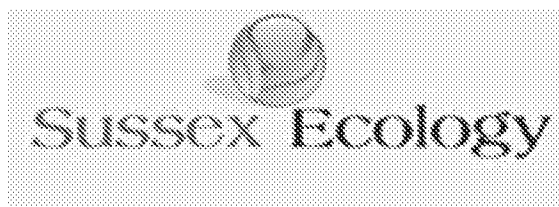


Report issued:
23 January 2014

Phase 1 Ecology Survey Report

Hobbs Farm
Bilsham Road
Yapton
Arundel
West Sussex
BN18 0JY

Report reference:
100/2014/SE/HW/hobbs01



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Summary

The Phase 1 Ecology Survey aimed to establish if protected species were likely to be present. This information was used to assess if the proposed development would have a significant impact on protected species and recommend further survey work.

The Phase 1 Ecology Survey revealed that it was likely that the following protected species could be present: bats, nesting birds and reptiles (notably slow-worm, *Anguis fragilis*).

An initial building inspection for bats was undertaken on the existing building. No signs of bats or a bat roost were found, and it was considered that the building had no real potential to support roosting bats. Please refer to the separate *Bat Survey Report* for further information.

It was considered that the proposed conversion and extension of the existing building would not have a negative impact on bats.

It was considered, however, that an increase in external lighting could have a negative impact on foraging bats. We have made recommendations to reduce these impacts.

It was considered that the clearance of ivy on the side of the existing building could have a negative impact on nesting birds, if this was undertaken at an inappropriate time of year. We have made recommendations to reduce these impacts.

It was considered that ground construction work and proposed extension of the building could have a negative impact on reptile populations, if they were using habitats on the north side of the building. We have recommendations to reduce the impacts on reptiles.

It was considered that the proposed development would not have a negative impact on badger (*Meles meles*), barn owl (*Tyto alba*), great crested newt (*Triturus cristatus*), hazel dormouse (*Muscardinus avellanarius*), stag beetle (*Lucanus cervus*) or water vole (*Arvicola amphibius*).

1. Introduction

1.1 Background

Sussex Ecology Ltd was commissioned to undertake an ecological survey at Hobbs Farm, Bilsham Road, Yapton, nr Arundel, West Sussex BN18 0JY.

The proposed development site is located in a rural setting, surrounded by grazing land, domestic gardens and further afield, grazing freshwater marsh.

The proposed development will involve the conversion and extension of the existing outbuilding at Hobbs Farm.

The Phase 1 Ecology Survey was undertaken by a suitably experienced Ecologist who has extensive experience (>5 years) of undertaking ecological surveys, including Phase 1 Ecology surveys. She is competent in using different survey methods and has an extensive knowledge of ecology.

1.2 Objectives of the survey

The Phase 1 Survey was undertaken to assess and suggest the likely presence/absence of protected species. This information was used to indicate if further survey work would be required.

2. Methodology

2.1 Survey methods

The field survey involved identifying habitats and features that were present on the site.

The survey was undertaken at a time of year which is normally outside the optimal survey window for Phase 1 surveys. However, as it had been exceptionally mild, it was considered appropriate to undertake the survey at this time of year. In addition, extensive information of plants was not required; albeit an assessment of the habitats was undertaken.

In addition, a desktop study was undertaken which involved the use of aerial photographs (BingMaps) and Ordnance Survey Maps to identify habitats in the wider landscape.

A data request was submitted to Sussex Biodiversity Records Centre for all records of protected species within 1 km of the proposed development site.

In addition, a Code for Sustainable Homes Assessment was undertaken.

2.2 Area of search

The survey surveyed concentrated on land under the ownership of the client.

3. Results

3.1 Desk Study

Protected species

The desktop report from Sussex Biological Records Centre shows that there are records of protected species within 1 km including slow-worm (*A. fragilis*), grass snake (*Natrix natrix*), water vole (*A. amphibius*), various bat species and pennyroyal (*Mentha pulegium*). The full results are given in Appendix 1.

Ordnance survey maps and aerial photographs

A search on aerial photographs (via BingMaps) showed that the habitats in the wider landscape were not linked together. This was based on the fact that many of the hedgerows appeared to have gaps. In addition, the land use appeared to show intensive land use (grazing land).

3.2 Field Study

Group	Features present	Survey recommended?
Badger	No suitable features present on the proposed development site. Adjacent habitats were considered to be suitable for foraging (considered to be primary foraging habitat).	Survey not required
Barn owl	No suitable features present on the development site (eg old barns, old mature trees with suitable holes)	No survey required
Bats	Low potential building on proposed development due to be developed.	Initial building inspection undertaken. See separate <i>Bat Survey Report</i>

Bats continued	Foraging habitats in adjacent areas (hedgerows)	
Great crested newt	One pond within 90 m of proposed development site (but pond considered to be poor quality eg duck pond with no vegetation cover) Barriers between pond and construction work zone (extensive area of bare habitat) Other ponds considered to be >500 m from development site No records of this species within data trawl	No survey required
Hazel dormouse	No suitable features on the development site. No features in adjacent habitats (such as no nearby woodlands that are linked to the site) In addition, hedgerows in adjacent habitats were not linked together (eg large gaps in hedgerows) No records of this species within data trawl.	No survey required
Nesting birds	Suitable trees and small bushes within boundary hedgerow. Some ivy on the outside of building which could be used by nesting birds	Nesting bird survey only required if the client intends to remove suitable nesting sites during nesting season (March to end of August inclusive)

Reptiles	Some features present on proposed development site (on north side of existing building: Small amount of habitat which could be used by a small number of slow worms (grassland habitat around existing building and bricks) But habitat is very isolated from other habitats Note that habitat measures approx. 1 m wide x 10 m long) Adjacent habitats considered to be poor quality for reptiles.	Survey not suggested but avoidance measures recommended to avoid impacts.
Stag beetle	No suitable features on proposed development site. No records of this species in data trawl.	No survey required
Water vole	No suitable features on the proposed development site, or in adjacent habitats. One record of this species in data trawl, but this was noted to be some considerable distance from the development site.	No survey required

4. Likelihood of Protected Species

4.1 Badger

It was considered that the proposed development site had a low potential for badger (*M. meles*). This was based on the fact that the majority of the site was hard-landscaped and areas of low ecological value.

It was felt that the adjacent habitats were considered to be suitable for foraging badgers (*M. meles*). This was based on the presence of primary foraging habitat.

For clarity, primary foraging habitat is defined as short grazed or mown grassland (improved grassland), golf courses or broadleaved woodland. An example of the adjacent habitats is given in Appendix 5 (photograph 3).

As there is a low potential for badger (*M. meles*) on the proposed development site, it is our opinion that a badger survey is not required.

4.2 Barn owl

It was considered that the proposed development had no potential for barn owl (*T. alba*). This was based on the fact that there were no suitable nesting sites (eg old barns, mature trees with old holes).

Buildings on the site were considered to be unsuitable for this species. This was based on the fact that these had been modernized in recent years and therefore they would not have suitable features (ie no timber beams or open access).

As there is no potential for barn owl (*T. alba*) on the proposed development site, it is our opinion that a barn owl survey is not required.

4.3 Bats

It was considered that the proposed development had a moderate potential for bats. This was based on the presence of an existing building, surrounded by potential foraging habitats in adjacent areas (hedgerows).

An initial building inspection was undertaken at the same time as the Phase 1 Ecology survey by a licensed bat ecologist, employed by Sussex Ecology Ltd. Please refer to the separate *Bat Survey Report* for further information.

It was considered that adjacent habitats were likely to be used by foraging bats.

4.4 Great Crested Newt

It was considered that the proposed development had a low potential for great crested newt (*T. cristatus*). This was based on the presence of one waterbody within 100 m of the proposed development. All other waterbodies were further than 500 m from the development site.

However, the pond in question was considered to be poor quality for newts. This was based on the presence of ducks and a lack of aquatic vegetation.

In addition, it was noted that there were major barriers between the pond and the construction work zone and any suitable areas (including grassland). Barriers included extensive areas of bare habitat (hard-landscaping) and areas which are subject to regular disturbance. This is marked on the site plan in Appendix 10.

It was considered that it was highly unlikely that great crested newts (*T.cristatus*) would be present within the general area. This was based on the fact that the habitats within the wider landscape were unsuitable for this species.

For example, it was noted that there were lots of gaps in the hedgerows in the adjacent areas and therefore habitats were not linked together. In addition, it was clear from aerial photographs that there were no woodlands within 1 km of the development site.

The data trawl showed that there were no records of this species within 1 km. As it is considered highly unlikely that newts would be present within the general area, it is our opinion that a great crested newt survey is not required.

4.5 Hazel dormouse

It was considered that there was no potential for the hazel dormouse (*M. avellanarius*) on the proposed development site, or in adjacent habitats. This was based on the lack of suitable habitat (woodland, species-rich hedgerows, scrub).

It was noted, for example, that the boundary hedgerow was not connected to adjacent hedgerows.

In addition, it was noted that the majority of hedgerows in adjacent habitats had significant gaps and were not connected together. Dormice rarely visit the ground, with the exception of hibernation, and as such they require dense vegetation at the canopy level to move around.

As the boundary hedgerow is being retained and there is a low probability of this species being present, it is our opinion that a dormouse survey is not required.

4.6 Nesting birds

It was considered that the proposed development site had a high potential for nesting birds. This was based on the presence of suitable nesting sites around the site, such as the trees/bushes within the boundary hedgerows or the ivy on the outside of the existing building.

Please refer to Section 5.7 and Section 6.1 for further information regarding nesting birds.

4.7 Reptiles

It was considered that the proposed development had a moderate potential for reptiles (such as slow-worm, *A. fragilis*). This was based on the presence of suitable habitat on the north side of the existing building. This comprised a small amount of grassland habitat which measured approximately 1 x wide x 10 m long.

The area in question is further illustrated in Appendix 6 and is marked on the site plan in Appendix 10.

However, it was considered that this area was not connected to areas of good quality habitat in adjacent areas. Therefore, it was considered to be very isolated and fragmented.

It was considered that the area is unlikely to receive sunlight for the majority of the day since it is north-facing. As reptiles are cold-blooded they require open, sunny areas in which to bask to warm up. South-facing habitats are generally preferred.

Examples of good quality habitats for reptiles are given in Appendix 7. Please note that these are not taken from the site itself, but are taken from sites where reptiles are known to be present.

The data trawl showed that there were various records of reptiles within 1 km of the proposed development site. These included slow-worm (*A. fragilis*) and grass snake (*N. natrix*).

As outlined in the survey guidelines *“Where reptiles are or may be present, we strongly recommend that the developer undertakes surveys before considering development proposals.*

Where reptiles are known to be present locally and the site supports potential reptile habitats such as rough grassland, heathland, mature gardens, open scrub/woodland, wetlands or vegetated embankments, the developer should commission a survey”.

Please refer to Section 5.8 and Section 6.2 for our recommendations concerning reptiles.

4.8 Stag beetle

It was considered that the proposed development had no potential for stag beetle (*L. cervus*). This was based on the lack of suitable dead wood, dead tree stumps or woodland habitats.

In addition, there were no records of this species within the data trawl.

Therefore, it is our opinion that an invertebrate survey focusing on stag beetles is not required.

4.9 Water vole

It was considered that the proposed development site had no potential for water vole (*A. amphibius*). This was based on the lack of suitable features (eg waterbodies with dense vegetation).

The data trawl showed there was one record of this species within 1 km. However, this was noted to be to the west of the proposed development, where there is considerable amount of marsh (floodplain grazing) habitat.

It was considered that these areas were more likely to support water vole populations.

It is therefore our opinion that a water vole survey is not required.

5. Likely Impacts of Development

5.1 Use of this section

A full impact assessment on protected species cannot be undertaken at this stage, without any survey data.

The suggestions in this section are based on provisional impacts, and are based on the probability of protected species being present on the development site. However, a full impact assessment of the impacts of the development can be undertaken following survey work.

5.2 Badger

It was considered that, in the absence of appropriate mitigation, the proposed development would not result in the loss or damage to a badger sett, or obstruct access to a badger sett. It is considered that the development would not kill or injure individual badgers.

5.3 Barn owl

It was considered that, in the absence of appropriate mitigation, the proposed development would not result in the loss or damage to nesting sites used by barn owls, disturb barn owls whilst they are using such a structure, or kill or injure individual barn owls.

5.4 Bats

It was considered that, in the absence of appropriate mitigation, the proposed development would not result in the loss or damage to a bat roost, or result in the killing or injury of individual bats. It was, however, considered that an increase in external lighting could have an impact on foraging bats.

Please refer to the *Bat Survey Report* and Section 6.3 for further information.

5.5 Great Crested Newt

It was considered that, in the absence of appropriate mitigation, the proposed development is unlikely to result in the direct killing or injury of individual great crested newts or would result in the disturbance or damage to their habitat, or would obstruct access to a place of shelter likely to be used by this species.

5.6 Hazel dormouse

It was considered that, in the absence of appropriate mitigation, the proposed development would not result in the damage, loss of any structure or place used by a dormouse, obstruct access to such a feature, disturb a dormouse whilst it is using a place or kill or injure individual animals.

5.7 Nesting birds

It is considered that, in the absence of appropriate mitigation, the proposed development could result in the loss or damage to any active bird nests, their eggs or their young, if any clearance work is undertaken at an inappropriate time of year.

Please refer to Section 6.1 for further information for our recommendations concerning nesting birds.

5.8 Reptiles

It was considered that, in the absence of appropriate mitigation, the proposed development could result in the direct killing and injury of a small proportion of individual reptiles if they were using this habitat.

Please refer to Section 6.2 for further information for our recommendations concerning reptiles (eg avoidance measures).

5.9 Stag beetle

It was considered that, in the absence of appropriate mitigation, the proposed development would not result in the loss of key habitats likely to be used by stag beetle

5.10 Water vole

it is considered that, in the absence of appropriate mitigation, the proposed development would not result in the loss of water vole habitats, disturb water voles or obstruct access to a place of shelter likely to be used by a water vole.

6. Recommendations

6.1 Nesting birds recommendations

As indicated in the Natural England Standing Advice for Nesting Birds *“the main mitigation route to reduce the likelihood of harm to breeding birds is to avoid clearance or destruction of any vegetation or structure which may be used as a breeding site during the bird breeding season.*

The bird breeding season will be dependent upon weather conditions and will vary from year to year but in general is between early March and late August”.

It is recommended that the ivy on the outside of the existing building is removed outside the bird nesting season. For clarity, this should be undertaken before mid-March and after late August inclusive.

In addition, any trees/bushes within the proposed construction work zone which need to be removed, should be removed at a similar time of year as stated above.

If the trees need to be removed during the nesting bird season (ie mid-March to end of August), it is suggested that this is undertaken in a sensitive manner and under the supervision of an Ecologist, as part of an ecological watching brief. If a bird nest is found, 5 m of vegetation should be left around the nest and work should be halted until the young have fledged.

6.2 Reptile recommendations

It is our opinion that due to size of the suitable habitat on the site, it does not merit a full reptile survey.

It is considered that it would be more appropriate to recommend avoidance measures. Avoidance measures can include the following:

- Changing the site layout of the development in order to avoid the impacts of killing, injury or result in the loss of habitats
- Undertaking the work when reptiles are not active, *providing* that no hibernation sites would be affected *and* that suitable habitat is created elsewhere, preferably as close as possible to the affected area

We would recommend that the building footprint is changed to avoid the area of habitat which has been identified as having some ecological value.

We have recommended two options which would involve altering the site layout slightly. This would avoid impacts to protected species. These options are marked in Appendix 8 and Appendix 9. In addition, for Option 1 (Appendix 8) there should be a buffer zone of 1 m where no ground work is undertaken.

We would also recommend that no heavy machinery or spoil should be dumped in the area identified as having ecological value. This is due to the fact that this area is considered to be a sensitive area.

6.3 Restrictions in external lighting

External lighting would have a negative impact upon foraging and roosting bats which could be potentially roosting within the surrounding trees. The use of lights near a known bat roost, or an area known to be used by bats is unlawful.

We recommend that no additional external lighting is added to the development site in the future. In addition, any lighting **should not** be directed towards the hedgerows, any bat boxes or possible roost exits on the site or facing in an upward direction.

Please refer to the publication, *Bats and Lighting in the UK* for more information.

6.4 Emergency recommendations

In the unlikely event of the discovery or evidence of great crested newts (*T.cristatus*) being found during construction work, all construction/ground work must cease until advice has been obtained from the ecological consultant and/or Natural England as required.

Continuing to clear/destroy features used by great crested newts (*T.cristatus*) is likely to constitute a breach of European Law and carries severe penalties.

The presence of great crested newts (*T.cristatus*) is likely to entail a delay to the work of the affected areas until the statutory agency (Natural England) has been informed and the requisite permission/licence obtained.

Natural England can be contacted on 0300 0601 299 for advice on appropriate action.

6.5 Habitat Enhancement

It is suggested that some enhancement measures are encouraged as part of the proposed development and as part of the Code for Sustainable Homes Assessment.

We have provided further information in the CFSH Template. However, we have recommended the following measures to improve habitats on the site:

- New planting regime within areas due to be landscaped to benefit wildlife;
- no use of pesticides on development site;
- access slits in soffits for bats OR walling bricks using purpose made bat bricks on new building.

7. Legal implications

7.1 Badgers and the Law

Badgers (*M. meles*) are protected in the UK under the Protection of Badgers Act 1992 and the Wildlife and Countryside Act 1981 (as amended).

As such, it is illegal to wilfully kill, injure or disturb a badger (*M. meles*) or to intentionally or recklessly interfere with a badger sett. Sett interference includes damaging or destroying a sett, obstructing access to a sett, or disturbing a badger (*M. meles*) whilst it is occupying a sett.

Where interference with a sett showing signs of activity cannot be avoided during a development, a licence must first be sought from Natural England before works can proceed.

7.2 Barn owls and the Law

All birds, their nests and eggs are protected by law under Part 1 of the Wildlife and Countryside Act 1981 (as amended). Barn owls (*T. alba*) are listed on Schedule 1 which gives them special protection.

It is an offence, with certain exceptions, to:

- Intentionally kill, injure, or take (handle) any wild barn owl.
- Intentionally take, damage or destroy any wild barn owl nest whilst in use or being 'built' (barn owls do not 'build' a nest but may make a nest scrape).
- Intentionally take or destroy a wild barn owl egg.
- Have in one's possession or control a wild barn owl (dead or alive), or egg, (unless one can show that it was obtained legally).
- Intentionally or recklessly disturb any wild barn owl whilst 'building' a nest or whilst in, on, or near a nest containing eggs or young
- Intentionally or recklessly disturb any dependent young of wild barn owls.

7.3 Bats and the Law

In England, Scotland and Wales all bat species are fully protected under the Wildlife and Countryside Act 1981, through inclusion in Schedule 5. All bats are also included in Schedule 2 of the Conservation (Natural Habitats, &c.)

Regulations 1994 (or Northern Ireland, 1995), which defines European protected species of animals.

It is therefore illegal to:

- intentionally or deliberately kill, injure or capture (take) bats
- Deliberately disturb bats (whether in a roost or not)
- Damage, destroy or obstruct access to bat roosts
- Possess or transport a bat or any part of a bat, unless acquired legally
- Sell, barter or exchange bats, or parts of bats.

A bat roost is any structure or place which any wild animal uses for shelter or protection, because bats tend to reuse the same roosts, legal opinion is that the roost is protected whether or not the bats are present at the time.

7.4 Great crested newts and the Law

The great crested newt (*T.cristatus*) is protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and the Conservation of European Wildlife and Natural Habitats (2010), making it an offence to:

- Intentionally kill, disturb, injure or take a great crested newt or its eggs
- Possess or control any live or dead specimen or anything derived from a great crested newt
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt
- Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for that purpose.
- Damage or destroy a breeding site or resting place of a great crested newt.

7.5 Hazel dormouse and the Law

The hazel dormouse (*M. avellanarius*) is protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of The Conservation of Habitats and Species Regulations 2010 making the hazel dormouse (*M. avellanarius*) a European Protected Species.

Under the relevant wildlife legislation, it is an offence to:

- Intentionally kill, injure or take a dormouse
- Deliberately capture or kill a dormouse
- Possess or control any live or dead specimen or anything derived from a dormouse (unless it can be shown to have been legally acquired).
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a dormouse
- Damage or destroy a breeding site or resting place of a dormouse
- Intentionally or recklessly disturb a dormouse while it is occupying a structure or place which it uses for that purpose
- Deliberately disturb a dormouse
- Keep, transport, sell or exchange, or offer for sale or exchange a live or dead dormouse or any part of a dormouse

7.6 Nesting birds and the Law

All wild birds are protected from being killed, injured or captured, while their nests and eggs are protected from being damaged, destroyed or taken.

It is an offence under Section 1 of the Wildlife and Countryside Act 1981 (as amended) to intentionally take, damage or destroy the nest of any wild bird while it is in use or being built.

7.7 Reptiles and the Law

All reptiles are protected under the Wildlife and Countryside Act 1981. The current legislation offers full protection for two species – sand lizard and smooth snake. Legislation covers protection of the animals as well as protection of their habitat.

The widespread reptiles: slow worm, (*Anguis fragilis*), viviparous lizard (*Lacerta vivipara*), grass snake (*Natrix natrix*) and adder (*Vipera berus*) are protected against intentional, deliberate and reckless killing and injuring. All reptiles have also recently been recognised as Priority Species.

Key points of legislation:

- For all species: if a development has the potential to impact on reptiles in a way that could cause an offence, efforts should be made to reduce and if possible avoid these impacts.

- For widespread species; actions which could predictably kill or cause injury to reptiles would result in an offence.
- Actions which could potentially harm reptiles include clearing land, digging/excavation work, cutting vegetation to a low level, laying pipelines, driving machinery over sensitive areas, storing construction materials on site and removing rubble or wood piles from the site.

7.8 Water voles and the Law

The water vole (*A. terrestris*) received limited legal protection in April 1998 through its inclusion in Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) for some offences. This protection has been extended (6 April 2008), so the water vole (*A. terrestris*) is now fully protected under Section 9.

Legal protection makes it an offence to:

- intentionally kill, injure or take (capture) a water vole;
- possess or control a live or dead water vole, or any part of a water vole; intentionally or recklessly damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection or disturb water voles while they are using such a place;
- sell, offer for sale or advertise for live or dead water voles.

8. References

Natural England Standing Advice Sheet: Badgers. February 2011.

Scottish National Heritage ('SNH'), 2003. *Best Practice Guidance – Badger Surveys*.

Natural England ('NE'), 2006. *Interim Guidance Document – Badgers and Development: A Guide to Best Practice and Licensing*.

Natural England ('NE'), 2009a. *Protection of Badgers Act 1992 (as amended) – Guidance on 'Current Use' in the Definition of a Badger Sett*

Natural England Standing Advice Sheet: Great crested newt, February 2011.

Great Crested Newt Mitigation Guidelines. English Nature (2001).

Natural England Standing Advice Sheet: Bats, February 2011.

Bats and Lighting in the UK: Bats and the Built Environment Series, BCT.

Bat Surveys: Good Practice Guidelines, (2nd edition) 2011. BCT

Natural England Standing Advice Sheet: Reptiles, February 2011.

Evaluating local mitigation/translocation programmes: maintaining best practice and lawful standards. HGBI Advisory notes. 1998

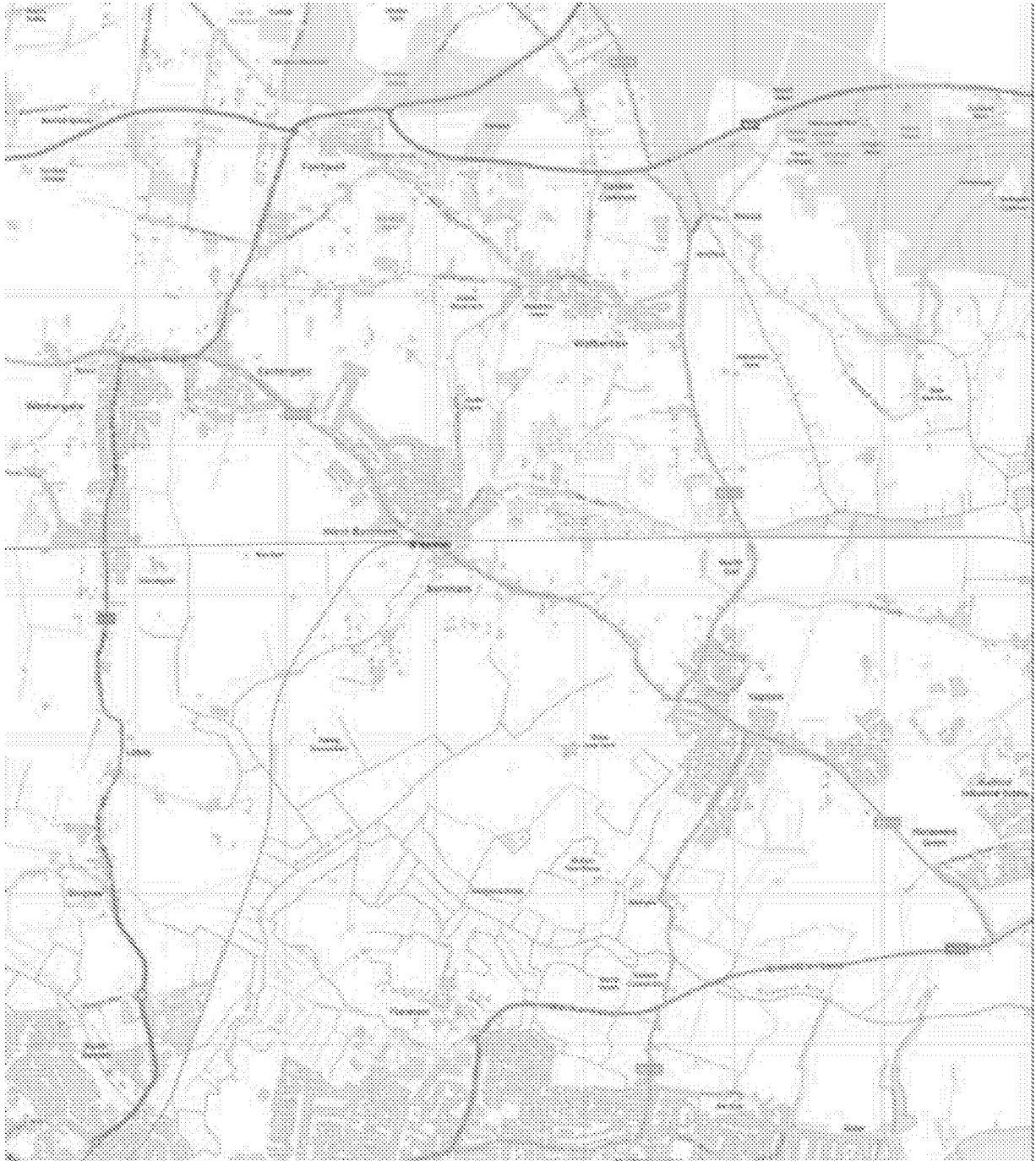
Gent, T, Gibson, S. Herpetofauna Workers Manual, 2003, Joint Nature Conservation Committee (JNCC).

Natural England: Reptile Mitigation Guidelines. Technical Information Note TN102 (2011). [currently in draft format, new updated guidance to be issued at a later stage].

Natural England Standing Advice Sheet: Nesting birds, February 2011.

Natural England Standing Advice Sheet: Water vole. February 2011.

Site location plan



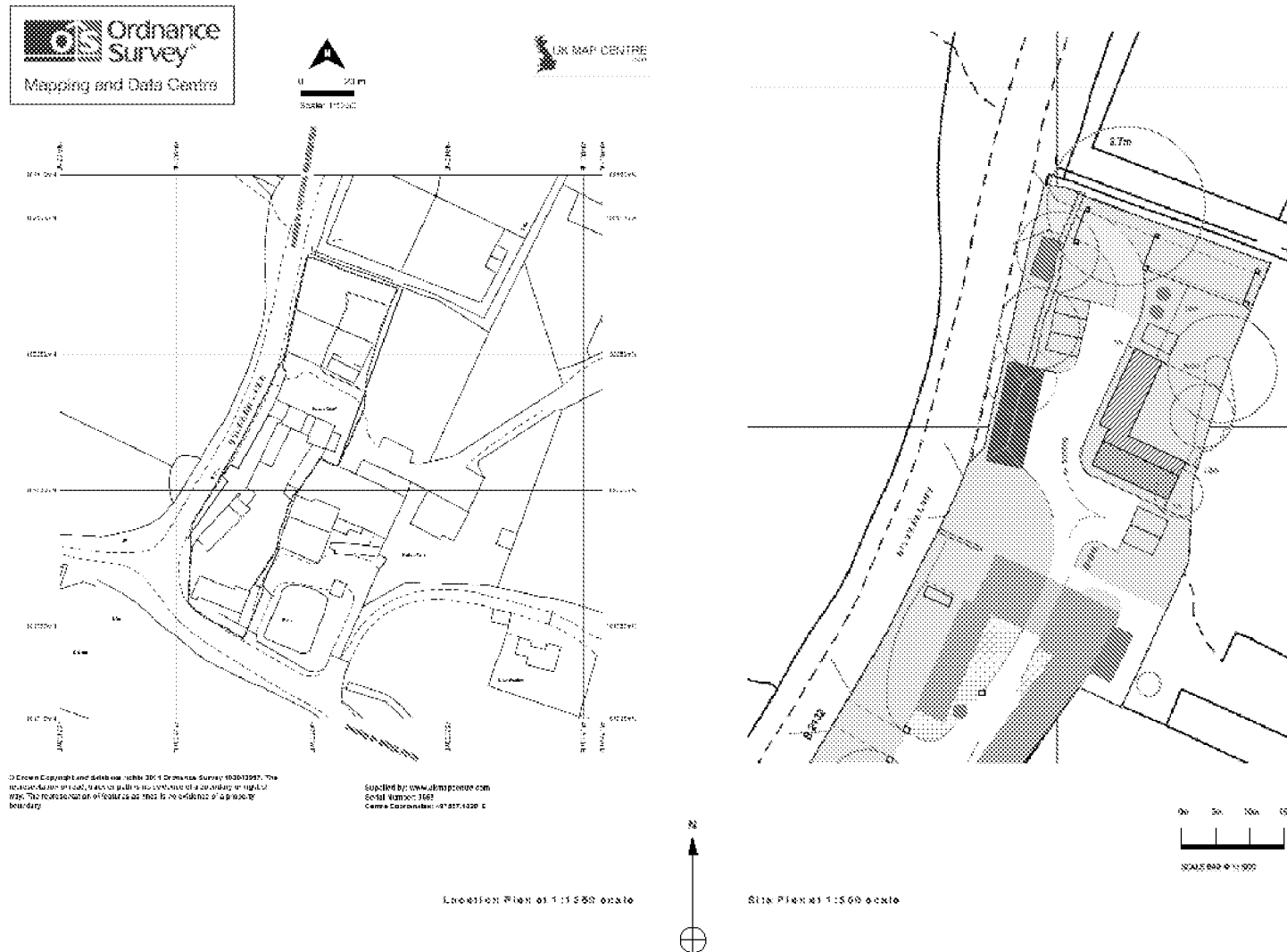
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Appendix 1: Desktop study results

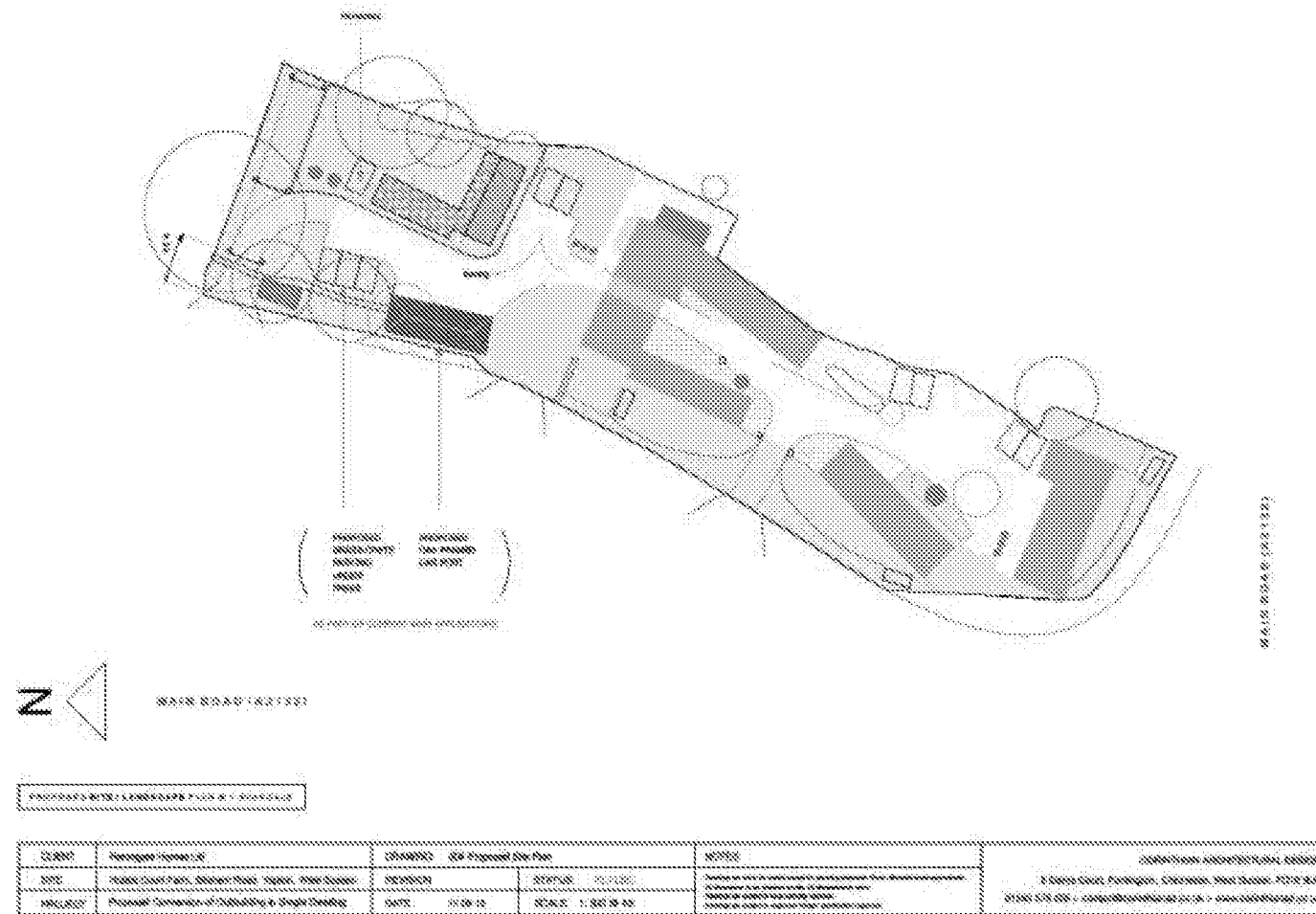
GRID REF	Species	Latin name	Year	Location
SU90R	Pennyroyal	<i>Mentha pulegium</i>	1986	Barnham, West Sussex
SU960013	European Water Vole	<i>Arvicola amphibius</i>	2003	Flansham
SU978024	Slow-worm	<i>Anguis fragilis</i>	2007	Bilsham Road, Yapton Bilsham
SU982028	Slow-worm	<i>Anguis fragilis</i>	2002	
SU967022	Grass Snake	<i>Natrix natrix</i>	May 2011	Bilsham Farm, Yapton
SU96580235	Grass Snake	<i>Natrix natrix</i>	27/05/2008	Bilsham Lane, Bilsham
SU9702	Grass Snake	<i>Natrix natrix</i>	15/07/1996	Shamrock, Bilsham Road, Yapton,
SU978024	Pipistrelle sp.	<i>Pipistrellus</i>	01/04/2007	Bilsham Road, Yapton
SU975020	Serotine	<i>Eptesicus serotinus</i>	04/12/1990	Hobbs Farmhouse, Yapton Lane, Bilsham,
SU986028	Bat sp.	<i>Chiroptera</i>	09/09/1987	26 Fordwater Gardens,

Source of information: Sussex Biodiversity Records Centre (ESD/13/701)

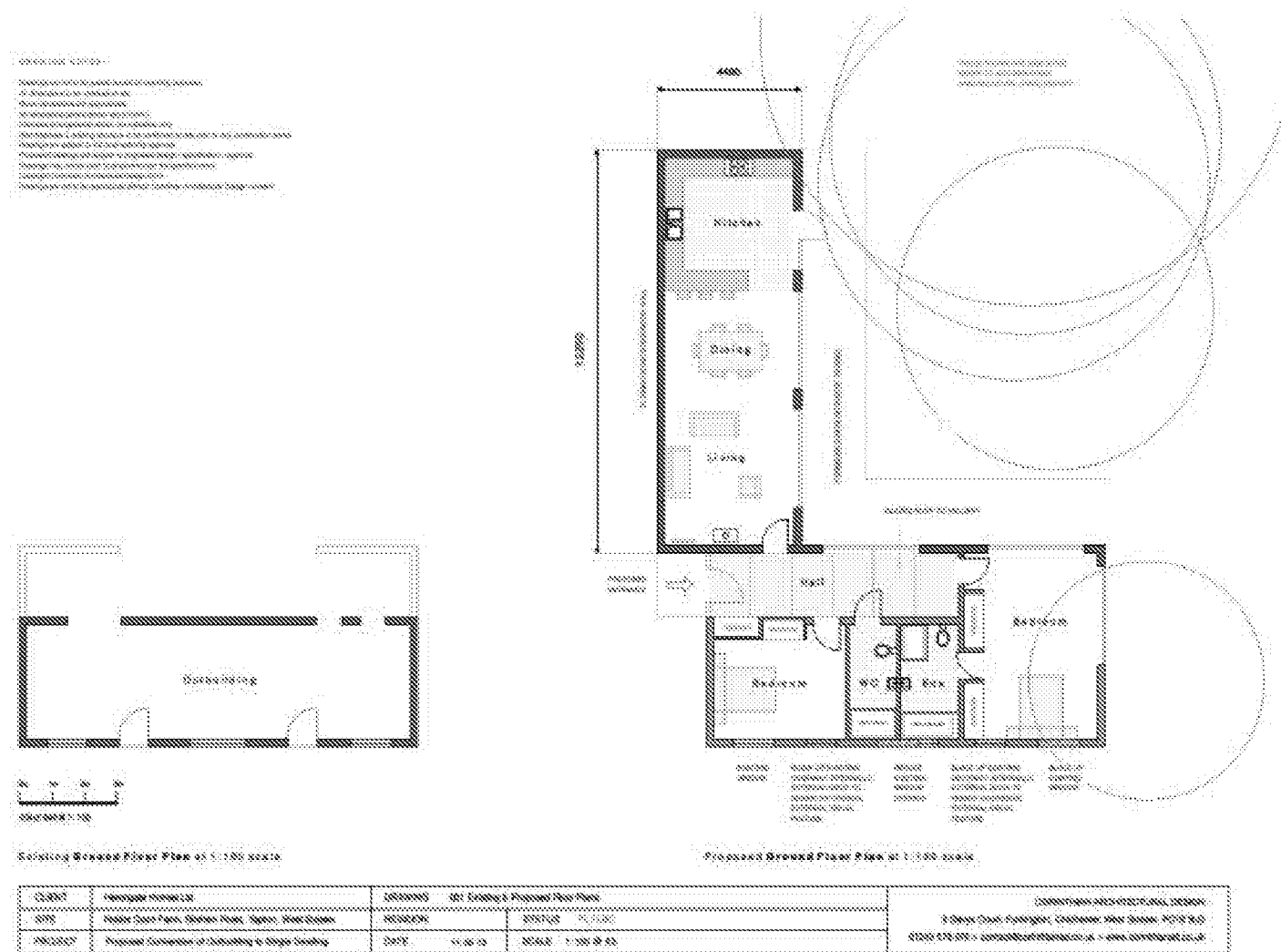
Appendix 2: Existing site plan and site location plan



Appendix 3: Proposed site plan



Appendix 4: Existing and Proposed Floor Plans



Appendix 5: Photographs of the site



Photograph 1

Photograph showing habitats on the proposed development site, and habitats around the construction work zone.

The existing building is to the left in the picture. Other buildings on the site were not assessed during the initial bat survey. In addition, these buildings are part of another planning application.



Photograph 2

Photograph showing the existing building which was due to be developed.



Photograph 3

Photograph showing examples of adjacent habitats

Appendix 6: Photographs of area of high ecological value



Photo credit: S.McMinn

Photograph 1

View looking towards the existing building. Note the surrounding habitats are considered to be of a low ecological value (hard-landscaping area and car park). This view shows the north side of the building.

The area of ecological value is immediately adjacent to the building, and is illustrated in more detail below.



Photo credit: S.McMinn

Photograph 2

Photograph showing the small area of habitat on the north side of the building.

This photograph is looking in a north-east direction.



Photo credit: S.McMinn

Photograph 3

Photograph showing the small area of habitat on the north side of the building.

This photograph is looking in a north-west direction.

At the front of this photograph, under the ivy, there is a small rubble pile of bricks – which could be used as a hibernation site.



Photograph 4

Another view, looking south.

This photograph clearly shows the habitat immediately around the area.

As can be seen from this photograph, the habitat to the left of the photograph is unsuitable due to a lack of vegetation cover and bare areas.



Photograph 5

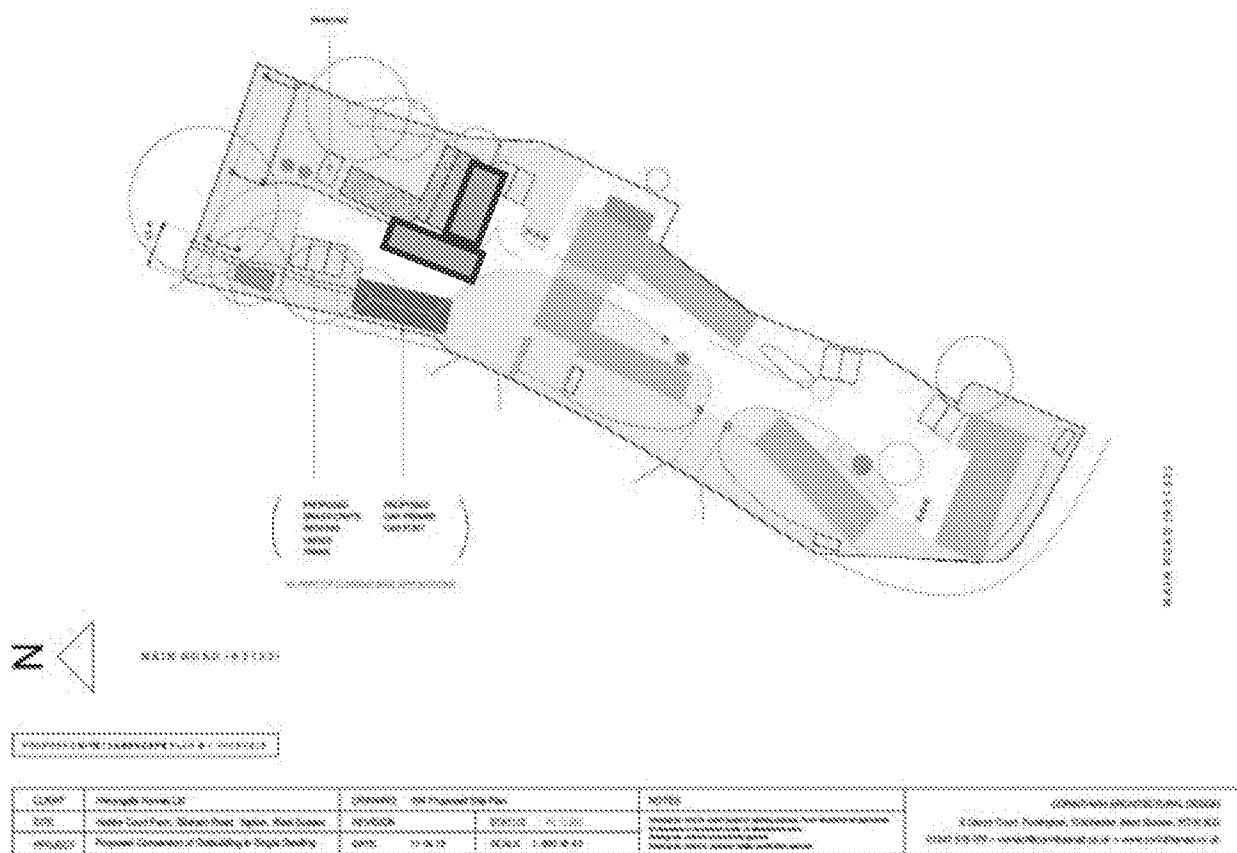
Photograph showing the adjacent field.

As can be seen from this photograph, there are significant gaps in the hedgerows within adjacent areas.

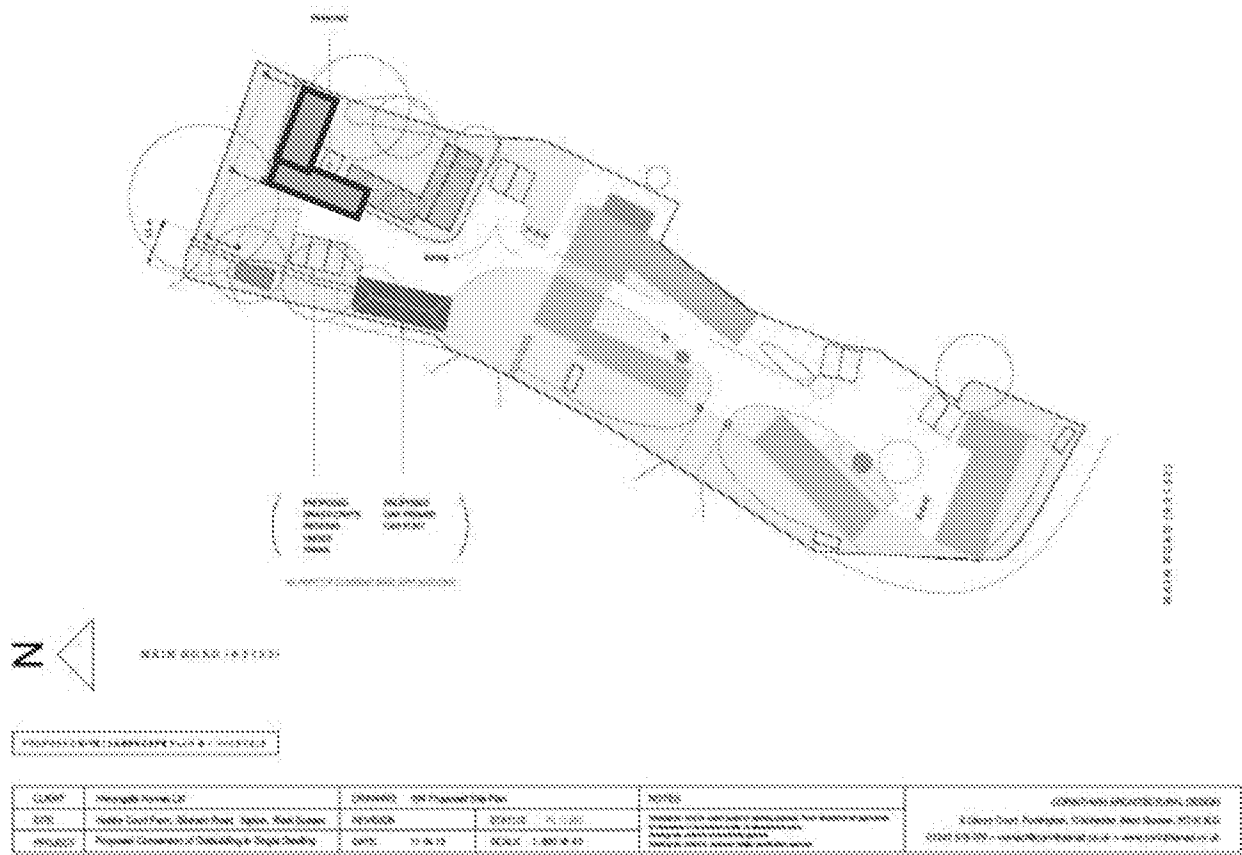
Appendix 7: Examples of good quality reptile habitats and sites

	Development site in West Sussex Reptile surveys undertaken in 2012 revealed that 2 reptile species were present (grass snake and slow worm). In the absence of appropriate mitigation, this development would have resulted in >80% loss of reptile habitats, and would have resulted in the direct killing and injury of reptiles.
	Development site in Kent Reptile surveys undertaken in 2013 revealed that this site supported 3 species of reptiles (grass snake, viviparous lizard and slow worm) In the absence of appropriate mitigation, this development would have resulted in 50% loss of reptile habitats, and would have resulted in the direct killing and injury of reptiles.
	Development site in East Sussex Reptile surveys undertaken in 2012 revealed that this area supported 1 reptile species (slow worm) In the absence of appropriate mitigation, this development would have resulted in 30% loss of reptile habitats, and would have resulted in the direct killing and injury of reptiles.

Appendix 8: Option 1 for Avoidance measures



Appendix 9: Option 2 for Avoidance measures



Appendix 10: Barriers between pond and development site

