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Preliminary Ecological Appraisal Including a Protected Species Assessment of a Barn at Wolves Farm Lane, Hedleigh, Suffolk.

On behalf of:

Mr Philip Partridge

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0 SUMMARY

- 0.1 Skilled Ecology Consultancy Ltd. was commissioned by Mr Philip Partridge to undertake a Preliminary Ecological Appraisal including a Protected Species Assessment of a Barn at Wolves Farm Lane, Hadleigh, Suffolk. The report is required for a planning application for residential development.
- 0.2 The survey was conducted on the 12th March 2021, by experienced ecologist Roger Spring BSc MCIEEM (licensed to survey for bats (level 2) and great crested newts *Triturus cristatus* (level 1)). The survey consisted of an inspection for preferred habitat types and signs and evidence of protected and priority species, such as for bats, great crested newts, reptiles, badgers *Meles meles* and nesting birds following Natural England (English Nature) Guidelines. A local bat record search was undertaken.
- 0.3 The site includes one detached, double-storey height, modern barn constructed from block with a pitched, corrugated sheeting roof and steel supporting beams. The barn is positioned in an area of short and disturbed improved grassland to the south, north and west with scrub and early mature trees to the east. No trees are proposed for impact, though some minor blackthorn *Prunus spinosa* dominated scrub reduction may be required.
- 0.4 Immediately surrounding the site habitats included; Ipswich Road south, Wolves Farm Lane north and west and scrub and early mature woodland east. The broader landscape was dominated by arable farming with low density housing and commercial properties.
- 0.5 No signs or evidence of protected, priority or rare species were discovered on or adjacent to the site. The site was considered negligible in suitability or potential to support such species. It is possible that the blackthorn scrub may support low numbers of common nesting birds.
- 0.6 Further ecological surveys or mitigation were considered unnecessary. However, to minimise any residual risk of impact to bats, birds, amphibians and hedgehogs, precautionary measures, detailed later in the report should be followed.
- 0.7 With the recommendations followed as described, the proposed development could proceed with a negligible risk of significant impact to protected, priority or rare species or notable habitats.
- 0.8 Biodiversity enhancements are also included in the report to create a net-gain in accordance with national planning policy.

1 INTRODUCTION

1.1 Background

- 1.1.1 Skilled Ecology Consultancy Ltd. was commissioned by Mr Philip Partridge to undertake a Preliminary Ecological Appraisal including a Protected Species Assessment of a Barn at Wolves Farm Lane, Hadleigh, Suffolk. The report is required for a planning application for residential development.
- 1.1.2 Wildlife such as nesting birds, bats, reptiles and great crested newts *Triturus cristatus* are protected by law. Protected and priority species and habitats, are also a material consideration for individual planning decisions under the National Planning Policy Framework, 2019 (NPPF) (MHCLG, 2019).
- 1.1.3 This study and report complies with the Chartered Institute for Ecology and Environmental Management (CIEEM) Guidelines for Preliminary Ecological Appraisals (Second Edition, 2017).
- 1.1.4 CIEEM guidelines indicate that ecological surveying typically remains valid for 18 months (CIEEM, 2019).

2 METHODOLOGY

2.1 Desk Study

- 2.1.1 The Suffolk Biodiversity Information Service (SBIS) was consulted for bat records within 2km of the site. The results are listed below.
- 2.1.2 A search of the Multi-Agency Geographical Information for the Countryside (MAGIC) was also conducted, to check for statutory nature conservation sites.
- 2.1.3 These results were then combined with the findings of the site survey, to assess the risk of ecology issues, relevant to planning, occurring on the site.

2.2 Study Limitations

- 2.2.1 No major study limitations were found.
- 2.2.2 Botanical assessment was undertaken at a suitable time of year, though some flowering species and annuals may no longer be present or identifiable to species level.

2.3 Initial Site Surveys

Habitats and Surroundings

2.3.1 The site was visited on the 12th March 2021 to survey for ecology issues. This included the following:

- Noting the suitability of habitats present on the site, with regard to protected, priority and rare species; including plants, amphibians, reptiles, mammals, nesting birds, invertebrates and protected, priority or red-listed Birds of Conservation Concern (BoCC);
- Assessing the habitats surrounding the site and in the local area;
- Direct survey for evidence of protected species as far as possible, e.g. for bats, reptiles, great crested newts, badgers *Meles meles*, and nesting birds;
- Checking for invasive species such as Japanese knotweed *Fallopia japonica* and giant hogweed *Heracleum mantegazzianum*, though it should be noted that some invasive plants may not be identifiable in winter.

Bat Inspection

2.3.2 The assessment for bats was conducted by an experienced and licensed ecologist. Trees and buildings were inspected for bat activity, suitability and potential for roosting following English Nature Bat Mitigation Guidelines (English Nature, 2004) and Bat Conservation Trust Best Practice Guidelines, therefore considerations were:

- the availability of access to roosts for bats;
- the presence and suitability of cracks, crevices, gaps around tiles, ivy growth and other places as roosts;
- signs of bat activity or presence, such as; the bats themselves, droppings, grease marks, scratch marks, urine spatter and prey remains.

2.3.3 Equipment available for use during the survey included a ladder, digital camera, high-powered torch, video endoscope, and binoculars.

2.3.4 The availability of access to roosts was assessed based upon the presence of holes large enough to allow entry to bats and lack of cobwebs and dirt.

2.3.5 The inside and outside of buildings and outside of trees were inspected for gaps, cavities, access points and crevices, and any signs of bats (droppings, staining, urine spatter), in accordance with Natural England (English Nature) guidelines (English Nature, 2004).

Reptiles & Amphibians

2.3.6 The site was inspected for potentially suitable terrestrial habitats for foraging, sheltering or dispersing amphibians and foraging, sheltering, breeding and basking habitat for reptiles. High quality terrestrial refuges searched for, included:

- Log piles & rockeries,
- Thick leaf litter,
- Compost & manure heaps,
- Mammal burrows,
- Deep ground cracks;
- Refuse suitable for shelter;
- Tussock grassland;
- Hedgerows and any other potential habitats.

Badgers, Water Voles & Other Mammals

2.3.7 Signs and evidence of badgers, water voles and other protected, priority and rare mammal activity searched for included the following:

- Setts, holes and burrows;
- Foraging holes and other diggings;
- Latrines, droppings, spraints and scats;
- Mammal hairs;
- Paw prints and other tracks;
- Feeding remains;
- Scratch marks, bedding material and other signs.

3 RESULTS AND RISK

3.1 Site Description & Location

3.1.1 The site includes one detached, double-storey height, modern barn constructed from block with a pitched, corrugated sheeting roof. With steel supporting beams. The barn is positioned in an area of short and disturbed improved grassland to the south, north and west with scrub and early mature trees to the east. No trees are proposed for impact, though some minor blackthorn *Prunus spinosa* dominated scrub reduction may be required.

3.1.2 Immediately surrounding the site habitats included; Ipswich Road south, Wolves Farm Lane north and west and scrub and early mature woodland east. The broader area was dominated by arable farming with low density housing and commercial properties.

3.1.3 No ponds with habitat connectivity were present within 250m of the site. The closest pond is a small garden pond located approximately 180m south west, though this was across the busy Ipswich Road (Ordnance Survey Map, 2021).

3.2 Nature Conservation Sites

3.2.1 The closest statutorily designated nature conservation sites is Wolves Wood Sites of Special Scientific Interest (SSSI) located approximately 1km north east and designated for its ancient coppiced woodland (MAGIC, 2021).

3.3 Data Search

3.3.1 The following information is a summary of modern, local bat records collated through SBIS (2021).

Table 1 - Summary of local biological records.

Species	Approximate Location	Year
Common Pipistrelle (UK & EU protected)	Hadleigh	2018
Barbastelle (UK & EU protected)	Hadleigh	2016
Noctule (UK & EU protected)	Hadleigh	2016
Soprano Pipistrelle (UK & EU protected)	Hadleigh	2011
Brown long-eared (UK & EU protected)	Hadleigh	2003

3.4 Protected, Priority & Rare Species

Vegetation & Habitats

3.4.1 Short, disturbed improved grassland surrounded the barn to the south, west and north. A small patch of blackthorn *Prunus spinosa* dominated scrub was present in the north east of the site and east of the barn was a scrub and early mature woodland.

- 3.4.2 Plants recorded in the grassland included; creeping buttercup *Ranunculus repens*, cocksfoot *Dactylis glomerata*, yarrow *Achillea millefolium*, ribwort plantain *Plantago lanceolata*, ground ivy *Glechoma hederacea*, creeping thistle *Cirsium arvense*, cow parsley *Anthriscus sylvestris*, ox-eye daisy *Leucanthemum vulgare*, spear thistle *Cirsium vulgare*, bramble *Rubus fruticosus*, ragwort *Jacobaea vulgaris*, black knapweed *Centaurea nigra*, common vetch *Vicia sativa*, burdock *Arctium* sp., great willowherb *Epilobium hirsutum*, nettle *Urtica dioica*, white dead nettle *Lamium album* and red dead nettle *Lamium purpureum*.
- 3.4.3 Shrubs and trees present on the eastern boundary included; Norway spruce *Picea abies*, apple *Malus* sp., hawthorn *Crataegus monogyna*, dog rose *Rosa canina*, blackthorn *Prunus spinosa*, bramble *Rubus fruticosus*, hazel *Corylus avellana*, elder *Sambucus nigra* and field maple *Acer campestre*.
- 3.4.4 No protected, priority or notable plants were present and habitats were unlikely to support such species.
- 3.4.5 No UK priority habitat was present or proposed for impact. No Schedule 9 Invasive plants were identified present.

Bats

- 3.4.6 The building was found to be a relatively modern barn used for storage constructed from modern materials negligible in suitability or potential for internal or external roosting by bats. No internal or external signs or evidence of bats were found.
- 3.4.7 The site was low in suitability or potential for foraging bats, though woodland habitats east of the site are likely to generate significant quantities of flying insects for feeding bats and be used during summer months for foraging by bats.

Other Protected or Priority Mammals

- 3.4.8 Habitats present and proposed for impact were low in suitability and potential to support other notable mammals, such as hedgehogs *Erinaceus europaeus*, brown hare *Lepus europaeus* and badgers *Meles meles*.
- 3.4.9 It is possible that on occasions hedgehogs may cross the site, though significant use was considered highly unlikely.
- 3.4.10 No signs or evidence of hedgehogs, brown hares, badgers or any other protected, priority or rare mammals were observed on or adjacent to the site.

Birds

- 3.4.11 Birds observed or heard on or close to the site during the survey included; wood pigeon *Columba palumbus*, blackbird *Turdus merula*, blue tit *Cyanistes caeruleus*, great tit *Parus major* and rook *Corvus frugilegus*.

- 3.4.12 All birds recorded are common, widespread and green-listed Birds of Conservation Concern (BoCC) species.
- 3.4.13 The building was considered negligible in suitability or potential for nesting birds. No signs or evidence of past bird activity was noted associated with the barn. Adjacent blackthorn scrub, which may require reduction, was considered suitable for low numbers of common nesting birds.
- 3.4.14 No trees are understood to be proposed for removal.
- 3.4.15 The BoCC ratings are summarised as follows:
- Red-listed - highest conservation concern;
 - Amber-listed - moderate conservation concern;
 - Green-listed - least conservation concern.

Reptiles

- 3.4.16 The site was considered negligible in suitability or potential to support reptiles of any species. Habitats offered negligible basking, breeding or foraging habitat. No reptiles were observed during the survey visit. Habitats adjacent to the site were considered low in suitability for reptiles.

Great Crested Newts & Other Amphibians

- 3.4.17 The site was considered very low in suitability for amphibians with little safe sheltering or foraging habitat present or proposed for impact. Much of the ground around the barn had been compacted by machinery. No ponds (necessary for breeding) with habitat connectivity were present within 250m of the site.
- 3.4.18 Amphibians were not discovered during the survey visit.

Invertebrates

- 3.4.19 The proposed development site was considered negligible in ecological value or potential to support an assemblage of invertebrates of conservation concern.
- 3.4.20 Protected, priority or rare invertebrates were not observed during the survey visits.

Other Protected, Priority or Rare Species

- 3.4.21 No signs or evidence of any other protected or priority species were observed on the site, nor were there any particularly suitable habitats present for such species.

4 DISCUSSION OF RISK AND LEGISLATION

4.1 Protected & Priority Species

Bats

4.1.1 Bats are protected under the Wildlife and Countryside Act 1981 as amended by the Countryside Rights of Way Act 2000 and under the Conservation of Habitats and Species Regulations 2017. Some bats are also UK priority species. A summary of the offences likely to be relevant to development are:

- Intentionally or deliberately kill, injure or take a bat;
- Intentionally or recklessly damage, destroy or obstruct access to any place that a bat uses for shelter or protection, whether bats are present or not;
- Damage or destroy a breeding site or resting place of any bat;
- Intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection;
- Deliberately disturb a bat anywhere.

4.1.2 Bats have been recorded locally (SBIS, 2021) and it is likely that bats may use adjacent habitats for foraging. However, the site was considered negligible in suitability or potential for roosting and foraging bats.

4.1.3 The risk of significant impact or harm to bats, bat roosts or local bat conservation was considered negligible.

4.1.4 Further bat surveys or mitigation were considered unnecessary, though to minimise any residual risk of impact, precautionary measures, detailed later in the report, should be followed.

Other Protected, Priority or Rare Mammals

4.1.5 Given the rural location, badgers, brown hares and hedgehogs are likely to be present locally and hedgehogs may on occasions cross the site. However, given the small size of the site and habitats present, the risk of significant impact to such species from the proposed development was considered negligible.

4.1.6 Therefore, further surveys or mitigation for such were considered unnecessary. However, to minimise any residual risk of impact to hedgehogs, precautionary measures, detailed later in the report, should be followed.

Reptiles

- 4.1.7 Widespread reptile species including, grass snake, adder, slow worm and common lizard, are protected from intentional killing and injuring under the Wildlife and Countryside Act 1981. They are also UK priority species.
- 4.1.8 Habitats present and proposed for impact were considered negligible in suitability or potential for reptiles. No safe basking, foraging or breeding habitat was present or proposed for impact.
- 4.1.9 Further reptile surveys or mitigation were considered unnecessary.

Amphibians

- 4.1.10 Great crested newts are protected under the Wildlife and Countryside Act 1981 as amended by the Countryside Rights of Way Act 2000, and the Conservation of Habitats and Species Regulations 2017. Great crested newts are also UK priority species. A summary of the offences likely to be relevant to development are:
- Intentionally or deliberately capture or kill;
 - Intentionally injure;
 - Deliberately disturb, or intentionally or recklessly disturb in a place of shelter or protection;
 - Damage or destroy a breeding site or resting place;
 - Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection.
- 4.1.11 The proposed construction zone was considered low in suitability for great crested newts and other amphibians and is a significant distance from the closest ponds. Overall, it was considered unlikely that great crested newts would be present or using the site. Therefore, the risk of significant impact or harm to great crested newts or other amphibians was considered very low.
- 4.1.12 Therefore, further surveys or mitigation were considered unnecessary. However, to minimise any residual risk of impact, precautionary measures, detailed later in the report, should be followed.

Birds

- 4.1.13 Wild birds are protected under the Wildlife and Countryside Act 1981 and, with certain exceptions (e.g. pest species) in certain situations, it is an offence to intentionally:
- Kill or injure any wild bird;

- Take, damage or destroy the nest of any wild bird while it is in use or being built;
- Take or destroy the egg of any wild bird.

4.1.14 Some bird species (such as barn owls) are also specially protected under Schedule 1 of the Wildlife and Countryside Act 1981 and others are UK priority species.

4.1.15 Given the rural location of the site, protected and UK priority birds may visit the site. However, given the habitats present and lack of evidence of such, the risk of significant impact or harm to protected or priority birds was considered negligible.

4.1.16 A small quantity of blackthorn scrub is present on the site and may require reduction.

4.1.17 Overall, it was considered that further bird surveys and mitigation for protected or rare nesting birds was considered unnecessary. However, to prevent harm to actively nesting common birds, precautionary measures, detailed later in the report, should be followed.

Plants & Habitats

4.1.18 The site supports habitats negligible in suitability or potential for protected, priority or rare botanical interest. Trees will be retained. No UK priority habitats will be impacted by the proposed development. Further botanical surveys or mitigation were considered unnecessary.

4.1.19 No Schedule 9 invasive plants species were recorded.

Invertebrates

4.1.20 Given the rural location, priority and other notable invertebrates are likely to be present locally. However, the proposed construction zone was considered very low in suitability or potential to support such species.

4.1.21 Consequently, the risk of impact to rare or priority invertebrates was considered negligible. Further invertebrate surveys or mitigation were considered unnecessary.

Other Protected & Priority Species

4.1.22 No signs or evidence of other protected, priority or rare species were observed on the site. The risk of presence or impact to such species was very low. Further ecological surveys or mitigation for any other protected, priority or rare species was considered unnecessary.

4.2 Other Issues

Designated Conservation Sites & Sensitive Habitats

- 4.2.1 The site is positioned a significant distance from statutorily designated nature conservation sites. The risk of significant impact (direct or indirect) or harm to such sites from the proposed development was considered negligible.
- 4.2.2 Consequently, further surveys or mitigation were deemed unnecessary for the protection of designated nature conservation sites.

5 RECOMMENDATIONS

5.1 Impact Avoidance Precautionary Measures & Habitat Compensation

Foraging Bats

- 5.2.1 The risk of significant impact to bats was considered low. However, to minimise any residual risk of impact the following precautionary measures should be undertaken:
- Minimisation of new external lighting on and around the site. Any necessary new lighting should use warm white LED lamps with hoods to direct the light downward and prevent horizontal or vertical light spillage. Any external lighting should be on sensors with short timers and be sensitive to large moving objects only, to prevent passing bats from switching them on.

Birds

- 5.2.2 To prevent harm to actively nesting birds, scrub clearance works should commence outside of the bird nesting season (March – end of August). If this is not possible it is recommended that an ecologist should inspect the site for active bird nests before scrub clearance commencement.
- 5.2.3 In the event that an active bird nest was found, it would be necessary to protect the nest from harm or disturbance until the bird had finished nesting.

Hedgehogs & Amphibians

- 5.2.4 The risk of hedgehogs and amphibians being significantly impacted by the development was low, to minimise any residual risk of impact or harm or impact, the below recommendations should be followed:
- Any ground vegetation on the site to be maintained short throughout the development to prevent habitats improving for wildlife attracting wildlife into harms way;
 - Construction materials should be stored on hardstanding or on pallets to prevent wildlife from sheltering in the materials and being harmed by movement of the materials;

- No construction work at night when amphibians and hedgehogs are mostly active;
- Any excavations should be covered at night or should have a roughly sawn plank placed in them to facilitate escape, the plank should not be placed at more than 30° and must be at least 30cm in width;
- If at any stage notable wildlife are observed, works should stop immediately, and the animal should be allowed to disperse of its own accord, or an ecologist should be contacted for advice.

5.2 Enhancements

- 5.2.1 By following the below biodiversity enhancements, the development will improve the site for local wildlife and provide a net-gain in accordance with national planning policy (NPPF, 2019).
- 5.2.2 The following bat and bird boxes will be installed on the site as biodiversity enhancement:
- 1 x Vivara Pro sparrow terrace.
 - 2 x Eco integrated bat boxes.
- 5.2.3 The bird box will be installed into the walls of the new building (just below the roof) positioned facing a northerly direction. The bat boxes will be installed into the walls of the new building facing a southerly and easterly direction just below the roof.
- 5.2.4 A new hedgerow will be planted on the site. To maximise the ecological value of this hedgerow, the new hedgerow will be planted in double staggered row sections, preferably 5 whips per linear metre, with spiral tree guards and include: 60% Hawthorn (*Crataegus monogyna*) 20% Field maple (*Acer campestre*), 10% Hazel (*Corylus Avellana*), 5% wild cherry (*Prunus avium*), 5% guelder rose (*Viburnum opulus*).
- 5.2.5 Any new or restored grass areas will be created using a wildflower meadow mixture such as EM1 from Emorsgate Seeds;
- 5.2.6 Any other new soft landscaping will include native and or wildlife attracting species only.

6 CONCLUSION

- 6.1 The site is small in area and low in ecological value, supporting common and widespread habitats. No signs or evidence of protected, priority or rare species were discovered. The risk of presence of such was considered very low.

- 6.2 Further ecological surveys or mitigation were considered unnecessary.
- 6.3 However, to minimise any residual risk of impact to bats, birds, amphibians and hedgehogs, precautionary measures are provided and should be followed.
- 6.4 Biodiversity enhancements are also provided in the report for the benefit of local wildlife to provide a net-gain in accordance with national planning policy.

7 REFERENCES

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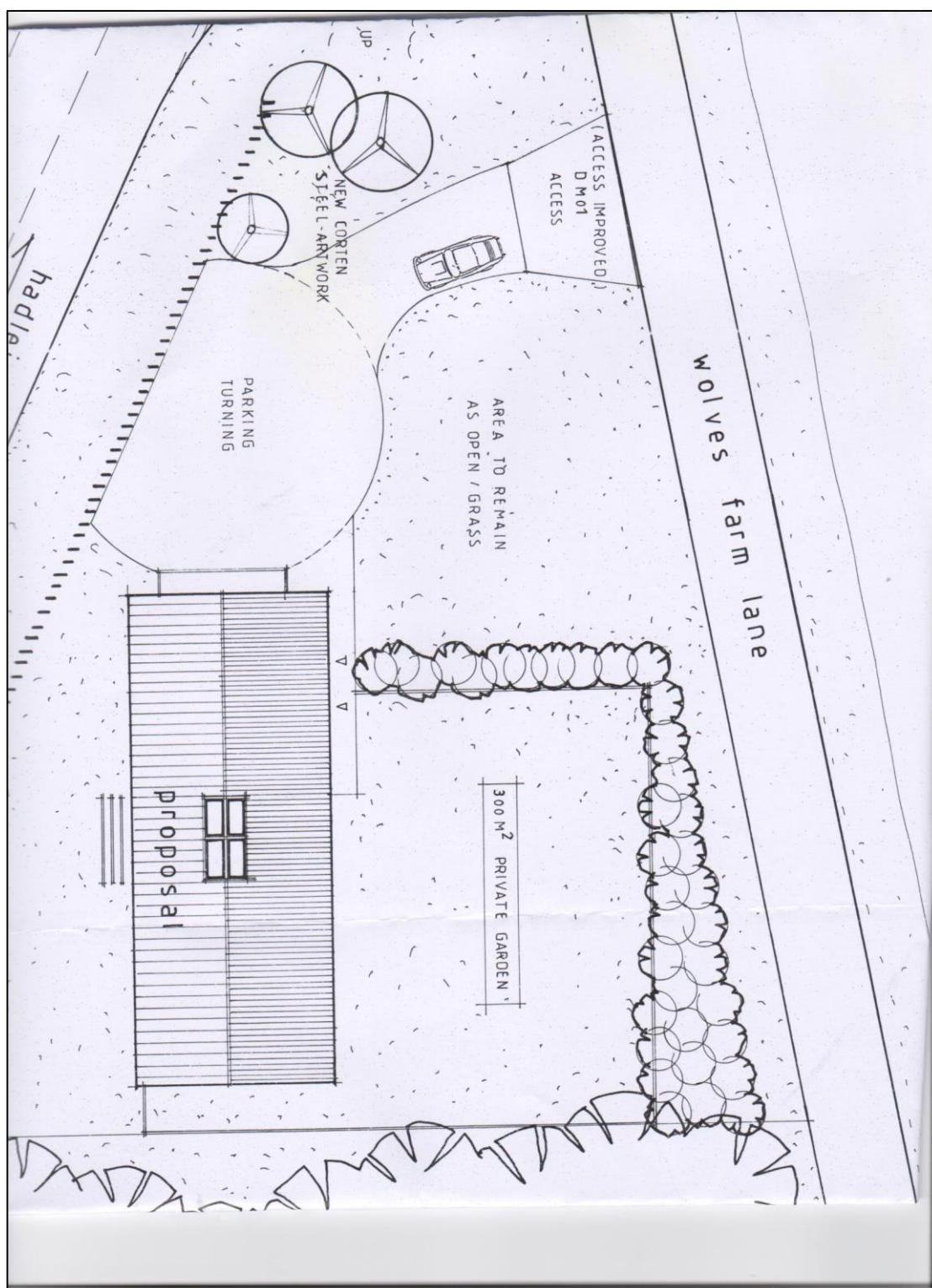
8 APPENDICES

8.1 Appendix 1: Maps

Figure 1 – Map of site.



Figure 2 – Proposed development.



8.2 Appendix 2: Photographs

Photograph 1 – Wolves Farm Barn.



Photograph by Roger Spring 2021

Photograph 2 – Wolves Farm Barn and blackthorn scrub in the north.



Photograph by Roger Spring 2021

Photograph 3 – Wolves Farm Barn.



Photograph by Roger Spring 2021

Photograph 4 – Eastern boundary of the site at Wolves Farm Barn.



Photograph by Roger Spring 2021

Photograph 5 – Inside Wolves Farm Barn.



Photograph by Roger Spring 2021