EXTENDED PHASE 1 ECOLOGICAL HABITAT SURVEY REPORT
(2023 Update)

Barnstormers, Stone Street, Stanford North, Kent TN25 6DF

Document Version/Ref	Date	Author
Final Report V1	30th August 2020	Julie Merrett (Ecologist) ACIEEM BSc (Hons)
Final Report V1.1	10th November 2023	Julie Merrett BSc (Hons) ACIEEM Principal Ecologist

Hone Ecology Ltd
mail@ecologysurveyor.co.uk
07399 861899

Executive summary

Introduction	This report provides detailed information on the potential ecological constraints for the land at Barnstormers, Stone Street, Stanford North, Kent TN25 6DF, and is an update to the Extended Phase Ecology Report produced for the site in 2020 (Hone Ecology, 2020). The recommendations of this report will highlight key ecological areas, potential constraints to development and recommend further action in the form of more detailed species specific surveys or ecological enhancements where necessary. It is understood that the proposed plans for the site comprise the construction of new dwellings on the site, with a new access driveway, and that these plans remain unchanged since 2020.
Results	The site is dominated by mown grassland, with an area of previously cleared and regularly treated bare ground on the north side, and the dry remains of a pond and further bare earth to the west. There is rubble and other materials stored on the north east and east sides of the site. The site is bordered by hedges to the north, west and east, and scattered semi-mature and mature trees to the south. It was noted that a tree on the north boundary had been blown down in a recent storm. The proposed driveway is to run through an adjacent managed garden which is dominated by mown lawn and bordered by introduced shrubs. The site is surrounded by agricultural and grazing land to the east and west, and sub-urban development to the north and south. The site is approximately 900m south of the Kent Downs Area of Outstanding Natural Beauty (AONB). There are no other statutory designated sites such as SSSI within 1km of the site. There are no non-statutory sites such as Local Wildlife Sites (LWS) within 1km of the proposed works. There are three areas of ancient semi-natural woodland within 1km of the site, the closest of which is approximately 600m to the east. These areas of ancient woodland will not be impacted by the planned works due to distance from the site.
Conclusion and Recommendations	Due to the mown grass which dominates the site, and regular clearance and treatment of ruderals, there is **low potential** for protected or notable flora on the site. The site provides no pond to attract breeding amphibians and limited foraging opportunities in the hedges. The site should therefore be considered to have a **negligible potential** to support breeding GCN and **low potential** to support foraging common amphibians**.** There is limited potential for cover and foraging opportunities beneath the hedges bordering the site and brash pile to the east, and limited refuge within the rubble pile to the north east of the site. The site should be considered to have a **low potential** to support common reptile species on the east boundary section of the site. The scattered trees and bordering hedge should be regarded as having **moderate potential** to support breeding birds No signs of badger were observed on the site. The site should be considered to have **low potential** to support foraging badgers. The Horse Chestnut tree on the south west corner of the site should be considered to have a **low potential** to support roosting bats, but is understood not to be impacted by the planned works. The site itself should be considered to have a **low-moderate potential** for foraging bats. The site should be considered to have a **low potential** to support Hazel Dormouse. It should be considered that the site has a **negligible potential** to support notable invertebrates.

	No signs of invasive species such as Japanese Knotweed were observed on the site. The site is approximately 900m south of the Kent Downs AONB. There are no other statutory designates sites or non-statutory sites within 1km of the proposed works. There are three areas of ancient semi-natural woodland within 1km of the site, the closest of which is approximately 600m to the east. These areas of ancient woodland will not be impacted by the planned works due to distance from the site. **Amphibians and Reptiles** Due to the low potential for common amphibians and reptiles on the site, no further surveys for GCN or reptiles are recommended. To ensure the sites current low suitability for reptiles and amphibians remains, the grass should be maintained in it's current state with regular cutting. As a precautionary measure, it is recommended that the rubble pile and building material storage on the site be removed by hand on warms days between March and October, when reptiles and amphibians are active and able to move clear. This work should be completed prior to any heavy plant being brought onto the site. During development works, and rubble or works materials should be left on hard standing to avoid attracting reptiles or amphibians which may use it for refuge. In the unlikely event that any reptiles or GCN are observed during the works, then works should cease in that area and an ecologist contacted for advice. **Bats** In the event that any works are required on the mature Horse Chestnut on the south west corner of the site, these should be completed under supervision by a suitably qualified ecologist. Research has indicated that bats avoid well-lit areas as it impairs their night vision. As the site supports hedges which have potential to be used by bats for commuting, the proposed scheme should keep external lighting to a minimum and follow lighting guidance from the bat conservation trust. Lighting should be downward facing and should avoid light spill onto trees or vegetation. **Birds** If possible, any tree and hedge clearance which may be required should be undertaken outside the bird breeding season. The breeding bird season extends from **March – August** inclusive. It should be noted however that certain species are known to breed throughout the year (e.g. pigeons) and remain protected. If these works cannot be undertaken outside of the bird breeding season, they should be undertaken under ecological supervision. If a nest is identified either being built, has eggs or chicks the area around the nest should be avoided until the young have fledged. **Badger** While no signs of badger were observed, as a precautionary measure, during works, any holes or trenches on the site should be covered over at night to prevent badgers and other animals falling in and getting trapped. Alternatively, ramps should be placed in the trench to enable animals to escape, in the unlikely event they access the site. In the unlikely event that a badger burrow is observed on or within 20m of the site during the works, works in that area should stop immediately and a suitably qualified ecologist contacted for advice

	Other species Beyond those noted above, there are no obvious of immediate issues regarding protected species on the site. Should at any point during the development a protected or notable species be identified within the site, then all works should stop, and the appointed ecologist consulted on the appropriate manner in which to proceed. This report is valid for 18 months.
Enhancements	Enhancements across the site could include: • Addition of swift/swallow nest boxes (see example below) on the planned buildings. Additionally, bird boxes suitable for a variety of species including starling and thrush could be positioned in the trees on the site • To provide enhancement opportunities locally and a net gain of potential roosting locations, bat roost boxes could be placed on the walls of the planned buildings. • To improve biodiversity and foraging potential for local bats, birds, the enhancing of the existing species-poor hedges is recommended, as well as the planting of additional species-rich (five or more species) hedging as part of the planned development works..

Contents

1. Introduction

1.1 This report provides detailed information on the potential ecological constraints for the land at Barnstormers, Stone Street, Stanford North, Kent TN25 6DF, and is an update to the Extended Phase Ecology Report produced for the site in 2020 (Hone Ecology, 2020). The recommendations of this report will highlight key ecological areas, potential constraints to development and recommend further action in the form of more detailed species specific surveys or ecological enhancements where necessary.

1.2 It is understood that the proposed plans for the site comprise the construction of new dwellings on the site, with a new access driveway, and that these plans remain unchanged since 2020.

Survey Location

1.3 The site is located at OS Grid reference TQ 12826 37801.

1.4 The site and habitats present are shown on Figure 1 in the Figures section.

Survey Objectives

1.5 The purpose of this survey is to produce an update phase 1 habitat survey report to comply with wildlife legislation and planning policy objectives such as such as National Planning Policy Framework and Local Planning Policy.

1.6 The key objectives are as follows:

- Identify all relevant statutory and non-statutory designated sites and features of ecological significance within the site and its surroundings.
- Using JNCC 2010 Phase 1 methodology identify key habitats on and adjacent to site. The recognised standard for mapping ecological habitats.
- Assess the potential for the presence of protected species and species of principal conservation importance within the site and its surroundings. Using the Chartered Institute for Ecology and Environmental Guidelines undertaken by an experienced and qualified ecologist.
- Provide recommendations for further surveys where assessed as necessary and suggest potential enhancements.
- Provide an early indication of potential ecological mitigation and compensation requirements.

Further information on wildlife legislation and planning policy has been included in Appendix A.

Survey Limitations

1.7 This survey records the flora and fauna evident on the day of the site visit. It does not record any flora or fauna that may appear at other times of the year, and as such, were not evident at the time of visit.

2. Methodology

Desk Study

2.1 Updated biological records from Kent and Medway Biological Records Centre (KMBRC) were obtained for a 1km radius. The records obtained contain all relevant records and information held by the local wildlife trust on the area. An extensive search of web based information for the area was also undertaken identifying records of protected and other notable species of flora, fauna together with statutory/non-statutory wildlife sites.

2.2 Web-based DEFRA resource Multi-Agency Geographic Information for the Countryside was also consulted to identify designated nature conservation sites within or immediately adjacent to the site surveyed.

Phase 1 Habitat Mapping

2.3 The Joint Nature Conservation Committee (JNCC) is the statutory adviser to Government on UK and international nature conservation. Its work contributes to maintaining and enriching biological diversity, conserving geological features and sustaining natural systems. The JNCC Phase 1 Habitat Classification and associated field survey technique provide a standardised system to record semi-natural vegetation and other wildlife habitats. The approach is designed to cover large areas of countryside relatively rapidly. It presents the user with a basic assessment of habitat type and potential importance for nature conservation. Each habitat type/feature is identified by way of a brief description of its defining features. It is then allocated a specific name, an alpha-numeric code.

2.4 The use of this method relies on the ecologist being experienced in native botanical identification of common native plants, trees and grasses.

2.5 Julie Merrett has completed botanical training with The Field Studies Council, JNCC Phase 1 Habitat Classification training with CIEEM, and undertaken botanical surveys and as such is qualified to use this methodology accurately.

Scoping Survey

2.6 The site and its immediate surroundings were considered in terms of habitats, protected species present and the potential for presence species of principal conservation importance during the original walkover survey undertaken on 16th July 2020. The walkover survey for the current updated report was undertaken on 26th October 2023.

2.7 Habitats were searched for:

- field signs of protected species in the form of latrines, feeding remains, active shelter/breeding sites.
- animal activity/behaviour if observed.
- botanically diverse habitats.
- invasive introduced plants and animals.
- habitats with the potential to support protected species.
- habitat connectivity to surrounding habitats.

3. Results

Site Description

3.1 The site is dominated by mown grassland, with an area of previously cleared and regularly treated bare ground on the north side, and the dry remains of a pond and further bare earth to the west. There is rubble and other materials stored on the north east and east sides of the site. The site is bordered by hedges to the north, west and east, and scattered semi-mature and mature trees to the south. It was noted that a tree on the north boundary had been blown down in a recent storm. The proposed driveway is to run through an adjacent managed garden which is dominated by mown lawn and bordered by introduced shrubs. The site is surrounded by agricultural and grazing land to the east and west, and sub-urban development to the north and south. See pictures below for various views of the site.

Plate 1: View of site from south west corner.

Plate 2: Lawn and recently re-treated ruderal area.

Plate 3: Dried pond.

Plate 4: Trees along south boundary.

Plate 5: Route of proposed driveway.

4. Designated Nature Conservation Sites

See the Figures section for a plan showing the designations in relation to site.

4.1 The site is approximately 900m south of the Kent Downs Area of Outstanding Natural Beauty (AONB). There are no other statutory designated sites such as SSSI within 1km of the site.

4.2 There are no non-statutory sites such as Local Wildlife Sites (LWS) within 1km of the proposed works.

4.3 There are three areas of ancient semi-natural woodland within 1km of the site, the closest of which is approximately 600m to the east. These areas of ancient woodland will not be impacted by the planned works due to distance from the site.

5. Habitats Assessment

See Figure 1 for the location of habitats on site.

Habitat overview

5.1 The site is dominated by mown semi-improved grassland, bare earth which is being regularly treated to remove any ruderal regrowth, and a dry pond. The site is bordered by species poor hedges, and a mixture of broadleaved and coniferous trees. There are areas of introduced shrub in the section of the proposed driveway.

5.2 Phase 1 habitats identified on site are listed below using the JNCC terminology JNCC (2010). See Figure 1 for the location of habitats on site:

5.3 Amenity grassland (J1.2)

The site is dominated by mown grass lawn areas. The species include Yorkshire Fog *Holcus lanatus*, Cock's-foot *Dactylis glomerate*, Annual meadow-grass *Poa annua* as well as Fescue species *Festuca sp* of grass.

5.4 Bare ground (including hard standing) (J3.2)

The site contains four areas of bare earth, the largest being on the north side of the site which is being maintained by regular treatments to remove any ruderal growth. There is also a similar area to the south east used for storage, an earth bank along the west boundary and an area of managed bare earth and dried pond to the south east.

5.5 Species-poor hedge (J2.3.2)

The site is bordered by sections of species-poor hedge. The hedge along the west boundary consists of Blackthorn *Prunus spinosa*, elder *Sambucus nigra* and bramble *Rubus fruticosus*, and there is a poplar *Populus sp.* hedge to the north east and sweet chestnut *Castanea sativa* to the east. The section of garden through which the proposed driveway is to run is bordered by laurel *Laurus nobilis* and privet *Ligustrum vulgare* hedges.

5.6 Scattered Mixed trees (A3.3)

The south, east and north boundaries all contain scattered trees including Horse Chestnut *Aesculus hippocastanum*, Norway Maple *Acer platanoides*, Sycamore *Acer pseudoplatanus*, Ash *Fraxinus excelsior*, Yew *Taxus baccata* and Conifer.

5.7 Introduced shrub (A2.2)

The garden of the eastern planned driveway section of the site contains areas of managed introduced shrubs.

6. Protected Species Potential Assessment

Protected Flora

6.1 Records of protected flora including Common Spotted Orchid *Dactylorhiza fuchsii* and Pyramidal Orchid *Anacamptis pyramidalis* have been identified within 1km of the site, although the mown grassland which dominates the site provides a sub-optimal habitat for such notable flora. It should therefore be considered that the site has a **low potential** to support protected or notable flora.

Great Crested Newts

6.2 There are historic records of Great Crested Newt (GCN) identified within 1km of the site, the nearest of which are approximately 1km to the south and separated from the site by the M20 motorway. Class survey return records for GCN from 2017 were identified, the closest of which was approximately 850m to the north west. Other common amphibian species Common Frog *Rana temporaria* have also been recorded within 1km of the site, but none on the proposed works site itself. The site itself does not support a pond to attract breeding GCN or other amphibians, with the garden pond having dried out (Plate 3). The nearest waterbodies to the site are approximately 1800m to the north west and north.

6.3 The site itself is dominated by regularly mown grass which provide limited cover or foraging opportunities for common amphibians, although the surrounding hedgerows could provide some limited foraging opportunities. Therefore, as the site provides no pond to attract breeding amphibians and limited foraging opportunities, the site should be considered to have a **negligible potential** to support breeding GCN and **low potential** to support foraging common amphibians**.**

6.4 Common amphibian species are afforded limited legal protection under the Wildlife & Countryside Act 1981 (as amended). GCN's are afforded legal protection under Schedule 5 of The Conservation of Habitats Species Regulations (2010) (as amended) and Schedule 2 of The Conservation of Habitats Species Regulations (2010) (as amended) (See Appendix A). GCN's are a European Protected Species (EPS).

Reptiles

6.5 There are records of Slow-worm *Anguis fragilis*, Grass Snake *Natrix Helvetica* and Adder *Vipera berus* within 1km of the site, the closest of which are over 800m to the south and separated from the site by the M20. The site is dominated by regularly mown grass which provides sub-optimal habitat for these species. There is potential for cover and foraging opportunities in the hedgerows and the rubble piles (Plate 7, Target Note 3) and storage area (Plate 8, Target Note 2). Tall ruderals which grow in boundary areas of the site are regularly managed through clearance or weed treatment, and were noted to have had a treatment prior to the site visit.

Plate 7: Rubble pile on north side of site.

Plate 8: Storage area on hard standing on east side.

6.6 Therefore it should be considered that the site itself has a **low potential** to support common reptile species in the bramble and storage area on the east section of the site.

6.7 Common reptiles Slow-worm, Common Lizard *Zootoca vivipara*, Grass Snake *Natrix Helvetica* and Adder *Vipera berus* are afforded legal protection under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) (See Appendix A).

Birds

6.8 Numerous bird records have been identified within 1 km, including Swallow *Hirundo rustica* Song Thrush *Turdus philomelos*, Sparrowhawk *Accipiter nisus*, and House Martin *Delichon urbica.* The hedges and scattered trees on the boundaries offer potential for nesting birds. It is understood that none of the mature trees or hedges on site are impacted by the planned works.

6.9 The scattered trees and bordering hedges should be regarded as having **moderate potential** to support breeding birds.

6.10 All species of bird whilst actively nesting are afforded legal protection under the Wildlife & Countryside Act 1981 (as amended) and special penalties are available for offences related to birds listed on Schedule 1 (See Appendix A).

Badger

6.11 No signs of badger in the form of animal paths, setts, latrines, guard hairs or snuffle holes were observed on the site. This is likely due to the lack of wooded banks which this species prefer. The site should be considered to have **low potential** to support foraging badgers.

6.12 Badgers are afforded legal protection under the Badgers Act 1992 and Schedule 6 of the Wildlife & Countryside Act 1981 (as amended) (See Appendix A).

Bats

6.13 Records for ten bat species were identified within 5km of the site, including Common pipistrelle *Pipistrellus pipistrellus*, Soprano pipistrelle *Pipistrellus pygmaeus*, Nathusius' pipistrelle *Pipistrellus nathusii*, Daubenton's Bat *Myotis daubentoniid*, Serotine *Eptesicus serotinus*, Noctule *Nyctalus noctula,* Whiskered *Myotis mystacinus*, Natterer's *Myotis nattereri*, Leisler's *Nyctalus leisleri* and Brown long-eared *Plecotus auratus*. The records include two pipistrelle species roosts approximately 1km and 800m to the south and long eared species roosts approximately 800m to the south and hibernation roost 100m to the east (see Figures section for map of bat roosts).

6.14 The trees on the southern boundary of the site were surveyed for roosting bat potential in the form of holes, fissures, or dense Ivy. The mature Horse Chestnut (Target Note 1) supported sections of raised bark (Plate 9) and a cavity (Plate 10) which could provide roosting potential for bats. The site itself offered limited foraging opportunities, and limited commuting potential along the bordering hedgerows and trees.

Plate 9: Raised bark on the Horse Chestnut Tree.

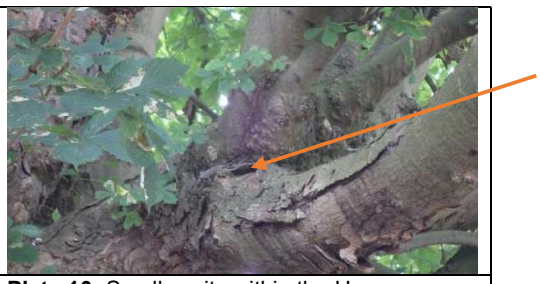


Plate 10: Small cavity within the Horse Chestnut Tree.

6.15 The Horse Chestnut on site should be considered to have a **low potential** to support roosting bats. The site itself should be considered to have a **low-moderate potential** for foraging bats around the borders.

6.16 All species of bat are afforded legal protection under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) and Schedule 2 of The Conservation of Habitats Species Regulations (2010) (as amended) (See Appendix A). All species of bat are European Protected Species (EPS).

Hazel Dormouse

6.17 There were no records of dormice identified within 1km of the site. The habitat on the site is suboptimal for dormice due to being dominated by mown grass. The boundary hedges and scattered trees lack aerial connectivity with any areas of suitable habitat of sufficient area to support a population of dormice. The site should therefore be considered to have a **low potential** to support Hazel Dormouse *Muscardinus avellanarius*.

6.18 Dormice are afforded legal protection under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) and Schedule 2 of The Conservation of Habitats Species Regulations (2010) (as amended) (See Appendix A). Dormice are European Protected Species (EPS).

Invertebrates

6.19 No notable invertebrate were identified within 1km of site. The limited habitats on site are sub-optimal to support notable invertebrate. Therefore it should be considered that site a **negligible potential** to support notable invertebrates.

Other Protected Species

6.20 No other protected species such as otter have potential to be supported on or adjacent to the site.

Invasive Species

6.21 No signs of invasive species such as Japanese Knotweed *Fallopia japonica* and Himalayan Balsam *Impatiens glandulifera* were observed during the site survey.

7. Conclusions

7.1 Due to the mown grass which dominates the site, there is **low potential** for protected or notable flora on the site.

7.2 The site provides no pond to attract breeding amphibians and limited foraging opportunities in the hedges. The site should therefore be considered to have a **negligible potential** to support breeding GCN and **low potential** to support foraging common amphibians**.**

7.3 There is limited potential for cover and foraging opportunities beneath the hedges bordering the site and brash pile to the east, and limited refuge within the rubble pile to the north east of the site. The site should be considered to have a **low potential** to support common reptile species on the east boundary section of the site.

7.4 The scattered trees and bordering hedge should be regarded as having **moderate potential** to support breeding birds

7.5 No signs of badger were observed on the site. The site should be considered to have **low potential** to support foraging badgers.

7.6 The Horse Chestnut tree on the south west corner of the site should be considered to have a **low potential** to support roosting bats, but is understood not to be impacted by the planned works. The site itself should be considered to have a **low-moderate potential** for foraging bats.

7.7 The site should be considered to have a **low potential** to support Hazel Dormouse.

7.8 It should be considered that the site has a **negligible potential** to support notable invertebrates.

7.9 No signs of invasive species such as Japanese Knotweed were observed on the site.

7.10 The site is approximately 900m south of the Kent Downs AONB. There are no other statutory designates sites or non-statutory sites within 1km of the proposed works.

7.11 There are three areas of ancient semi-natural woodland within 1km of the site, the closest of which is approximately 600m to the east. These areas of ancient woodland will not be impacted by the planned works due to distance from the site.

8. Recommendations

8.1 The following recommendations are based on the principles of established survey techniques and comply with relevant best practice guidelines set out by the Chartered Institute for Ecology and Environmental Management (CIEEM).

Amphibians and Reptiles

8.2 Due to the low potential for common amphibians and reptiles on the site, no further surveys for GCN or reptiles are recommended.

8.3 To ensure the sites current low suitability for reptiles and amphibians remains, the grass should continue to be maintained in it's current state with regular cutting. Any tall ruderal growth should also continue to be regularly cleared.

8.4 As a precautionary measure, it is recommended that the rubble pile and brash pile on the site be removed by hand on warms days between March and October, when reptiles and amphibians are active and able to move clear. This work should be completed prior to any heavy plant being brought onto the site.

8.5 During development works, and rubble or works materials should be left on hard-standing to avoid attracting reptiles or amphibians which may use it for refuge. In the unlikely event that any reptiles or GCN are observed during the works, then works should cease in that area and an ecologist contacted for advice.

Bats

8.6 In the event that any works are required on the mature Horse Chestnut on the south west corner of the site, these should be completed under supervision by a suitably qualified ecologist.

8.7 Research has indicated that bats avoid well-lit areas as it impairs their night vision, which despite common misconception they use as well as echolocation to see their environment and prey (Fure 2006). As the site supports hedges and trees which have potential to be used by bats for commuting, the proposed scheme should keep external lighting to a minimum and follow lighting guidance from the bat conservation trust which can be found at this link below. https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/ Lighting should be downward facing and should avoid light spill onto trees or vegetation.

Birds

8.8 If possible, any tree and hedge clearance which may be required should be undertaken outside the bird breeding season. The breeding bird season extends from **March – August** inclusive. It should be noted however that certain species are known to breed throughout the year (e.g. pigeons) and remain protected.

8.9 If these works cannot be undertaken outside of the bird breeding season, they should be undertaken under ecological supervision. If a nest is identified either being built, has eggs or chicks the area around the nest should be avoided until the young have fledged.

Badger

8.10 While no signs of badger were observed, as a precautionary measure, during works, any holes or trenches on the site should be covered over at night to prevent badgers and other animals falling in and getting trapped. Alternatively, ramps should be placed in the trench to enable animals to escape, in the unlikely event they access the site.

8.11 In the unlikely event that a badger burrow is observed on or within 20m of the site during the works, works in that area should stop immediately and a suitably qualified ecologist contacted for advice.

Other species

8.12 Beyond those noted above, there are no obvious of immediate issues regarding protected species on the site.

8.13 Should at any point during the development a protected or notable species be identified within the site, then all works should stop, and the appointed ecologist consulted on the appropriate manner in which to proceed.

9. Enhancements and Opportunities

9.1 Ecological enhancements should where possible be incorporated into the proposed development to contribute towards the objectives of planning legislation identified within the National Planning Policy Framework (NPPF).

9.2 In accordance with the above plan: “Plan policies and planning decisions should aim to maintain, and enhance, restore or add to biodiversity and geological conservation interests” and together with the Natural England & Rural Communities Act 2005, places a statutory duty to promote biodiversity and minimise impacts of a development upon ecology.

9.3 Furthermore, in accordance with the principles of NPPF, developments should contribute towards the degree of connectivity between natural habitats and avoid the effects of habitat fragmentation and isolation. These networks of habitats provide valuable routes or stepping-stones for the migration, dispersal and genetic exchange of species within the wider environment. Existing networks, where possible, should be strengthened by, or integrated within, new developments.

9.4 Enhancements across the site could include:

- Addition of swift/swallow nest boxes (see example below) on the planned buildings. Additionally, bird boxes suitable for a variety of species including starling and thrush could be positioned in the trees on the site. Examples of good bird box designs are found below and can be sourced at: http://www.wildcareshop.com/product/nest-boxes-artificial-habitats/bird-boxes.html

Picture of a swallow’s nest.

- To provide enhancement opportunities locally and a net gain of potential roosting locations, bat roost boxes could be placed on the walls of the planned buildings. The Schwegler 2FE Bat box is suitable for use by all bat species which inhabit buildings. It should be at placed a height of at least 3m above ground level, insuring unobstructed access for bats and away from any light spill. https://www.wildcare.co.uk/schwegler-wall-mounted-bat-shelter-2fe.html

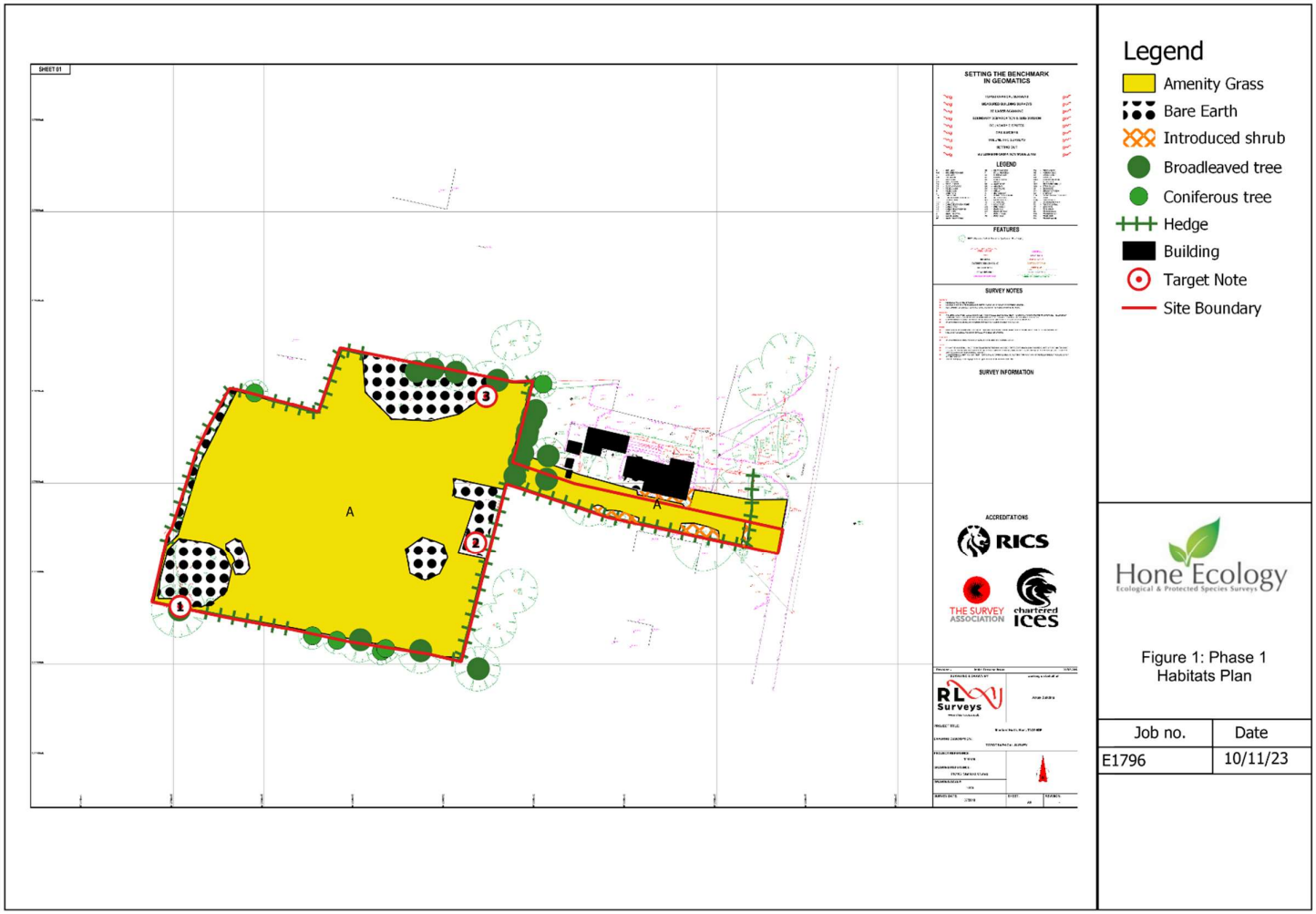
Picture of bat box below.

- To improve biodiversity and foraging potential for local bats and birds, the enhancing of the existing species-poor hedges is recommended, as well as the planting of additional species-rich (five or more species) hedging as part of the planned development works. Native species are to be planted, and could include:
    - Hazel *Corylus avellana*
    - Hawthorn *Crataegus monogyna*
    - Beech *Fagus sylvatica*
    - Holly *Ilex aquifolium*
    - Honeysuckle *Lonicera periclymenum*
    - Dog rose *Rosa canina*

References and Bibliography

Biodiversity: The UK Action Plan. H.M.S.O., (1994), London.
Bat Conservation Trust (2012). Bat Surveys - Good Practice Guidelines. Bat Conservation Trust, London.
IEEM (2006). Guidelines for Ecological Impact Assessment in the United Kingdom
English Nature (2001). Great Crested Newt Mitigation Guidelines. English Nature, Peterborough
English Nature (2002). Badgers and Development. English Nature, Peterborough
English Nature (2004). Bat Mitigation Guidelines. English Nature, Peterborough
English Nature (2006). The Dormouse conservation handbook. 2nd Edition. English Nature, Peterborough
H.M.S.O. (1960) Abandonment of Animals Act 1960. H.M.S.O., London
H.M.S.O. (2017) Conservation Habitats Species Regulations as amended. H.M.S.O., London.
H.M.S.O. (2000) Countryside & Rights of Way Act 2000. H.M.S.O., London.
H.M.S.O. (2006) Natural England & Rural Communities Act 2006. H.M.S.O., London
H.M.S.O. (1992) The Badger Act 1992. H.M.S.O., London.
H.M.S.O. (1992) The Hedgerow Regulations 1992. H.M.S.O., London.
H.M.S.O. (1981) Wildlife and Countryside Act 1981. H.M.S.O., London.
H.M.S.O. (1996) Wild Mammals Act 1996. H.M.S.O., London
Hone Ecology (2020) Extended Phase 1 Ecology Report Final V1, Barnstormers, Stone Street, Stanford North, Kent TN25 6DF. Hone Ecology Ltd, Headcorn.
Joint Nature Conservation Committee (2003) Herpetofauna Worker Manual, JNCC, Peterborough.
Joint Nature Conservation Committee (1999) Bat Workers Manual, JNCC, Peterborough.
Joint Nature Conservation Committee (2010). Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit. JNCC, Peterborough.
Langton, T.E.S., Beckett, C.L., & Foster, J.P. (2001). Great Crested Newt Conservation Handbook, Froglife, Halesworth.
Office of the Deputy Prime Minister (March 2012). National Planning Policy Framework. H.M.S.O., London.
Rose, F (1989) Colour Identification Guide to the Grasses, Sedges, Rushes and
Rose, F (2006) The Wild Flower Key, Frederick Warne.
Stace, C (2016) New Flora of the British Isles, Third Edition, Cambridge University Press, Cambridge.
British Standards Institution (BSI) (1991) Guide for Trees in Relation to Construction. BS5837.
The UK Biodiversity Steering Group Report. Volume 2. Action Plans. H.M.S.O., (1995), London.
Wildlife and Countryside Act 1981. H.M.S.O., London.

Figures



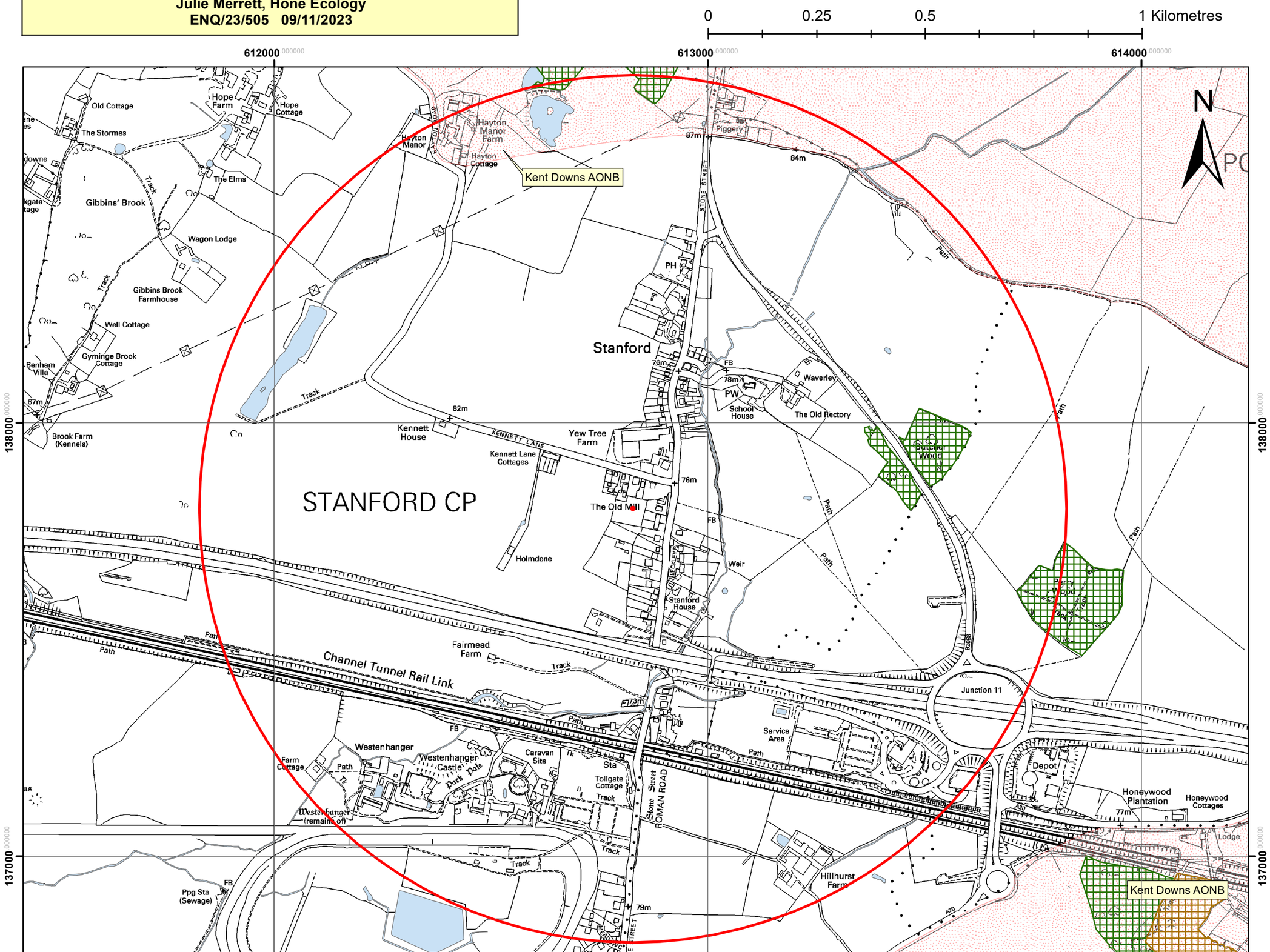
Target Note	Description
1	Low bat roost potential in Horse Chestnut
2	Stored building materials which could provide foraging potential for reptiles.
3	Rubble pile which could provide refuge for reptiles.

Figure 1: Phase 1 habitat map for site.

Kent & Medway Biological Records Centre

Map showing the statutory and non-statutory designated sites, ancient woodland and water features at Barnstormers, Stone Street, Stanford North
Julie Merrett, Hone Ecology
ENQ/23/505 09/11/2023

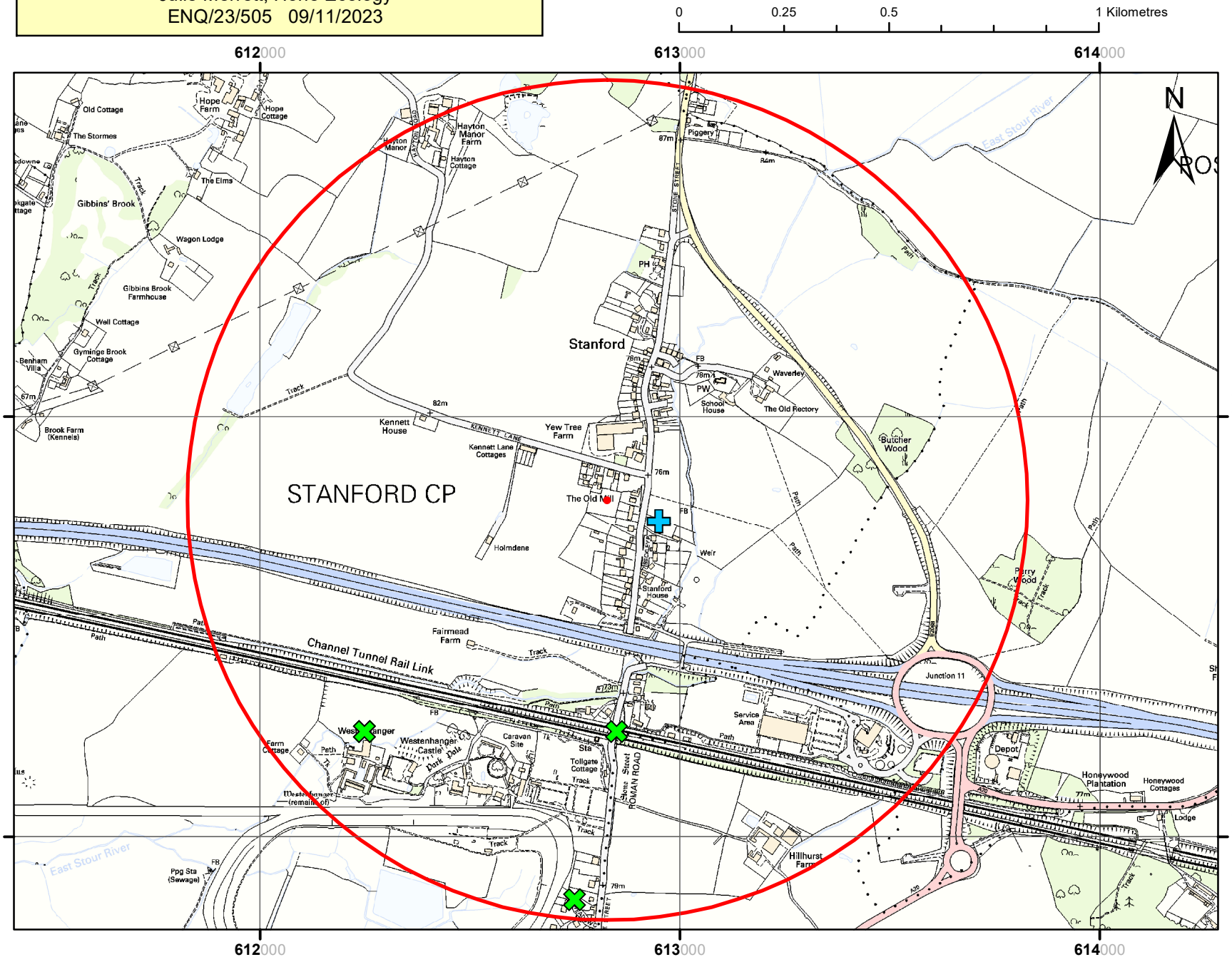
Kent & Medway Biological Records Centre would like to acknowledge, where appropriate: Natural England for Ramsar, SAC, SPA, NNR, SSSI, AONB, Heritage Coast and Ancient Woodland data; Kent Wildlife Trust for LWS, RNR and Reserve data; GeoConservation Kent for RIGS data; The National Trust, The RSPB and The Woodland Trust for Reserve data; Kent County Council for Kent Habitat Survey 2012 data used in this map.



Kent & Medway Biological Records Centre

Kent & Medway Biological Records Centre

Known Bat Roost Locations at
Barnstormers, Stone Street, Stanford North
Julie Merrett, Hone Ecology
ENQ/23/505 09/11/2023



KEY

- Study Area

Roost Type

- Maternity Roost
- Hibernating Bat
- Roost (unknown type)
- Flying Bat

This map should be used in conjunction with the accompanying bat records report.

To convert from the eastings and northings grid shown to a standard OS grid reference, use the first digit from the easting to determine the 10km square: a **5** corresponds to **TQ** and a **6** to **TR**. The second and third digits from the easting and northing give the rest of the grid reference for the 1km square.

For example, coordinates (**602**000,1**58**000) tell you the grid square is **TR0258**.

Kent Bat Group

Kent & Medway Biological Records Centre

Appendix A Legislation

The following is a summary of wildlife legislation and planning policy relevant to protected plant and animal species in the UK.

The sections on legislation have been extracted from the Joint Nature Conservation Committee's website and the Department of the Environment, Food and Rural Affairs website.

The Conservation of Habitats Species Regulations (2017) (as amended)

The Conservation of Habitats Species Regulations (2017) (as amended) consolidate all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994 in respect of England and Wales. The 1994 Regulations transposed Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into national law. The Regulations provide for the designation and protection of a network of 'European Sites' termed Natura 2000, the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites.

Amendments to the Habitats Regulations for England and Wales and the new Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 came into force on the 21st August 2007.

The amendments relate to the protection status of European protected species covered by the Habitats regulations. Taken together it is an offence to undertake the following acts with regard to European Protected Species:

(a) deliberately capture, injure or kill any wild animal of a European Protected Species;

(b) deliberately disturb animals of any such species in such a way as to be likely to significantly affect:

> *(i) the ability of any significant group of animals of that species to survive, breed, or rear or nurture their young, or*
>
> *(ii) the local distribution or abundance of that species;*

(c) deliberately take or destroy the eggs of such an animal; or

(d) damage or destroy a breeding site or resting place of such an animal.

An offence will only be committed if the deliberate disturbance is likely to **significantly affect** a **significant group** of animals of that species' ability to survive, breed, or rear or nurture its young or **significantly affect** the local distribution or abundance of that species.

Any biological definition of what constitutes a significant group of animals should take into account the local abundance of the species, its behaviour and the circumstances in which the disturbance takes place. Species that tend to be solitary, **such as dormice**, probably never form significant groups of adults, but a family group with dependent young could constitute such a group, particularly if the species is rare in the area.
The Regulations make it an offence (subject to exceptions) to deliberately capture, kill, disturb or trade in the animals listed in **Schedule 2** or damage or destroy a breeding site or resting place of such an animal; or pick, collect, cut, uproot, destroy, or trade in the plants listed in **Schedule 4**. However, these actions can be made lawful through the granting of licences (European Protected Species Licence) by the appropriate authorities (Natural England in England and Countryside Council for Wales). Licences may be granted for a number of purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that:

- **Regulation 44 (2)(e)** the development is 'in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment'.
- **Regulation 44 (3)(a**) there is 'no satisfactory alternative'.
- **Regulation 44 (3)(b)** the action 'will not be detrimental to the maintenance of the population of the species at favourable conservation status in their natural range'.

To apply for a licence, the following information is required:

- The species concerned.
- The size of the population at the site (note this may require a survey to be carried out at a particular time of the year).
- The impact(s) (if any) that the development is likely to have upon the populations.
- What measures can be conducted to mitigate for the impact(s).

Amendments to the Habitats Regulations for England and Wales and the new Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 came into force on the 21st August 2007. Both Regulations revised the definition of deliberate disturbance of European Protected Species.

The Wildlife & Countryside Act (as amended) 1981

The Wildlife & Countryside Act 1981 (as amended) is the principal piece of UK legislation relating to the protection of wildlife. It consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive) in Great Britain.

The Act makes it an offence (with exception to species listed in Schedule 2) to intentionally kill, injure, or take any wild bird or their eggs or nests. Special penalties are available for offences related to birds listed on **Schedule 1**, for which there are additional offences of disturbing these birds at their nests, or their dependent young. The Secretary of State may also designate Areas of Special Protection (subject to exceptions) to provide further protection to birds. The Act also prohibits certain methods of killing, injuring, or taking birds, restricts the sale and possession of captive bred birds, and sets standards for keeping birds in captivity.

The Act makes it an offence (subject to exceptions) to intentionally kill, injure, or take, possess, or trade in any wild animal listed in **Schedule 5**, and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying such places. The Act also prohibits certain methods of killing, injuring, or taking wild animals listed in **Schedule 6**.

The Act makes it an offence (subject to exceptions) to pick, uproot, trade in, or possess (for the purposes of trade) any wild plant listed in **Schedule 8**, and prohibits the unauthorised intentional uprooting of such plants.

The Act contains measures for preventing the establishment of non-native species which may be detrimental to native wildlife, prohibiting the release of animals and planting of plants listed in **Schedule 9**. It also provides a mechanism making any of the above offences legal through the granting of licences by the appropriate authorities.

The Countryside & Rights of Way Act 2000

The Countryside and Rights of Way Act 2000 (CRoW) was passed to provide additional levels of protection for wildlife whilst also strengthening the protection afforded to Sites of Special Scientific Interest. The CRoW act now makes it an offence to 'recklessly' harm the majority of species listed on the Schedules of the Wildlife and Countryside Act.

The Act places a duty on Government Departments and the National Assembly for Wales to have regard for the conservation of biodiversity and maintain lists of species and habitats for which conservation steps should be taken or promoted, in accordance with the Convention on Biological Diversity **(Section 74)**.

Schedule 12 of the Act amends the Wildlife and Countryside Act 1981, strengthening the legal protection for threatened species. The provisions make certain offences 'arrestable', create a new offence of reckless disturbance, confer greater powers to police and wildlife inspectors for entering premises and obtaining wildlife tissue samples for DNA analysis, and enable heavier penalties on conviction of wildlife offences.

Natural Environment & Rural Communities Act 2006

The Natural Environment & Rural Communities Act 2006 (NERC) is designed to help achieve a rich and diverse natural environment and thriving rural communities through modernised and simplified arrangements for delivering Government policy.

It was created to make provision in connection with wildlife, sites of special scientific interest, National Parks and the Broads; to amend the law relating to rights of way; to make provision as to the Inland Waterways Amenity Advisory Council; to provide for flexible administrative arrangements in connection with functions relating to the environment and rural affairs and certain other functions; and for connected purposes.

NERC carries an extension of the CRoW Act biodiversity duty to public bodies and statutory undertakers to ensure due regard to the conservation of biodiversity.

The Badger Act 1992

In the UK, badgers are primarily afforded protection under the Protection of Badgers Act 1992. This makes it illegal to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so and to intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it.

Badgers also receive limited protection under Schedule 6 of the Wildlife & Countryside Act 1981 (as amended). This outlaws certain methods of taking or killing animals.

Under Section 10 (1)(d) of the Protection of Badgers Act 1992, a licence may be granted by Natural England to interfere with a badger sett for the purpose of development, as defined by Section 55(1) of the Town & Country Planning Act 1990.

Section 3 of the Protection of Badgers Act 1992 defines interference as:

a) Damaging a badger sett;
b) Destroying a badger sett;
c) Obstructing access to, or any entrance of, a badger sett;
d) Causing a dog to enter a sett; or
e) Disturbing a badger when it is occupying a badger sett.

The Wild Mammals Act 1996

The Wild Mammals (Protection) Act (1996) makes it an offence for any person to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

The Abandonment of Animals Act 1960

The Abandonment of Animals Act comes into force when an animal is abandoned, whether permanently or not, in circumstances likely to cause unnecessary suffering. With regards to development, this has implications when translocations of animals are proposed. As such, care must be taken to ensure that any receptor sites are suitable for the species in terms of habitat and carrying capacity in order that minimal stress and suffering is imposed upon the animal(s) concerned.

The Hedgerows Regulations

The Hedgerows Regulations 1997 were introduced to protect hedgerows of importance from destruction. The Regulations define a hedgerow as, ‘a row of bushes forming a hedge with the trees growing in it’. The law however does not clarify the difference between a line of trees and a hedgerow.

However the legislation does not apply to any hedgerow (even if it is within the list above) which is 'within or marking the boundary of the curtilage of a dwelling house'.

For the Regulations to be applicable, the hedgerow must be at least 20 metres in length and less than 5 metres wide. A hedgerow is deemed to be important if it is more than thirty years old and meets at least one of the criteria listed in Part II of Schedule 1 of the Regulations.

If a hedgerow that qualifies under the Regulations is to be removed, the landowner must contact the Local Planning Authority (LPA) in writing by submitting a hedgerow removal notice. The LPA then has a period of 42 days to decide whether or not the hedgerow meets the importance criteria of the regulations.

National Planning Policy Framework

The National Planning Policy Framework (NPPF) sets out the view of central Government on how planners should balance nature conservation with development and helps ensure that Government meets its biodiversity commitments with regard to the operation of the planning system. It is a key objective of NPPF to:

"promote the preservation, restoration and re-creation of priority habitats, ecological networks and the recovery of priority species, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure.

NPPF states that development plan policies and planning decisions should be based upon up-to-date information about the environmental characteristics of their areas, including biodiversity. It also states that the aim of planning decisions should be to prevent harm to biodiversity conservation interests and to "promote opportunities for the incorporation of beneficial biodiversity and geological features within the design of development.

Where granting planning permission would result in significant harm to those interests, local planning authorities will need to be satisfied that the development cannot be reasonably be located on any alternative sites that would result in less or no harm. In the absence of any such alternatives, local planning authorities should ensure that, before planning permission is granted, adequate mitigation measures are put in place. Where a planning decision would result in significant harm to biodiversity interests, which cannot be prevented or adequately mitigated against, appropriate compensation measures should be sought. If that significant harm cannot be prevented, adequately mitigated against, or compensated for, then planning permission should be refused.

This means that full ecological surveys should be carried out and suitable mitigation measures proposed prior to any planning application being submitted. It is common practice for planning officers to consult Natural England or other conservation bodies for advice regarding the suitability of proposals in relation to biodiversity conservation.

Biodiversity Action Plans

Biodiversity Action Plans (BAPS) set out actions for the conservation and enhancement of biological diversity at various spatial scales. They consist of both Habitat Action Plans (HAPs) and Species Action Plans (SAPs).

The UK BAP was the UK's response to the 1992 Convention on Biological Diversity in Rio de Janeiro. Following a review in 2007 a list of 1149 priority species and 65 priority habitats has been adopted, which are given a statutory basis for planning consideration under Section 74 of the CRoW Act 2000.

Red Data Books

Red Data Books (RDB) is an additional method for determining rarity of species and is often seen as a natural progression from Biodiversity Action Plans.

RDB species have no automatic legal protection (unless they are protected under any of the legislation previously mentioned). Instead they provide a means of assessing rarity and highlight areas where resources may be targeted. Various categories of RDB species are recorded ranging from RDB 1 (endangered) through to RDBX (extinct). As with Biodiversity Action Plans, where possible, steps should be taken to conserve RDB species, which are to be affected by development.