



Harry Johnson

Red House Farm, Leamington Spa, Warwickshire

ECOLOGICAL APPRAISAL

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1.0 INTRODUCTION

- 1.1 This report has been produced by FPCR Environment and Design Ltd on behalf of Harry Johnson and provides an assessment of nature conservation interest on an area of land off Black Lane, Leamington Spa, Warwickshire. The survey and report were commissioned to assess the potential ecological constraints to development of the site for residential purposes and provide recommendations for ecological enhancements and additional species specific survey work which will be required in the event the site is allocated for residential development.

Site Context

- 1.2 The site is of approximate 29ha in size and is located to the north east of Royal Leamington Spa, adjacent to Black Lane (central grid reference SP336667). Habitats within the site comprise species-poor grassland grazed by horses and an arable field with associated field boundary hedgerows. A riding school was situated within the centre of the site. Habitats associated with the riding school included several buildings, a car park and menage.
- 1.3 Housing lies to the northwest of the site, with arable land to the south and east. Newbold Comyn Golf Centre partially adjoins the western boundary.

2.0 METHODOLOGY

2.1 A desktop survey was undertaken for existing ecological data regarding statutorily and non-statutorily protected species and habitats or sites of interest to nature conservation. The search radius around the site was 5km for the presence of statutorily protected sites of international value including Special Protection Areas (SPA) and Special Areas of Conservation (SAC), 2km for Sites of Special Scientific Interest (SSSI), and 1km for Local Nature Reserves (LNR). The Multi-Agency Government Information for the Countryside (MAGIC) website (www.magic.gov.uk) was used to gather this information.

Habitats

2.2 The area of survey is shown on Figure 1. This area was surveyed in July 2013 using the standard Extended Phase-1 Habitat Survey Methodology (Joint Nature Conservation Committee 2003). This involved a systematic walk over to classify the habitat types present and marking them on a base map. Target notes were used to record features or habitats of particular interest, as well as any sightings or evidence of protected or notable species. Whilst the plant species lists obtained should not be regarded as exhaustive, sufficient information was obtained to determine broad habitat types.

Hedgerows

2.3 Hedgerows were surveyed using the Hedgerow Evaluation and Grading System (HEGS) (Clements and Toft 1993). The aim of the assessment is to allow the rapid recording and ecological appraisal of any given site in the UK, and to allow the grading of the individual hedges present, in order to identify those which are likely to be of greatest significance for wildlife. This method of assessment considers: canopy species composition, associated ground flora and climbers; structure of the hedgerow including height, width and gaps, and associated features including number and species of mature tree and the presence of banks, ditches and grass verges.

2.4 Using the HEGS methodology each hedgerow is given a grade. These grades are used to assign a nature conservation value to each hedgerow as follows:

- Grade -1, 1, 1+ High to Very High Value
- Grade -2, 2, 2+ Moderately High to High Value
- Grade -3, 3, 3+ Moderate Value
- Grade -4, 4, 4+ Low Value

2.5 Hedgerows graded -2 or above are suggested as being a nature conservation priority.

2.6 The hedgerows were also assessed for their potential ecological value against the wildlife and landscape criteria of the Hedgerow Regulations 1997 (Statutory Instrument No: 1160). Briefly, each hedgerow is evaluated by determining both the average number of woody native species present per 100m and the number of hedgerow associated features. These results were compared against the wildlife and landscape criteria of the Hedgerow Regulations 1997 to ascertain whether a hedgerow is classed as important under this part of the regulations.

Fauna

- 2.7 Throughout the Extended Phase I survey consideration was given to the actual or potential presence of protected species or notable species, such as those protected under the Wildlife and Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations 2010 (as amended) or/and listed as Species of Principal Importance in England under the provisions of the NERC Act 2006 and Warwickshire Biodiversity Action Plan (BAP) Species.

BatsTree Assessment

- 2.8 Tree assessments were undertaken from ground level, with the aid of binoculars, where required, to visually assess the potential to support bat roosts. During the survey, features considered to provide suitable roost sites for bats such as the following were sought:
- Trunk cavity . Large hole in trunk caused by rot or injury
 - Branch cavity - Large hole in branch caused by rot or injury
 - Trunk split . Large split / fissure in trunk caused by rot or injury
 - Branch spilt . Large split / fissure in branch caused by rot or injury
 - Branch socket cavity . Where a branch has fallen from the tree and resulted in formation of an access point in to a cavity
 - Woodpecker hole . Hole created by nesting birds suitable for use by roosting bats
 - Lifted bark . Areas of bark which has rotted / lifted to form suitable access point/roost site for bats
 - Hollow trunk . Decay in heartwood leading to internal cavity in trunk
 - Hazard beam failure - Where a section of the tree stem/branch has failed causing collapse and leading to longitudinal fractures / splits / cracks along its length
 - Ivy cover . Dense / mature ivy cover where the woody stems could create small cavities / crevices
- 2.9 The trees were classified into general bat roost potential groups based on the presence of features listed above. Table 1 below classifies the potential categories as accurately as possible. This table is based upon Table 8.4 in Bat Surveys - Good Practice Guidelines (Bat Conservation Trust, 2012)

Table 1: Bat Survey Protocol for Trees

Tree category and description	Survey requirements prior to determination.	Recommended mitigation works and / or further surveys.
Category 1 Confirmed bat roost with field evidence of the presence of bats, e.g. live / dead bats, droppings, scratch marks, grease marks and / or urine staining.	Identified on map and on the ground. Further assessment such as climb and inspect and / or dusk / dawn surveys should be undertaken to provide an assessment on the likely use of the roost, numbers and species of bat present.	Avoid disturbance where possible. Felling or other works that would affect the roost would require an EPS licence with like for like roost replacement as a minimum. Works may also be subject to timing constraints.
Category 2a Trees that have a high potential to support bat roosts.	Identified on map and on the ground to assess the potential use of suitable cavities, based on the habitat preferences of bats. Further assessment such as climb and inspect and / or dusk / dawn surveys should be undertaken to ascertain presence / absence of roosting bats. Trees may be upgraded if presence of roosting bats is confirmed or downgraded following further surveys if features present are of low suitability.	Trees where no bat roost confirmed after further surveys: Avoid disturbance where possible. Further nocturnal surveys during the active bat season immediately prior to felling and / the use of non-return valves may be required. Use soft felling+techniques and avoid cutting through tree cavities.
Category 2b Trees with a low potential to support bat roosts.	None.	Avoid disturbance where possible. Trees would be felled using reasonable avoidance measures such as soft felling, removing ivy cover by hand etc.
Category 3 Trees with negligible potential to support bat roosts.	None.	None.

Building Surveys

- 2.10 An initial assessment of the buildings within the site was completed during the Phase 1 habitat survey. The exterior of the buildings were visually assessed during the survey for potential access points and evidence of bat activity. Features such as small gaps under barge/soffit/fascia boards, raised or missing ridge tiles and gaps at gable ends, which have potential as access points, were sought. Evidence that bats actively used potential access points includes staining within gaps and bat droppings or urine staining under gaps, a note being made wherever these were present. Indicators that potential access points had not recently been used included the presence of cobwebs and general detritus within the access.

Foraging / Commuting Habitat

- 2.11 The potential for the site and immediate surrounds to support feeding / commuting bats was also assessed, particular regard being given to the presence of continuous treelines and hedges

providing good connectivity in the landscape, and the presence of varied habitat such as scrub, woodland, grassland and open water in the vicinity of known bat roost sites (identified through the consultation process and from field survey).

Reptiles

- 2.12 Habitats were evaluated for their potential to support reptiles following guidance set out within the Herpetofauna Workers Manual (Gent and Gibson, 1998). Habitats suitable for reptiles included south facing banks and field margins, transitional areas between long and short vegetation, together with other areas which provide basking and sheltering opportunities.

Other

- 2.13 Any sightings, evidence of or suitable habitats for other protected fauna, local BAP or otherwise notable species including breeding birds, amphibians and invertebrates were recorded during the site visit.

3.0 RESULTS

Desk Study

- 3.1 Two Local Nature Reserves (LNRs) were found within 1km of the site. Further details are provided in Table 2. No other statutory sites were located within 5km of the site.

Table 2. Statutory Sites within 5km

Site Name	Designation	Approximate Distance from Site (m or Km)	Direction	Summary description
Statutory Sites				
Leam Valley	LNR	620m	South west	Flood meadows, marsh, woodland, riparian and dry grassland habitats.
Welches Meadow	LNR	750m	South west	Wetland areas supporting birds, dragonflies and butterflies.

Habitats

- 3.2 Habitats within the site were dominated by species-poor grassland fields with associated boundary hedgerow and trees. One arable field was located in the north east of the site. The wider countryside comprised a mosaic of built development, a golf course, a water treatment works, mixed farmland, watercourses, scattered woodland and open water habitats.
- 3.3 A list of plant species recorded is provided in Appendix 1 and a map of the habitats is provided in Figure 1.

Poor Semi-improved Grassland

- 3.4 Species-poor semi-improved horse grazed grassland was the dominant habitat type within the site. The sward consisted of dominant perennial rye-grass *Lolium perenne* and creeping bent *Agrostis stolonifera* abundant false oat-grass *Arrhenatherum elatius* and Yorkshire fog *Holcus lanatus*. Cock-foot *Dactylis glomerata* was frequent with occasional rough meadow grass *Poa trivialis*, Timothy-grass *Phleum pratense* and meadow foxtail *Alopecurus pratensis*. In the southern half of the site the grazing pressure was reduced and the resultant sward height was higher but the species composition of the grassland was similar to that of the heavy grazed pasture in the northern area of the site.
- 3.5 Herb species were relatively limited in diversity and included creeping buttercup *Ranunculus acris*, dandelion *Taraxacum officinale* agg and white clover *Trifolium repens*. Other species recorded included hogweed *Heracleum sphondylium*, creeping thistle *Cirsium arvense*, common nettle *Urtica dioica*, cow parsley *Anthriscus sylvestris*, and broad-leaved dock *Rumex obtusifolius*.



Photograph 1: Grazed poor semi-improved grassland field looking south

Arable farmland

- 3.6 One arable field compartment was located in the north east of the site. The habitat was characteristically low in floral diversity due the intensively farmed nature of the habitat and input of fertiliser, pesticide and herbicide as part of this process. Species identified associated with the arable habitat were restricted to common arable weeds and grasses, such as knotgrass *Polygonum aviculare*, dove-foot crane-bill *Geranium molle*, and pineappleweed *Matricaria discoidea*. These species were restricted to the field boundaries which were approximately 0.5m in width.



Photograph 2: Arable field looking north west

Hedgerows

- 3.7 The majority of the hedgerows were species-poor being dominated by hawthorn *Crataegus monogyna* and blackthorn *Prunus spinosa*. Most hedgerows contained mature tree standards of predominantly English oak *Quercus robur*. Table 3 shows a detailed breakdown of the hedgerow survey.
- 3.8 HEGS assessment indicated that most of the hedgerows were of moderate to low nature conservation priority (HEGS Score), mainly due to a lack of standard trees and associated features.
- 3.9 Nine hedgerows (H2, H3, H7, H8, H15, H16, H19, H21 and H22) scored a moderately high to high value on the HEGS assessment, which was generally due to the presence of tree standards, lack of gaps and good connectivity.
- 3.10 None of the hedgerows were considered important according to the wildlife and landscape criteria of the Hedgerow Regulations 1997.
- 3.11 All hedgerows (H1-22) qualify as habitats of principal importance under the Natural Environment and Rural Communities (NERC) Act, Section 41 and priority habitat in England as the canopy composition comprised over 80% native species.

Table 3 - Hedgerow Species Composition and HEGS Grades

Hedge	Length (m)	HEGS Grade	Woody Species Present	Important Under Habitat Regulations	>80% Native Species
H1	150m	3	Hawthorn, blackthorn, elder, crab apple, dog rose	N	Y
H2	240m	-2	Hawthorn, dog rose, elder, crab apple	N	Y
H3	100m	-2	Hawthorn, blackthorn, dog rose, elder	N	Y

Hedge	Length (m)	HEGS Grade	Woody Species Present	Important Under Habitat Regulations	>80% Native Species
H4	45m	3	Ash, hawthorn, elder	N	Y
H5	75m	-3	English oak, ash, hawthorn, hazel	N	Y
H6	75m	+3	Horse chestnut, ash, crab apple, hazel, hawthorn	N	Y
H7	270m	+2	Crab apple, ash, hazel, elder, blackthorn, dog rose	N	Y
H8	140m	-2	Blackthorn, hawthorn, hazel, ash, dog rose	N	Y
H9	165m	+3	Hazel, ash, hawthorn, crab apple	N	Y
H10	260m	+3	Ash, elder, hawthorn, dog rose	N	Y
H11	40m	+4	Crab apple, hawthorn	N	Y
H12	230m	3	Hawthorn, blackthorn, english oak, guelder rose, elder, holly, hazel	N	Y
H13	65m	4	Guelder rose, elder, hawthorn, blackthorn	N	Y
H14	135m	+3	Crab apple, elder, hawthorn, blackthorn	N	Y
H15	215m	2	Crab apple, hawthorn, elder, hazel, dog rose, blackthorn	N	Y
H16	120m	-2	Blackthorn, dog rose, crab apple, elder, hawthorn	N	Y
H17	45m	+3	Ash, elder, blackthorn, dog rose, hawthorn, crab apple	N	Y
H18	95m	+3	Elder, blackthorn, crab apple, english oak	N	Y
H19	195m	-2	English oak, ash, hawthorn, blackthorn, crab apple, dog rose, hazel	N	Y
H20	130m	3	Ash, blackthorn	N	Y
H21	290m	-2	Hazel, hawthorn, crab apple, dog rose, ash, elder	N	Y
H22	155m	-2	English oak, elder, hawthorn, crab apple	N	Y

Faunal Surveys

Badger

- 3.12 At the time of survey an active main sett comprising 12 holes was found; eight of the holes were active with prints / hairs at the entrances, two were partially active with no evidence of recent occupation and two were disused. A juvenile badger was seen entering one of the sett entrances during the survey. An active outlying sett was also identified within the site. Further detailed information relating to these setts can be provided to appropriate consultees during the consultation period, if requested.
- 3.13 The arable habitat within the site sown with oats offers seasonal foraging for badgers, whilst more optimal permanent foraging habitat is provided by grassland habitats within the site at northern and southern extents, particularly those which are horse grazed and exhibit a shorter sward likely to support a high yield of worms.

Bats

- 3.14 Three trees (T1 - T3) supported features suitable to be used as a bat roost (Table 4 & Figure 2). The trees referenced T1 - T3 were identified as only having providing low potential.

Table 4: Bat Roost Potential Associated with Trees

Tree	Species	Features	Bat Roost potential
T1	Ash <i>Fraxinus excelsior</i>	Large woodpecker hole 7m high facing SW.	Low-medium (2a)
T2	English Oak <i>Quercus robur</i>	Hole at base of failed limb facing NW. Large knot hole 4m high facing S.	Low (2b)
T3	English Oak <i>Quercus robur</i>	Hole at base of failed limb 7m high facing N. Split in branch 8m high facing east.	Low (2b)

Assessment of Buildings

- 3.15 Three buildings were identified within the curtilage of the riding school (B1 (the residential dwelling house); B2 (the stables) and B3 (the barn)). Building B1 was a two storey brick built house with a hipped, pitched clay-tiled roof. On the eastern elevation of the building a single storey breeze block section with a pitched bituminous roof was present. Potential access points identified into these buildings included gaps beneath the tiles and under a loose section of lead flashing around the chimney. Connected to the house is a single storey brick construction also with a pitched, tiled roof. No external evidence of occupation was identified over the survey.
- 3.16 Building B2 was a single storey brick built stable with a hipped clay tiled roof. A sealed roof void was present in the southern section of this building. The remaining area of the building was constructed around a timber frame and traditional bituminous roofing felt was present. Potential access points into the building included gaps beneath missing / loose tiles and via the numerous open doorways / windows. No external evidence of occupation was identified during the survey.

- 3.17 Building B3 was a barn with a pitched hipped roof constructed of corrugated sheeting constructed around a steel frame. The upper half of the walls was made of corrugated sheeting and wooden slats with the lower half comprising concrete breeze blocks. The roof was single skin with no lining or roof void present. Access to this building is possible via gaps in the side wooden slats and between the roof and through open doors. At the time of survey no external evidence of occupation was identified.

Foraging/Commuting habitat

- 3.18 The hedgerow network within the site containing frequent tree standards offering good foraging/commuting routes for bats. Additional habitats which are likely to support densities of suitable prey and be of some value as foraging resources include the unmanaged semi-improved grassland within the southern extent.

Birds

- 3.19 The hedgerows and associated trees provided suitable nesting habitat for generalist and urban fringe species within the local area. The grassland edges and hedgerow bases represented sheltered habitats that were potentially suitable for ground nesting bird species. Fruit and seed-bearing trees associated with the hedgerows supplied a potential foraging resource for the local bird population.

Great-crested Newts

- 3.20 The site contained some terrestrial habitat suitable for use by great crested newts (GCN) during their terrestrial phase in the form of field compartments of less intensively grazed grassland and hedgerows. However, no evidence of GCN was identified during the survey.
- 3.21 A pond was identified from OS maps as being present to the east of the site, but this was dry during the survey. Other water bodies were identified within 500m of the site boundary on third party land. The ponds surrounding the site were not surveyed due to access restrictions.

Reptiles

- 3.22 The vegetation within the survey area provided some potential to support reptiles in the form of hedgerow, tall grass and scrub. This habitat could provide the structural diversity preferred by reptiles for basking, shelter and foraging and was considered to be of medium value to common reptile species such as slow worm *Anguis fragilis* and grass snake *Natrix natrix*.

Other Protected Species

- 3.23 No evidence of or habitat suitable for other protected species was identified within the survey area.

4.0 DISCUSSION & RECOMMENDATIONS

Statutory Nature Conservation Sites

- 4.1 The Multi-Agency Geographic Information for the Countryside (MAGIC) website indicates that no statutory designated sites of nature conservation are present within the site boundary. Two LNRs were identified within 1km of the site, both located to the south west of Newbold Comyn Golf Centre.
- 4.2 To ensure increased recreation pressure does not affect the conservation value of these sites development proposals should be designed with a suitable green infrastructure package to provide adequate resources for formal and informal recreation within the site.

Habitats

- 4.3 The dominant habitat within the site consisted of semi-improved species-poor grassland compartments and arable land of negligible nature conservation value, being predominantly very uniform in composition and structure. No rare or notable plant species were confirmed in this area of the site. Consequently, loss of this grassland from a botanical perspective is unlikely to be a significant ecological constraint to development of the site. With the implementation of species rich grassland within areas of the green infrastructure and appropriate management of the grassland positive gains to biodiversity can be achieved through development of the site.
- 4.4 Hedgerows and mature trees around the site boundary provide some structural diversity to the site, therefore are considered to be of value at a local level. All hedgerows qualified as habitats of principal importance under the Natural Environment and Rural Communities (NERC) Act.
- 4.5 Trees and hedgerow throughout the site provide ecological value to the local area as they provide structural diversity and opportunities for sheltering and foraging wildlife. They also provide green corridors to allow movement of animals throughout the site. Consequently, it is recommended that these habitats are retained within the green infrastructure of the development proposals. Where there is the inevitable loss of hedgerows through the creation of infrastructure roads compensation can be provided through the implementation of new native species hedgerows within the overall green infrastructure. Consequently, such loss has not been identified as a significant ecological constraint to the proposed development.
- 4.6 Retained trees will be protected from damage and from soil compaction during works where appropriate by maintaining fenced Root Protection Areas (RPAs) determined in accordance with BS 5837 (2012) or following arboricultural advice. No vehicular access will be permitted within the RPAs, unless suitable soil protection layers are used, and no storage of materials, installations of services, excessive cultivation for landscape installations or fires will be permitted.
- 4.7 Further enhancements for biodiversity which can be achieved through development of the site within the overall green infrastructure package which will be provided. At the detailed design stage the creation of wet balancing facilities with areas of open water and marginal vegetation would increase the overall habitat diversity and provide gains for local biodiversity. Other enhancements which could be provided within the proposed development could include the provision of areas of native species woodland. The proposed creation of significant areas of native species woodland within the GI proposals would provide further gains for biodiversity locally.

Fauna**Badgers**

- 4.8 Badgers are protected by statute under the Protection of Badgers Act 1992. This legislation makes it an offence to wilfully kill, injure, take possession or cruelly ill treat a badger, or intentionally or recklessly interfere with a sett. Work that disturbs badgers whilst occupying a sett is illegal without a licence; badgers may be disturbed by work near the sett even if there is no direct interference or damage to the sett.
- 4.9 Evidence of badger using the site was found in the form of an active main sett of 12 entrances. A juvenile badger was seen entering one of the entrances during the survey. An outlying sett was also identified within the site. The arable habitat within the site sown with oats offers seasonal foraging to badgers, whilst more optimal permanent foraging habitat is provided in the form of the grassland habitats within the site.
- 4.10 It is likely that any potential effects to the local badger population can be addressed by appropriate links through the proposed development to the wider environment. Retention of existing hedgerows, the provision of areas of species rich grassland and areas of woodland in the overall green infrastructure package will compensate for the loss of foraging which will occur as a result of the proposed development. The implementation of these recommendations within future developments proposed will ensure that significant negative effects to the local badger population are minimised.

Bats

- 4.11 All bat species and their habitats are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010. In summary these make it an offence to damage, destroy or obstruct any place used by bats for breeding and shelter, disturb a bat, or kill, injure or take a bat.
- 4.12 Further nocturnal survey work will be required on the buildings and mature trees identified as providing suitable roost sites for bats if they are likely to be affected by the proposed development. These surveys will be necessary to support a planning application. In the event a bat roost is confirmed within the buildings or mature trees affected by the proposed development adequate compensation for loss of such sites can be provided at the detailed design stages. Such compensation could include the provision of bat boxes in suitable areas of the site, the provision of suitable roost sites in the new residential dwelling houses or the construction of suitable alternative roost sites in community buildings.
- 4.13 The majority of the habitats located within the proposed development site do not provide optimal foraging areas for bats. The existing hedgerows within the site will provide suitable foraging areas and commuting routes for the local population of bats. At the detail design stage further nocturnal survey work will be required to assess the potential effect of the proposed development on the local population. However with the application of appropriate design any potential effects on the local bat population can be minimised.
- 4.14 To minimise potential effects to the local population hedgerows should be retained in green corridors and a sensitive low level lighting scheme should be provided along these corridors. The creation of areas of species rich grassland, woodland and wet balancing facilities within the green

infrastructure would increase the overall habitat diversity within the site and provide net gains in the overall foraging resource for the local population of bats.

Birds

- 4.15 The grassland, hedgerows and boundary trees provide nesting and foraging habitats for farmland bird species in the local area. It is considered unlikely that the habitats within the site will provide suitable breeding habitats for any of the resident or migratory Schedule-1 bird species. Furthermore, it is unlikely that the habitats within the site are suitable to support a significant assemblage of breeding birds.
- 4.16 To support a planning application a breeding bird survey will be necessary, but compensation for any potential effect can be provided and overall gain for breeding birds can be provided through the implementation of appropriate green infrastructure. Appropriate measures to minimise potential affects and provide compensation for loss of habitats within the site should include retention of existing hedgerows, the creation of native species woodland planting and the development of areas of species rich grassland.

Great-crested Newts

- 4.17 One pond was identified to the east of the site, however this was dry at the time of survey. Several ponds were identified within 500m of the site boundary. Habitats within the site were considered suitable for use by great crested newts during their terrestrial phase as it comprised a mosaic of habitats including rank grassland field boundaries and hedgerows. However, no evidence of GCN was found during the surveys.
- 4.18 Should the proposals develop to planning application stage, further assessment of the neighbouring ponds is recommended to ascertain their suitability to support great crested newts. If suitable ponds are found with 500m of the site, presence/absence surveys will need to be carried out to meet the requirements of Natural England¹.
- 4.19 If the presence of GCN is confirmed adequate mitigation for the species can be incorporated into the development design through the provision of areas of species rich grassland, the implementation of native species woodland and the creation of wetland habitats in balancing facilities. The provision of such features would ensure the favourable conservation status of these species is maintained.

Reptiles

- 4.20 All common reptile species, including grass snake, slow worm, common lizard and adder are partially protected under the Wildlife and Countryside Act 1981. In summary this legislation protects the species from intentional killing, injury or sale, offering for sale, or possessing, transporting or publishing advertisements for the purposes of sale. All common reptile species are also listed as priority species on the UK BAP.
- 4.21 Habitats within the site were generally sub-optimal to support a significant population of common species of reptiles. However, a survey to confirm the presence / absence of such species will be required to support a planning application. If present the provision of species rich grassland and the development of wetland features in balancing facilities will compensate for the loss of the habitats within the site.

¹ Natural England Standing Advice Species Sheet. Ref GCN

Conclusion

- 4.22 The majority of the habitats within the site were of low conservation value and the hedgerows within the site were identified as being only of local level value. The presence of badgers has been identified within the site but can be addressed by mitigation within the development. Whilst additional species specific surveys will be required to support a planning application, the provision of an appropriate green infrastructure package across the proposed development site will provide suitable mitigation for species which may be present. Furthermore, the implementation of an appropriate green infrastructure package would provide positive gains for local biodiversity and would be in accordance to local and national policies covering ecology and nature conservation. Consequently, it has been concluded that the proposed development is unlikely to significantly affect biodiversity locally if allocated and appropriate green infrastructure is provided.

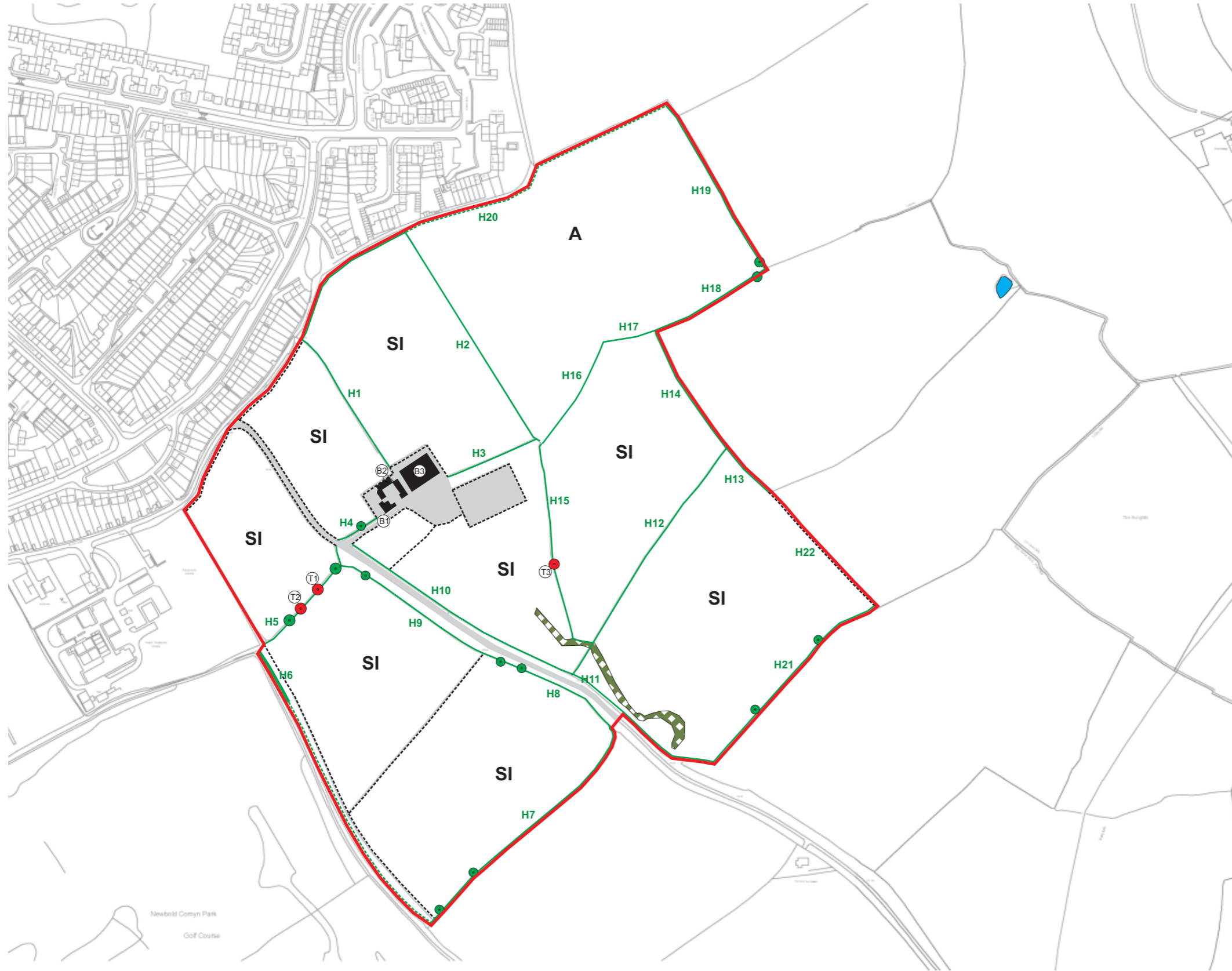
5.0 APPENDIX 1: BOTANICAL SPECIES LIST













Tree & Hedgerow Species

Common Name	Scientific Name
Ash	<i>Fraxinus excelsior</i>
Blackthorn	<i>Prunus spinosa</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corylus avellana</i>
English oak	<i>Quercus robur</i>
Hazel	<i>Corylus avellana</i>
Guelder rose	<i>Viburnum opulus</i>
Holly	<i>Ilex aquifolium</i>
Elder	<i>Sambucus nigra</i>
Apple	<i>Malus domestica</i>
Dog rose	<i>Rosa canina</i>
Buckthorn	<i>Rhamnus cathartica</i>

Grass and Herb Species

Common Name	Scientific Name
Bramble	<i>Rubus fruticosus agg</i>
Great willowherb	<i>Epilobium hirsutum</i>
Cock's-foot	<i>Dactylis glomerata</i>
Common nettle	<i>Urtica dioica</i>
Cow parsley	<i>Anthriscus sylvestris</i>
Creeping buttercup	<i>Ranunculus repens</i>
Creeping thistle	<i>Cirsium arvense</i>
Crested dog's-tail	<i>Cynosurus cristatus</i>
Dandelion	<i>Taraxacum agg.</i>
False Oat-grass	<i>Arrhenatherum elatius</i>
Ground ivy	<i>Glechoma hederacea</i>
Hogweed	<i>Heracleum sphondylium</i>
Perennial ryegrass	<i>Lolium perenne</i>
Red clover	<i>Trifolium pratense</i>
Ribwort plantain	<i>Plantago lanceolata</i>
White clover	<i>Trifolium repens</i>
Knotgrass	<i>Polygonum aviculare</i>
Creeping bent	<i>Agrostis stolonifera</i>
Germander speedwell	<i>Veronica chamaedrys</i>
Scented mayweed	<i>Matricaria chamomilla</i>
Rough hawkbit	<i>Leontodon hispidus</i>
Broadleaved dock	<i>Rumex obtusifolius</i>
Fat hen	<i>Chenopodium album</i>
Field bindweed	<i>Convolvulus arvensis</i>
Wood avens	<i>Geum urbanum</i>
Woundwort	<i>Stachys sylvatica</i>
Ragwort	<i>Jacobaea vulgaris</i>
Lesser burdock	<i>Arctium minus</i>
Hogweed	<i>Heracleum sphondylium</i>
Yorkshire fog	<i>Holcus lanatus</i>
Soft brome	<i>Bromus hordeaceus</i>
Spear thistle	<i>Cirsium vulgare</i>



-  Site boundary
-  Arable
-  Scrub
-  Fence
-  Species-poor hedgerow
-  Tree line
-  Mixed plantation
-  Broad-leaved tree
-  Tree with bat potential
-  Pond
-  Species-poor Semi-improved grassland
-  Building

 Harry Johnson
 Red House Farm, Leamington Spa
 Warwickshire
 PHASE 1 HABITAT PLAN
 Not to Scale SJS/KG 22.07.2013


Figure 1