external lighting will be installed (through the provision of appropriate lighting contour plans, isolux drawings and technical specifications) so that it can be clearly demonstrated that areas to be lit will not disturb or prevent bats using their territory.

All external lighting shall be installed in accordance with the specifications and locations set out in the scheme and maintained thereafter in accordance with the scheme. Under no circumstances should any other external lighting be installed without prior consent from the local planning authority.



Figure 1.1: Location and approved design of Smock Alley.

2 Site Description and Summary of Survey Results

The site encompasses approximately 3.73ha and consists of two grassland fields, bordered by hedgerows, bracken and scrub. An area of semi-natural broadleaved woodland is located adjacent to the west of the proposal site.

The project will involve the construction of a residential development, comprising 14 dwellings. These have been designed to create a rural atmosphere, with quiet lanes, soft landscaping and seclusion provided by retained hedgerows and woodland.

The following is a summary of the findings of various surveys and reports undertaken for the site and in particular the Ecological Appraisal Addendum (2023) by LUC.

2.1 Habitat Surveys

The habitat condition assessments were carried out in June 2021 by Katie Luxmoore from LUC. These were then updated on 21st April 2023 by Jasmine Bernard BSc to account for changes in the extent of habitats since the initial assessment. See baseline map at figure 2.1.

The Site comprised two poor semi-improved grassland fields, separated by a species-rich hedgerow. The fields were bordered to the east and north by species-rich hedgerows with trees. To the west and south the fields were bordered by dense scrub with areas of dense bracken.

Immediately beyond the Site boundary to the west, was an area of broadleaved woodland. Immediately to the east and north were Smock Alley and Haglands Lane, and immediately to the south was a residential development. The wider landscape was dominated by arable fields and pasture, interspersed by residential settlements and small villages.

Habitat Descriptions
Habitat descriptions are set out below.

Poor semi-improved grassland
The two poor semi-improved grassland fields, which made up the majority of the, had been recently cut at the time of survey and comprised a relatively uniform, species-poor, grass dominated sward. Species included dominant red fescue *Festuca rubra,* and Yorkshire fog *Holcus lanatus,* with frequent perennial rye-grass *Lolium perenne,* and occasional cock's-foot *Dactylis glomerata,* creeping buttercup *Ranunculus repens* and broadleaved doc *Rumex obtusifolius.*

Dense scrub
Along the southern and western boundaries, there was a wide strip of dense scrub This was dominated by bramble *Rubus fruticosus* agg., with locally dominant bracken *Pteridium aquilinum*, and occasional nettle *Urtica dioica*.

Species-rich hedgerow
The hedgerow which separated the two fields was approximately four metres tall. Species included locally dominant blackthorn *Prunus spinosa,* and hawthorn *Crataegus monogyna*, with abundant elder *Sambucus nigra* and bramble and rarely ash *Fraxinus excelsior*, and grey/goat willow hybrid *Salix* sp. Bracken was present along the margins

Species-rich hedgerow with trees
The hedgerow with trees along the eastern boundary was dominated by trees, including mature pedunculate oaks *Quercus robur.* Other species included occasional hazel *Corylus avellana*, hawthorn, ash, elder, holly *Ilex aquifolium,* and locally abundant cherry *Prunus* sp. The hedgerow with trees in the north of the Site comprised locally abundant hawthorn, hazel, grey/goat willow hybrid and elder, with occasional pedunculate oak, field maple *Acer campestre*, apple *Malus* sp., bramble and holly.

Semi-natural broadleaved woodland
The semi-natural broadleaved woodland to the west of the Site boundary was relatively uniform in structure and plant species and lacked an understory layer in most areas. Species included dominant pedunculate oak, with occasional birch Betula sp., hawthorn, holy and elder and locally frequent hazel. The woodland ground flora was sparse ,and many areas were dominated by bare ground or dense bracken. Other species included locally abundant bluebell *Hyacinthoides nonscripta*, bramble, germander speedwell *Veronica chamaedrys,* cleavers *Galium aparine*, and enchanter's nightshade *Circaea lutetiana.*



Figure 2.1 BNG habitats on site – Smock Alley.

2.2 Badgers

Previous surveys identified three badger setts within the Site (Sett 1, Sett 2 and Sett 3). The 2023 badger survey confirmed the continued presence of all of these setts and also identified two more setts (Sett 4 and Sett 5). Sett 1, Sett 2 and Sett 3 were also noted to have extended in distribution and number of entrance holes since the 2020 survey.

Badger activity, including paths, snuffle holes and latrines were noted throughout the Site and in the adjacent woodland. Paths led through the woodland and into scrub on the field boundaries, into the fields and through the central hedgerow within the Site. A fox carrying a badger cub away from the location of the main badger sett and into the woodland was also noted near target note 2 confirming current breeding activity.

2.3 Hazel Dormouse

The Site provides suitable habitat for dormouse including species-rich hedgerows in the centre of the Site and on the northern site boundary, which provide numerous food sources and nest building material. Habitat connectivity along the eastern boundary hedgerow was limited, due to this hedgerow being leggy and dominated by trees, with a sparse shrub layer. The woodland was considered to be of low suitability, as this habitat lacked an understory and therefore habitat connectivity was limited and foraging and nest building resources were sparse. The scrub along the southern boundary of the Site was also considered to be of low suitability, due to a lack of species diversity (composed solely of bramble and bracken) and its patchy distribution with limited habitat connectivity (due to the adjacent woodland and leggy hedgerow having limited connectivity).

Due to the small size of the Site, poor habitat connectivity with the wider landscape and the lack of understorey in the woodland, the presence of dormouse within the Site is considered unlikely.

2.4 Bats

Various trees were identified as having bat roost potential, mostly low potential and a mature cherry *Prunus* sp. on the eastern boundary was noted to have moderate potential due to the presence of a woodpecker hole on the western aspect and a fissure on the east aspect. Trees with bat roost potential are displayed in **Figure 2.4** below.



Figure 2.4- Trees with bat roost potential- Smock Alley (from LUC ecological appraisal addendum(2023)

Foraging and commuting

The poor semi-improved grassland areas were still considered to be of low suitability for foraging and commuting bats due to their limited species diversity. Hedgerows, woodland edge and scrub along the Site boundaries were still of moderate foraging suitability for bats due to their structural and species diversity and connections to the wider landscape. The woodland to the west of the Site was of high suitability for bats.

Bat activity surveys

Bat activity surveys undertaken in the form of Static Monitoring Point (SMP) surveys in 2014) and further update surveys conducted in May to October 2023 which comprised three SMP locations. The results of the two surveys are broadly similar , indicating that bat activity has not significantly changed since 2014.

Common pipistrelle *Pipistrellus pipistrellus*, was the most commonly recorded species (comprising approximately 45% of call registrations), followed by noctule *Nyctalus noctula* (approximately 21% of callregistrations), soprano pipistrelle *Pipistrellus pygmaeus*

(approximately 16% of call registrations) and serotine *Eptesicus serotinus* (approximately 13% of call registrations). Small numbers of call registrations (less than 2%) were also present for brown long-eared bat *Plecotus auritus,* nathusius pipistrelle *Pipistrellus nathusii*, and *Myotis* species.

Bat activity was highest at woodland edge on the western boundary of the Site) and SMP 3 (species-rich hedgerow on the eastern boundary of the Site), whereas activity on most nights was lowest at the species-rich hedgerow between the northern and southern fields). The woodland edge habitat is likely to support an abundance of invertebrates, providing good foraging opportunities for bats. The hedgerow along the eastern boundary, in addition to providing foraging resources, forms part of an un-lit, tree-lined road (Smock Alley), which would be expected to provide good commuting opportunities for bats, connecting the Site with the wider landscape.

2.5 Reptiles

A review of local records identified slow worm *Anguis fragilis*, adder *Vipera berus*, grass snake *Natrix natrix* and common lizard *Zootoca vivipara* within 2km of the Site, with the closest record being slow worm *Anguis fragilis* on Haglands Lane.

The suitability of the site for reptiles has increased since the 2020 survey work due to the longer and more varied sward. The extension of the scrub habitat also provides more sheltering opportunities, with the younger scrub providing basking opportunities. However, it should be noted that the site management includes cutting of the grassland four times per year and the grassland was due to be cut soon after the site visit. Reptile activity, if present, is therefore likely to be focussed around the site boundaries and areas of scrub. The Site is also subject to regular informal access by dog walkers. Residential gardens, scrub, woodland and grassland along country lanes in the surrounding landscape also provide opportunities for reptiles and are connected to the Site through hedgerows and tree lines, albeit with the barriers of Smock Alley and Haglands Lane.

2.6 Nesting birds

The hedgerows, scrub and trees within and immediately adjacent to the Site continued to provide suitable nesting and foraging opportunities for a range of widespread species of bird. A bird's nest was recorded in a cherry *Prunus* sp. tree on the eastern boundary. The grassland was still considered to be of low suitability for ground-nesting birds due to the proximity of boundary features and likely presence of cats from adjacent residential properties.

3 Habitat and Protected Species Mitigation and enhancement

The aim of this BMEP is to ensure the existing and potential biodiversity on the site is protected, maintained and enhanced during all stages of development. The protected habitat and species mitigation measures are as follows:

3.1 Habitats

Risk assessment.

The habitats within the Site, where the residential plots and access roads will be situated, mainly consisted of poor semi-improved grassland. This habitat is common and widespread throughout the UK and considered to be of low ecological value.

The scheme will include the provision of amenity grassland, species rich grassland, shrubs (ornamental, native and wildlife friendly) hedges, hedgerows, planting beds and a retention pond. This habitat creation in addition to retaining and enhancing habitats as below, will mitigate for the loss of semi-improved grassland.

The Site boundaries were well vegetated with species-rich hedgerows, scrub, bracken and broadleaved woodland edge with numerous mature trees. These habitats are considered to be of moderate ecological value. These habitats and the landscape connectivity they provide will be retained and enhanced as part of the proposed scheme via the provision of 2-3m wide buffers on all field boundaries.

In addition, wide buffers along the southern and western boundaries of the southern field, measuring a minimum of 10m, will be retained as a wildlife area. This wildlife area will be dominated with species-rich native scrub to discourage recreational access. The buffers and wildlife area will be located outside of the residential garden fences and will not be intensively managed. To enable to badger sett closures (as detailed in the Badger section below), the bramble scrub and bracken currently within these wide buffer areas will need to be temporarily removed and will then be replaced.

Ten trees are to be removed to facilitate the development (for example to provide sufficient space for the access road on Smock Alley). Of these trees, five have been identified in the Arboricultural Assessment and Method Statement as Category U (dead/dying/dangerous and therefore have to be removed for safety and longevity reasons) and three are goat willow scrub. Only two Category A and B trees (high and moderate respectively) are to be removed. The rest of the c.96 trees recorded on Site are to be retained. Importantly, the removal of these ten trees will not result in a loss of habitat connectivity within or beyond the Site and will not significantly impact the condition of the hedgerows.

In addition, it is expected that a small number of trees will require removal, to facilitate the badger mitigation, details on badger mitigation are summarised in section 3.2 below and specifically in Badger Mitigation Method Statement (Co-Ecology 2025).

3.1.1 Mitigation

The following mitigation will be provided:

- Any development within the Site has the potential to impact on retained mature trees and shrubs. Therefore, tree protection measures will be put in place around these features during works in accordance with BS5837: 2012. Trees in Relation to Construction.
- Good construction measures will also be followed throughout the project, including: fencing off the hedgerows, woodland and wildlife buffers; secure storage and safe disposal of any materials and substances; and dust prevention measures, to prevent accidental contamination to the adjacent habitats. (see **figure 3**.1)
- To mitigate for the ten trees that are to be removed, 39 trees will be planted within the development, incorporating a range of native and non-native species of benefit to

wildlife, including native field maple *Acer campestre*, hornbeam *Carpinus betulus*, and wild service tree *Sorbus torminalis,* and also *Amelanchier lamarckii, liquidambar styraciflua* and *Prunus sargentii* which are non-native trees of benefit to bird and invertebrate foraging.

- The scrub to be temporarily removed in the wide buffers on the southern and western boundaries of the southern field will be replaced and enhanced with a species-rich mix of the following seven native species: field maple, hazel *Corylus avellana*, crab apple *Malus sylvestris*, bird cherry *Prunus avium*, blackthorn *Prunus spinosa*, goat willow *Salix caprea*, and elder *Sambucus nigra*.
- All dead wood will be retained within the Site or the adjacent woodland as log piles to provide habitat for invertebrates and refuges for other wildlife.
- Fuel and other chemicals to be stored at least 10m away from the sensitive habitats, in nearby compounds and to be fully bunded to 110% of the maximum storage capacity and maintained in a secure and clear manner.
- All fuelling operations, servicing of equipment and fuel storage to take place at least 10m away from sensitive habitats.
- Any spillage shall be immediately contained, removed from site and disposed to a licensed tip.
- A supply of water and means of dispensing it will be available on site to dampen down dust, haul routes and material stockpiles.



Figure 3.1- red shaded areas are buffer areas that will be protected during construction and during residential occupation of the sites.

3.1.2 Summary of habitat enhancement proposals

- The replacement of the scrub with a native species-rich mix will result in an enhancement of foraging opportunities for a wide range of species and increased nesting opportunities for birds.
- The provision of new habitats, including the SuDS pond in the south-east (which will have long grass margins on at least two sides) and species-rich grassland within communal areas of the Site will result in an increase in plant species diversity within the Site and new foraging opportunities.
- The grassland will be seeded with EM2 Standard General PurposeMeadow Mixture grass seed mix (as supplied by Emorsgate, or a similar mix) and managed as meadow. Partially shaded areas will be over sown with EH1 – Hedgerow Mixture, where needed (as supplied by Emorsgate and or a similar mix).
- As part of the badger mitigation, the woodland adjacent to the Site will be fenced off from public access using hardwearing green paladin fencing to prevent public access and managed solely for wildlife. The fencing will have a minimum height of 2.2m, will be buried to a sufficient depth to prevent public access, and will be screened by planting thorny scrub. To ensure that the fencing does not create a barrier to badgers, 220mm x 300mm gaps will be created at the base of the paladin fencing, at 100metre intervals along the entire length of the fence, to allow free movement of badgers and other species such as fox, hedgehog and rabbit.
- The woodland will then be enhanced to increase its value for wildlife and habitat condition, resulting in BNG for this habitat (as detailed in the BNG report). This will include selective thinning of the woodland canopy, which is currently overly dominated by pedunculate oak trees of the same age and size, and therefore has minimal species and structural diversity. A range of native scrub and small understory tree species will be planted within thinned areas. The selective thinning and fencing will also enable woodland ground flora species such as bluebell *Hyacinthoides non-scripta*, to recolonise areas which are currently either over-shaded or subject to trampling from informal access.
- Wildlife-friendly planting, will be provided within the scheme design, incorporating species such as those listed on the Royal Horticultural Society's "Plants for Pollinators" species lists. This will increase insect abundance and diversity within the Site, whist also providing additional foraging opportunities for species such as bats and birds, which feed on insect prey.
- The creation of residential gardens, with an increased structural and species diversity of vegetation, has the potential to result in a small enhancement in foraging opportunities for hedgehog, if these areas are made accessible. Small gaps in fences of six inches by six inches will be provided to enable access for hedgehogs. Further information on creating habitats for hedgehogs is provided by the British Hedgehog Preservation Society at https://www.britishhedgehogs.org.uk/.

3.1.3 Habitat management

The proposed habitat management to achieve Biodiversity Net Gain (BNG) is set out in the Habitat Management and Monitoring Plan (2024), but is summarised below and see figure 3.1 below for the post intervention proposed habitats.



Figure 3.1-BNG post intervention habitats- Smock Alleyt

3.1.4 Grassland habitats

0.27ha of the modified grassland will be retained and enhanced to create other neutral grassland and managed as hay meadow type habitat. Aiming to convert poor condition modified grassland to good condition other neutral grassland before 15 years following commencement. All of the 0.03ha of bracken stand will be retained and will be maintained in current poor condition. 0.15ha of other neutral grassland will be created. It will be planted, aftercare undertaken and subject to annual management. Aiming to achieve good condition with 10 years following commencement.

Site preparation for neutral grassland creation areas

The aim will be to create a fine stable tilth. This could include; if present existing turf should be stripped and taken away, cultivated with rotovator or similar. **Herbicides will be avoided if not essential for proposer establishment of habitats areas**. If when a flush off weeds occurs that cannot be controlled with other measures will be sprayed off with an approved herbicide, once sufficiently died back, sown with a wildflower meadow mix Emorgates EM2 or similar at a rate of 4gm/m2 and lightly roll. In first year sward should be kept low to promote tillering and control problem weed, with arisings removed. This may impact annual species such as *Rhinanthus minor* – Yellow Rattle, which may need to be reintroduced. Yellow Rattle plays an important role in reducing the vigour of grass species (through hemi-parasitism) that may out-compete wildflower species.

Site preparation for neutral grassland enhancement areas

Grassland will be cut short 5-10cm sward height in September of first year and over-sown with a wildflower meadow mix Emorgates EM2 or similar at a rate of 2gm/m2. No fertiliser will be applied and only spot treatment of pernicious weeds with herbicide when cultural control methods have failed. This mix contains *Rhinanthus minor* – Yellow Rattle which should over time reduce the dominance of existing grass species.

Long-term management of neutral grassland areas

Following establishment of new and enhanced areas. Annual management will consist of an annual cut in September with arisings removed, to simulate hay cutting management. No fertiliser will be applied and only spot treatment of pernicious weeds when cultural control methods have failed with approved herbicide (ideally with a highly targeted method such weed wiping).

Once all areas established satisfactorily a rotational cutting programme will be implemented with some areas given an additional cut (and removal of arisings) in the spring, this will include areas along paths and road areas.

Monitoring of neutral grassland areas

Monitoring to be undertaken between May and August each year for years 1-5 and then every 5 years up to 30 years. To be undertaken on all enhanced and new areas of neutral grassland.

- Undertake quadrat sampling to identify the habitat type that is establishing and then number of species per m2.
- Estimate percentage of bare ground, bramble and bracken cover. Monitoring will identify any bare areas and if considered excessive, targeted re-seeding will be undertaken
- Collect a botanical species list across grassland to check against target species list
- Monitoring will identify any excessive bracken encroachment and if considered excessive and annual cutting is not reducing vigour, bracken bruising prior to the autumn will be undertaken. If still not effective and when cultural control methods have failed application of an approved herbicide will be undertaken using a targeted method such as a weed wiper.

3.1.5 Scrub habitats

0.14ha of mixed scrub will be retained and enhanced and subject to periodic management. Aiming to convert poor condition mixed scrub to moderate condition mixed scrub before 15 years following commencement. 0.3ha of the mixed scrub, (that has to be cleared to accommodate the badger mitigation) will be recreated in situ. It will be replanted, aftercare undertaken and subject to periodic management. Aiming to achieve moderate condition with 5 years following commencement.

Site preparation and establishment for new scrub areas

Depending on site conditions site preparation may or may not be required, if significant grass or weed species present, and when cultural control methods have failed approved herbicide spot treatment,

New areas to be planted with a mix of native and native provenance shrub species including;

• field maple Acer campestre
• hazel Corylus avellana
• crab apple Malus sylvestris
• bird cherry Prunus avium
• blackthorn Prunus spinosa
• goat willow Salix caprea
• elder Sambucus nigra

Subject to requirements of access management and badger mitigation, aim to plant at a minimum density of 2m centres, but ideally planted in clumps with varying density.
All scrubs will be protected with spiral guards or scrub guards suitable for the species, once established all guards will be removed.

If conditions are dry watering may be required in first 1-2 years until established.

Annual checks will be undertaken in first 5 years any dead or dying plants will be replaced within the next planting season.

Management and monitoring new scrub areas

Once established or in existing scrub area and where compatible with protected species mitigation and access management. Scrub will be managed on a rotational basis with 1/15th of the area coppiced to ground level each year in the winter and allowed to regrow, arisings removed or dead hedged to protect cut areas

If wild herbivores prevent regrow protection measures such as fencing or dead hedging will be implemented

Monitoring to be undertaken between May and August each year for years 1-5 and then every 5 years up to 30 years. Surveys to be completed between May and August
To be undertaken on all areas of new shrub.

- Undertake quadrat sampling to identify the habitat type that is establishing and then number of species per 5 m2.
- Estimate percentage of bare ground, bramble and bracken cover.
-

3.1.6 Hedgerows

All hedges will be retained and subject to regular sympathetic management. All will be maintained in good condition throughout management period.

Hedge protection during construction

All retained hedges will be protected with heras or similar fencing to ensure that construction activity including storage of materials or plant does not encroach into root protection areas.

Hedge Management

Maintain hedges at greater than 1.5m height an width through annual cutting of areas requiring sightlines and a rotation of every 2-3 years for other hedges

Hedge monitoring

To be undertaken on all hedges. Annually from years 1-5, then every 5 years. Surveys to be completed between May and August

- Undertake quadrat sampling to identify the habitat type that is establishing and then number of species per 20 m
- Estimate percentage of deleterious factors in accordance with condition assessment.
- Collect a botanical species list across grassland to check against target species list

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3.2 Badgers

Risk assessment

The Badger Mitigation Method Statement (2025) prepared by Co-Ecology is the authoritative document. What follows is a summary of the method statement for the badger mitigation element.

It is likely that disturbance from the construction phase could result in a shift in use of the site in favour of the woodland habitat, although ongoing monitoring of badger activity will reveal more. At present, the setts within the woodland are located sufficiently far from the development to be directly impacted. However, a number of setts or sett entrances within or close to the development area will have to be permanently temporarily closed to facilitate the development.

3.2.1 Mitigation for badgers

Regular checks by both ecologist and site staff should be made of the temporarily excluded setts throughout the duration of construction.

Territory size of the clan will be reduced slightly as a result of the proposals, although badgers are known to frequent gardens for opportunistic foraging and the open nature of the proposed designs with dividing hedgerows are likely to allow continued use of the site, although with reduced suitability/ foraging resource once operational.

The main dispersal routes across the site will be retained via protection of the central hedgerow as well as northern and eastern boundary hedgerows and a strip of scrub habitat will be retained along the southern boundary. *Nature Scot (2018) Guidelines- Managing Land as a Foraging Resource for Badgers* identifies broadleaved woodland as primary foraging habitat and rough grassland as secondary. Some enhancements to the woodland including understorey planting with fruit-bearing species such as Rowan and Elder could increase the availability of food resource within the adjacent woodland.

The Construction area should be secured from badgers with precautionary measures implemented for the duration of the construction and landscaping phases. This will include;

- Heras fencing installed as specified within the badger mitigation strategy, also see (**figure 3.2**)
- No excavations to be left open overnight and if this is not practicable a means of self-escape provided in the form of a scaffold plank (or similar) at a maximum angle of 45 degrees.



Figure 3.2- badger buffer area to be maintained through out construction and occupation.

Obtain consent from Natural England once all relevant planning conditions have been signed off, licensable work will include;

- Timing of all disturbing works to be carried out between July 1st and November 30th.
- Prior to commencement of any construction activities, from September 2025 - Hand removal of sufficient vegetation around the setts to facilitate the installation of weldmesh fencing secured to the ground as a proofing measure;
- Installation of one-way gates on all entrances;
- Monitoring of the efficacy of the exclusion for a minimum of 21 days;
- On completion of the exclusion process the whole of setts 7 and 8 and all below ground works would be fully excavated using a progressive tunnel blocking approach with the ground remediated thereafter;
- On completion of construction the exclusion measures for entrances to Sett 1 and Sett 3 to be removed by the ecologist and badgers allowed to re-colonise.

3.3 Breeding Birds

Risk assessment

The hedgerows, scrub, mature trees and woodland within and adjacent to the site continue to provide good opportunities for nesting and foraging birds and these features are to be retained. In the short-term, any tree and scrub removal has the potential to impact on birds and their nests, if present during the breeding season. Under the Wildlife and Countryside Act it is an offence to destroy or damage the nest of birds of any species.

Mitigation

The following mitigation will be provided:

- Any works to trees, hedges, shrubs or scrub within the Site, or construction work within close-proximity to these features, should be undertaken between September-February (inclusive) to avoid the season during which birds are most likely to nest.
- Where clearance of suitable habitat is programmed during the bird breeding season, which is typically March to August inclusive, prior to works, a suitably qualified ecologist must undertake a survey to determine whether birds are nesting in the area. If a nest is discovered, clearance or other construction works would need to be delayed within an exclusion zone. Works may only recommence once it is confirmed that chicks have fledged and that no other nests are in use within the
- exclusion zone.
- The same approach will also be applied to any selective thinning within the woodland.

Enhancement

Swift nest boxes (Schwegler swift boxes 1A, 16, 17 or 18 or a similar model) will be incorporated into the external walls of three of the new dwellings, thereby increasing nesting opportunities for birds at the Site. The boxes will be installed in clusters of at least three, and at a height of at least 3m above ground level. They will be situated under eaves or sheltered areas of the buildings, avoiding doors and windows where possible and facing north or east.

Clusters of three swift boxes will be installed at eaves level on the north elevation of plot 1, the east elevation of plot 3 and the north elevation of plot 7 (see figure 3.3)



Figure 3.3- Locations for installation of swift boxes yellow stars

3.4 Hazel Dormouse

Risk assessment

The central and northern hedgerows within the Site provide suitable habitat for dormouse, though the likelihood of this species being present is low, due to limited habitat connectivity within and adjacent to the Site. The layout of the scheme was redesigned at an early stage to avoid any loss of hedgerow habitat. The access from the southern field to the northern field was moved from the centre of the central hedgerow to the eastern extent of the hedgerow where an existing five metre gap is present. This design alteration ensured the central hedgerow is entirely retained with no loss or degradation of habitat connectivity. Similarly, access into the Site from Smock Alley will be through an existing vehicle access gap.

The woodland and scrub in the south of the Site are of low suitability due to a lack of species and structural diversity and a lack of a woodland understory. Therefore, the temporary removal of the scrub to enable the badger sett closures is not considered to result in impacts to dormouse or a significant temporary loss of dormouse habitat. This temporary removal will also not result in a loss of habitat connectivity overall, due to the ornamental hedgerow along the adjacent neighbouring property and due to the retention of all hedgerows within the Site and the woodland. The scrub will be replanted with a mix of seven native woody species, resulting in an enhancement of scrub habitat with increased foraging and sheltering opportunities, as outlined in the habitats section above.

Once occupied, the residential development has the potential to cause increased light-spill onto adjacent semi-natural habitats, if suitable design measures are not put in place, which could cause impacts on dormouse, if present.

Mitigation

- A sensitive lighting scheme will be provided, as outlined in the Bats section below.
- This BMEP will be ensure that the scrub habitats are created, managed and monitored in way which maximises opportunities for wildlife including Hazel Dormouse.

3.5 Bats

Risk assessment

All bat species and bat roosts are legally protected in the UK. You could be fined or go to prison if you:

- *Deliberately kill, injure or capture bats;*
- *Deliberately disturb bats in such a way as to be likely to significantly affect i) the ability of any significant group of bats to survive, breed or rear or nurture their young, or ii) the local distribution or abundance of bats;*
- *Intentionally or recklessly disturb any bat whilst it is occupying a roost;*
- *Damage or destroy bat roosts;*
- *Intentionally or recklessly obstruct access to a bat roost.*

The proposed development is to be limited to the poor semi-improved grassland fields which are considered to be of low suitability for commuting and foraging bats. The hedgerows,

scrub, mature trees woodland edge habitats, which are of a higher suitability will all be retained and protected. The proposed scheme will therefore not result in a significant loss of foraging habitat, or habitat connectivity for bats.

Once occupied, the residential development has the potential to cause increased light-spill onto adjacent semi-natural habitats, if suitable design measures are not put in place. A significant increase in light-spill onto the hedgerows and mature trees would result in these features becoming less accessible to bats, as most bat species will avoid well-lit areas where the risk of predation is perceived to be higher.

Mitigation

- *A sensitive lighting scheme will be provided as an addendum, which could be secured through a suitably worded planning condition. This will be designed to avoid light-spill onto the adjacent semi-natural habitats. This will include;*

    - *No external lighting in the immediate area around these habitats (especially potentially used for foraging and particularly commuting habitats, such as woodland edge and hedgerows) will be installed; See figure 3.5.1.*
    - *All lighting will make full use of sensors or timers;*
    - *The use of low lux LED lighting; and*
    - *provision of cut offs, baffles and screens on light fittings to limit light spill.*
    - *Detailed guidance on sensitive lighting for developments is provided by the Bat Conservation Trust and can be found at the following website address:* http://www.bats.org.uk/pages/bats_and_lighting.html.



Figure 3.5.1- red shaded area are wildlife buffers in which to avoid light -spill

Additional mitigation for bats will include;

- The removal of individual trees with Low BRS (T13, T14, T17, T30, T32, T33, T34, T49, T50, and T51) is required (for example to provide sufficient space for the access road on Smock Alley). A soft-felling method will be used to ensure the risk of killing or injuring bats is minimised. This will involve sensitively lowering the sections with BRS features to the ground. Once on the ground, features will be left for 48 hours and kept upright at an angle of 90 degrees to the ground, to enable bats to exit if present at the time of felling. This should be timed to avoid the times of the year when bats are most sensitive to disturbance: the maternity period (May to August inclusive) and also the hibernation period (mid-October to mid-March inclusive). If bats are discovered at any stage of the arboricultural work, then works should immediately stop and the advice of an ecologist should be sought.
- The newly identified tree with moderate BRS will be retained as part of the scheme. Should proposals change to include the removal of this tree, emergence and/or re-entry surveys will be required to determine whether bats are roosting within the tree.
- Any additional trees proposed to be felled or pruned that is a change to the above will be prior to any tree work be assessed from the ground level for the potential bat roost features, as even unoccupied bat roosts are protected by law. If required based upon the above survey, emergence/re-entry surveys will be conducted at a suitable time of year on trees due to be felled or pruned where potential bat roosting features are identified.
- Where possible all work on trees will be carried out in Spring (mid-March to end of April) before the young are born, or Autumn (September to late October) after the young are weaned, independent and before hibernation. However, these times are climate dependent and can vary from year to year.
- Soft felling will be used as a precautionary method to remove the trees and/or / branches, particularly those classified as ‘low roosting potential’ from the preliminary ground level surveys. Soft felling requires the trees to be cut down in sections, with each section carefully lowered to the ground. Once lowered, the sections must be left in situ for 24 hours, to give any temporary roosting bats time to move away to another roost site.
- To minimise risk of affecting foraging bats, avoid night working using artificial lighting. If essential, lights should be directed and shrouded to avoid light illuminating potential foraging areas e.g. woodland edge and hedges.
- In the unlikely event that bats or signs of bats are discovered during works (including pre-works clearance), work should stop immediately, and a suitably qualified and experienced ecologist contacted for advice.

Enhancement

Bat tubes (Schwegler 1FR, 1WI or Ibstock Enclosed Bat Box ‘C’ or a similar model) will be incorporated into the external walls of three of the new dwellings, thereby increasing the roosting opportunities for bats within the Site. The bat tubes should be installed at least 4m above ground level, with a south-east to south-west aspect and situated in sheltered areas of the building. The bat tubes will be installed on plot 5 south-west elevation, plot 6 south elevation and plot 11 south west elevation (See figure 3.5)

The scrub and woodland enhancement, the incorporation of tree and shrub species of benefit to pollinators and the SuDS pond creation will provide enhancements to bat foraging, due to the increase in diversity of invertebrate prey that these will provide.



Figure 3.5 locations for installation of bat boxes red stars.

3.6 Reptiles

Risk assessment

The Site is considered to be of moderate suitability for reptiles given the presence of scrub, hedgerows and patches of rough, tussocky grassland. However, given the reported site management regime of cutting four times per year, the presence of dog walkers and relatively short duration during which the suitability seems to have increased, reptile activity, if present, is likely to be low in size and focussed around the site boundaries, where the hedgerows and scrub provide more sheltered habitat. These boundary habitats will be retained as part of the proposals, therefore maintaining habitat suitability for reptiles. This includes a significant habitat buffer along the southern and western boundaries of the Site which will be retained as a wildlife area, and 2-3 metre buffers around all other field boundaries. In addition, a balancing pond will be created in the south-east of the Site, which provides opportunities for enhancement for species such as grass snake, which feed on amphibian prey.

This area will include the creation of habitat features for reptiles, including native marginal planting, areas of long grassland connected to the Site boundaries, and dead wood and rubble piles for basking. The proposals will therefore provide sufficient space to

accommodate a reptile population, if present.

It is therefore not considered necessary to undertake a targeted reptile survey, as the findings would be unlikely to change the assessment, or the mitigation measures proposed below.

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Mitigation

It is illegal to intentionally or recklessly kill or injure a common reptile. The following reptile mitigation strategy will be undertaken by the contractor to minimise the risk of the proposed works on impacting protected reptile species

In line with a precautionary approach, the following mitigation will be provided:

- Retained boundary habitats which form part of the landscape buffers will be protected during the construction phase of the development by interlocking weld-mesh panels (e.g. Heras), well braced to resist impacts by attachment to a scaffold framework that is set firmly into the ground. (see **figure 3.1** above)
- The poor semi-improved grassland will be maintained at a low sward height and cut regularly, both prior to development and throughout the construction period, to prevent sheltering opportunities developing.
- Any working areas, site compounds and storage of materials will be located away from the site boundaries and restricted to areas of bare ground, to minimise the risk of reptiles (if present) sheltering underneath these materials and being affected by the works. The most likely reptile habitat is highlighted in **figure 3.6** below)
- Any scrub or long/tussocky grass clearance will be undertaken between April to October inclusive, in the presence of a suitably experienced Ecological Clerk of Works appointed by the contractor, who will undertake fingertip searches and destructive searches. Any reptiles found will be relocated to the protected wildlife buffer areas.
- The wildlife buffer areas and balancing pond will be protected throughout the operational phase of the development and will be managed to maintain a varied vegetation structure, with areas suitable for basking provided, including a varied grass height and dead wood and rubble piles. These management prescriptions will be secured through this BMEP.



Figure 3.6- red shade area is highest potential reptile habitat.

3.7 Breeding Birds

Risk assessment

The hedgerows, scrub, mature trees and woodland within and adjacent to the Site continued to provide good opportunities for nesting and foraging birds and these features are to be retained. In the short-term, any tree and scrub removal has the potential to impact on birds and their nests, if present during the breeding season. Under the Wildlife and Countryside Act it is an offence to destroy or damage the nest of birds of any species.

Mitigation

The following mitigation will be provided:

- Any works to trees, hedges, shrubs or scrub within the Site, or construction work within close-proximity to these features, should be undertaken between September-February (inclusive) to avoid the season during which birds are most likely to nest.
- Where clearance of suitable habitat is programmed during the bird breeding season, which is typically March to August inclusive, prior to works, a suitably qualified ecologist must undertake a survey to determine whether birds are nesting in the area. If a nest is discovered, clearance or other construction works would need to be delayed within an exclusion zone. Works may only recommence once it is confirmed that chicks have fledged and that no other nests are in use within the
- exclusion zone.
- The same approach will also be applied to any selective thinning within the woodland.

Enhancement

Swift nest boxes (Schwegler swift boxes 1A, 16, 17 or 18 or a similar model) will be incorporated into the external walls of three of the new dwellings, thereby increasing nesting opportunities for birds at the Site. The boxes will be installed in clusters of at least three, and at a height of at least 3m above ground level. They will be situated under eaves or sheltered areas of the buildings, avoiding doors and windows where possible and facing north or east.

Clusters of three swift boxes will be installed at eaves level on the north elevation of plot 1, the east elevation of plot 3 and the north elevation of plot 7 (see figure 3.7)



Figure 3.7- Locations for installation of swift boxes yellow stars

3.8 Invasive Non-native Species

- Plants designated under schedule 9 of the Wildlife and Countryside Act 1981, which includes Japanese Knotweed (*Reynoutria japonica*), are non-native invasive species that have been determined to be a risk to native flora. During the various survey no non-native invasive species including those on schedule 9 were observed within the working area.
- Best practise guidelines (Natural England and Natural Resources Wales Marine Biosecurity Planning guidance) will be followed to minimise the introduction / spread of invasive non-native species.

- The ‘Clean, Check and Dry’ approach will be implemented on site for construction equipment, hand tools and workers’ personal protective equipment (http://www.nonnativespecies.org/checkcleandry/).

4 Personnel

Unless otherwise stated all work during the construction phase will be undertaken by the house-builder and his contractors and all should read and understand this document. All work that requires ecological supervision will be via an ecologist and/or ecological clerk of works appointed by the house-builder. It is recommended that for consistency the same individual or consultancy is retained throughout the construction phase.

Management and monitoring of the areas outside of residential curtilages will be required in-perpetuity or as described in this document and the HMMP (2024). The vehicle/mechanism for holding and managing this landholding is yet to be determined, but will need to appoint a suitably qualified habitat management and ecological survey contractor to support the delivery of these requirements.

5 Monitoring and Reporting

Requirements for monitoring have been included in the above mitigation measures and they will be actioned and reported on in accordance with these requirements. Upon completion of any element, a verification report will be prepared and submitted to the planning department to demonstrate compliance.

6 Caveats and Limitations

This BMEP and the allied reports represents a reasonable level of effort to identify potential biodiversity constraints present on the site. Access to the entire area subject to the client’s instructions was surveyed and it is not considered that there were any limitations to the survey. It is however only a snapshot of the site on the day of the survey; biodiversity interest is by nature cryptic and highly mobile. Therefore, this advice can only be considered valid for one year from the date of the survey. Should either the proposal or the timing change, an ecological consultant should be contacted for a revised opinion on the biodiversity risks represented by this proposal.

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