



Pegasus Group

Scropton Road, Scropton

ECOLOGICAL APPRAISAL

February 2019

FPCR Environment and Design Ltd

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CONTENTS

1.0	EXECUTIVE SUMMARY	3
2.0	INTRODUCTION	4
3.0	METHODOLOGY	5
4.0	RESULTS.....	10
5.0	DISCUSSION AND RECOMMENDATIONS	16

TABLES

Table 1: Classification and Survey Requirements for Bats in Trees

Table 2: Non-statutory Designated Sites within 1km of the Site

Table 3: Records of Protected/Notable Species within 1km of the Site

APPENDIX

Appendix A: Site Reference Photographs

Appendix B: Botanical Species List

FIGURES

Figure 1: Designated Sites & Protected/Notable Species Plan

Figure 2: Phase 1 Habitat Plan

1.0 EXECUTIVE SUMMARY

- 1.1 This assessment has been undertaken to identify the potential ecological constraints associated with a proposed residential development at Scropton Road, Scropton, Derbyshire. To meet the requirements of the brief, a Desk Study, Extended Phase 1 Habitat Survey and internal/external building and tree inspection for bats was undertaken.
- 1.2 No statutory designated sites of international nature conservation importance or national conservation importance were identified within 5km and 2km of the site boundary. There were two sites of local conservation value within 1km. These sites are unlikely to be directly impacted, due to the size and nature of the proposals, however implementation of site best working practices are recommended to avoid indirect impacts.
- 1.3 Habitats of greatest value included poor semi-improved grassland, which although unmanaged and generally species-poor comprised a number of herbs characteristic of grassland greater diversity. The remaining on-site habitats consisted of colonising bare ground, arable, gardens, scattered scrub and hardstanding ground, these habitats are of low ecological value and their loss does not pose a constraint to development.
- 1.4
- 1.5 Inspections of the on-site buildings found three buildings (B1, B3 and B5) to have 'low' potential to support roosting bats, therefore further surveys are required to confirm whether a roost is present. The surveys will inform whether these buildings can be demolished without constraints or further surveys and a Natural England licence are needed prior to demolition. The remaining buildings (B2 and B4) were found to have 'negligible' potential to support roosting bats therefore no further surveys are required and these structure can be demolished without constraint with regards to bats.
- 1.6 No waterbodies were present within the site although four ponds were present within 500m of the site boundary. These ponds are separated from the site by urban areas, therefore it is unlikely that should GCN be present in these ponds that they would be utilising the predominantly poor terrestrial habitat within the site; no further surveys are required.
- 1.7 On site habitats are of limited value for reptiles and are isolated from other reptile suitable habitats. In addition species consultation data showed no records of reptiles within 1km of the site boundary. Therefore, reptiles are unlikely to cause a constraint to the development and no additional surveys are required.
- 1.8 Removal of woody vegetation and demolition of buildings should occur outside of the bird breeding season (March to August inclusive) to minimise the risk of disturbance to breeding birds. If this is not possible, such vegetation and buildings should be checked prior to removal by a suitably experienced ecologist.
- 1.9 Recommended biodiversity enhancements could include planting of native tree species and installation of bat and bird boxes.

2.0 INTRODUCTION

- 2.1 The following report has been prepared by FPCR Environment & Design Ltd on behalf of Pegasus Group. It provides an Ecological Appraisal of a site at Scropton Road in Scropton, Derbyshire, following an extended Phase 1 habitat survey including initial observations of any suitable habitats for, or evidence of, protected species and internal/external building and ground-based tree inspection for bats.

Site Location and Context

- 2.2 The site is located on Scropton Road, Scropton in Derbyshire (Central Grid Ref: SK 194 302). Surrounding land-use is dominated variously by grassland and arable field compartments bordered by native hedgerows and scattered mature trees, with some small urban areas immediately to the east, south and west of the site. A tributary of the River Dove, Foston Brook, is located approximately 160m south of the site.
- 2.3 The site (extending to approximately 0.69 ha) comprised a farmyard with associated buildings, areas of colonising bare ground and species-poor grassland, as well as part of an arable field compartment and a residential garden. No waterbodies or areas of standing water were present within the site. Four ponds were present within a surrounding 500m radius.

Development Proposals

- 2.4 Proposals entail development of approximately 10 dwellings with associated landscaping and infrastructure. The scheme includes demolition or re-development of all buildings within the site boundary. The proposed site layout is illustrated in 'Land North of Scropton Road, Scropton – Layout Plan' (Drawing No. P18-1019 002 Rev D, 06/12/18, Pegasus Design).

3.0 METHODOLOGY

Desk Study

- 3.1 In order to compile existing baseline information, relevant ecological information was requested from both statutory and non-statutory nature conservation organisations including:
- Derbyshire Wildlife Trust (DWT)
 - Staffordshire Ecological Record Centre (SERC)
 - Multi Agency Geographic Information for the Countryside (MAGIC) website¹
- 3.2 Further inspection of colour 1:25000 OS base maps (www.ordnancesurvey.co.uk) and aerial photographs from Google Earth (www.maps.google.co.uk) was also undertaken in order to provide additional context and identify any features of potential importance for nature conservation in the wider countryside.
- 3.3 The search area for biodiversity information was related to the significance of sites and species and potential zones of influence, as follows:
- 5km around the application area for sites of International Importance (e.g. Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar sites).
 - 2km around the application area for sites of National or Regional Importance (e.g. Sites of Special Scientific Interest (SSSIs) and species records (e.g.: protected, Species of Principal Importance under the NERC Act (2006) or notable species).
 - 1km around the application site for sites of County Importance (e.g. Sites of Importance for Nature Conservation (SINC)/Local Wildlife Sites (LWS)).

Flora

- 3.4 The survey was undertaken on 16th January 2019 using the standard methodology (JNCC, 2010²), as recommended by Natural England, to identify specific habitats and features of ecological interest. Although outside the recommended season, sufficient information was gathered to enable an assessment of broad habitats and identification of features of interest, for the purposes of this assessment. Habitats were marked on a base plan and where appropriate, target notes were made. An inspection of the site for the presence of any invasive weed species was also carried out. Features such as trees were considered with regard to their ecological value and potential to provide suitable habitats for protected species.
- 3.5 Hedgerows were surveyed individually using the Hedgerow Evaluation and Grading System (HEGS) (Clements and Toft, 1993³) to enable identification and evaluation of hedgerows of nature conservation importance within the site. Hedgerows were graded on a scale of 1-4, within which grades 1 and 2 are generally considered to be of nature conservation priority:

1= high to very high value

2 = moderately high to high value

¹ www.magic.gov.uk

² Joint Nature Conservation Committee 2010 Handbook for Phase 1 Habitat Survey: a technique for environmental audit. JNCC, Peterborough.

³ Clements, D. & Toft, R. (1992). *Hedgerow Evaluation and Grading System (HEGS) – a methodology for the ecological survey, evaluation and grading of hedgerows*. Countryside Planning and Management

3 = moderate value

4 = low value.

- 3.6 Hedgerows were also considered against the Hedgerow Regulations 1997⁴ Wildlife and Landscape criteria, to identify any hedgerows, which would be classified as "important" for nature conservation under this part of the act. Under this methodology, hedgerows are considered according to the average number of woody species per 100m of hedgerow. Additional features which enhance hedgerows, when found in association with the hedge, such as mature trees, ditches and hedge banks are also considered.
- 3.7 It should be noted that hedgerows may also qualify as Important under the Archaeological criteria of this Act, which is beyond the scope of this assessment.

3.8

Bats

Assessment of Trees

- 3.9 Tree assessments were undertaken from ground level, with the aid of a torch and binoculars (where appropriate). These surveys were undertaken on 22nd January 2019 by experienced ecologists from FPCR. During the survey Potential Roosting Features (PRF) for bats such as the following were sought (Based on P16, British Standard 8596:2015 Surveying for bats in trees and woodland, October 2015⁹):
- Natural holes (e.g. knot holes) arising from naturally shed branches or branches previously pruned back to a branch collar;
 - Man-made holes (e.g. cavities that have developed from flush cuts or cavities created by branches tearing out from parent stems);
 - Woodpecker holes;
 - Cracks/splits in stems or branches (horizontal and vertical);
 - Partially detached, loose or bark plates;

⁴ The Hedgerow Regulations 1997 – Statutory Instrument 1997 No. 1160. [Online]. London: HMSO. Available at: <http://www.legislation.gov.uk/uksi/1997/1160/contents/made> [Accessed 02/12/2014].

⁵ The Wildlife and Countryside Act 1981 (as amended). [Online]. London: HMSO. Available at: <http://www.legislation.gov.uk/ukpga/1981/69> [Accessed 02/12/2014]

⁸ The Natural Environment and Rural Communities Act 2006. [Online]. London: HMSO. Available at: <http://www.legislation.gov.uk/ukpga/2006/16/contents> [Accessed 02/12/2014]

⁹ BSI Standards Publication BS 8596:2015 Surveying for Bats in Trees and Woodland October 2015

- Cankers (caused by localised bark death) in which cavities have developed;
 - Other hollows or cavities, including butt rots;
 - Compression of forks with included bark, forming potential cavities;
 - Crossing stems or branches with suitable roosting space between;
 - Ivy stems with diameters in excess of 50mm with suitable roosting space behind (or where roosting space can be seen where a mat of thinner stems has left a gap between the mat and the trunk);
 - Bat or bird boxes;
 - Other suitable places of rest or shelter.
- 3.10 Certain factors such as orientation of the feature, its height from the ground, the direct surroundings and its location in respect to other features may enhance or reduce the potential value.
- 3.11 Trees were classified into general bat roost potential groups based upon the presence of these features. Table 1 (below) broadly classifies the potential categories as accurately as possible as well as discussing the relevance of the features. This table is based upon Table 4.1 and Chapter 6 in Bat Surveys for Professional Ecologists: Good Practice Guidelines (J., Collins (Bat Conservation Trust), 2016¹⁰).
- 3.12 Although the British Standard 8596:2015 document groups trees with moderate and high potential, these have been separated below (as per Table 4.1 in The Bat Conservation Trust Guidelines) to allow more specific survey criteria to be applied.

Table 1: Classification and Survey Requirements for Bats in Trees

Classification of Tree	Description of Category and Associated Features (based on Potential Roosting Features listed above)	Likely Further Survey Work / Actions
Confirmed Roost	Evidence of roosting bats in the form of live/dead bats, droppings, urine staining, mammalian fur oil staining, etc.	A Natural England derogation licence application will be required if the tree or roost site is affected by the development or proposed arboricultural works. This will require a combination of aerial assessment by roped access bat workers (where possible, health and safety constraints allowing) and nocturnal survey during appropriate periods (e.g. nocturnal survey - May to August) to inform on the licence. Works to tree undertaken under supervision in accordance with the approved good practice method statement provided within the licence.

¹⁰ Bat Conservation Trust, 2016. *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd Edition)

Classification of Tree	Description of Category and Associated Features (based on Potential Roosting Features listed above)	Likely Further Survey Work / Actions
		However , where confirmed roost site(s) are not affected by works, work under a precautionary good practice method statement may be possible.
High Potential	A tree with one or more Potential Roosting Features that are obviously suitable for larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter protection, conditions (height above ground level, light levels, etc) and surrounding habitat. Examples include (but are not limited to); woodpecker holes, larger cavities, hollow trunks, hazard beams, etc.	Aerial assessment by roped access bat workers (if appropriate) and/or nocturnal survey during appropriate period (May to August). Following additional assessments, tree may be upgraded or downgraded based on findings. If roost sites are confirmed and the tree or roost is to be affected by proposals a licence from Natural England will be required. After completion of survey work (and the presence of a bat roost is discounted), a precautionary working method statement may still be appropriate.
Moderate Potential	A tree with Potential Roosting Features which could support one or more potential roost sites due to their size, shelter protection, conditions (height above ground level, light levels, etc) and surrounding habitat but unlikely to support a roost of high conservation status (i.e. larger roost, irrespective of wider conservation status). Examples include (but are not limited to); woodpecker holes, rot cavities, branch socket cavities, etc.	A combination of aerial assessment by roped access bat workers and/or nocturnal survey during appropriate period (May to August). Following additional assessments, tree may be upgraded or downgraded based on findings. After completion of survey work (and the presence of a bat roost is discounted), a precautionary working method statement may still be appropriate. If a roost site/s is confirmed a licence from Natural England will be required.
Low Potential	A tree of sufficient size and age to contain Potential Roosting Features but with none seen from ground or features seen only very limited potential.	No further survey required but a precautionary working method statement may be appropriate.

Classification of Tree	Description of Category and Associated Features (based on Potential Roosting Features listed above)	Likely Further Survey Work / Actions
	Examples include (but are not limited to); loose/lifted bark, shallow splits exposed to elements or upward facing holes.	
Negligible/No potential	Negligible/no habitat features likely to be used by roosting bats	None.

* The Conservation of Habitats & Species Regulations 2010 (as amended) affords protection to “breeding sites” and “resting places” of bats. The EU Commission’s Guidance document on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC, February 2007 states that these are places “where there is a reasonably high probability that the species concerned will return”.

Assessment of Buildings

- 3.13 External aspects of the buildings within the survey area were examined to determine the potential for roost sites. Structural features of the buildings were recorded and suitable access points, such as small gaps under eaves/soffit boards, raised or missing ridge tiles, gaps through degraded mortar and gaps at gable ends, were sought. Where potential access points were identified evidence that bats actively used the access points was sought. Such evidence includes staining and the presence of bat droppings within or beneath the potential access points. The presence of heavy cob-webbing and general detritus around or within potential access point was considered as an indicator that bats have not recently used the area. Binoculars were used to aid the surveys.
- 3.14 The interiors of any accessible buildings, including roof voids (where present), were also visually assessed for evidence of bat activity and/or for the potential to be used by bats. Evidence of a roost was determined as the presence of a dead or live bat(s), concentrated piles or scattered droppings, food remains, such as insect wing fragments, as well as scratch marks and/or staining.
- 3.15 The above survey was undertaken on 22nd January 2019 by a licenced bat worker from FPCR (Natural England Survey Licence Number 2016-25569-CLS-CLS)

Other Species

- 3.16 Any sightings, evidence of or suitable habitats for other protected fauna, local BAP or otherwise notable species were recorded during the site visit.

4.0 RESULTS

Desk Study

- 4.1 The locations of designated sites and faunal records discussed in the following section are illustrated in Figure 1 – Designated Sites & Protected/Notable Species Plan.

Statutory Designations

- 4.2 No internationally designated sites of nature conservation interest were identified within the site boundary or within 5km radius of the site.
- 4.3 No nationally designated sites of nature conservation interest were identified within the site boundary or within 2km radius of the site.

Non-statutory Designations

- 4.4 Consultation with the Derbyshire Wildlife Trust (DWT) and the Staffordshire Ecological Records Centre (SERC) identified two sites of local conservation importance within 1km of the site. These are detailed in Table 2 below.

Table 2: Non-statutory Designated Sites within 1km of the Site

Site	Designation	Location (Distance from Site)	Summary Description
Fishpond Plantation & The Churchleys	LWS	SK 187 312 860m NW	Area of plantation and semi-natural woodland. Semi-natural woodland is dominated by ash and elm; the plantation woodland is comprised of oak and sycamore. Crack willow is present in areas of damper soil along Foston Brook, which bisects the woodland. There is a diverse woodland ground flora assemblage. The woodland is managed for recreational purposes, mainly shooting and horse riding.
Lemon's Holme	pLWS	SK191 313 960m N	None available

Protected / Notable Species

- 4.5 Table 3 details records of protected/notable species returned by the DWT and SERC for within 1km of the application site. Details for the nearest records to site are given below.
- 4.6 Additional species records were recorded within three 1km grid squares, of which some partially overlap the site. The inaccuracy of a 1km grid reference is that it cannot be mapped accurately; therefore the entirety of the grid square is shown in Figure 1 to illustrate the area that each record could have occurred within.

Table 3: Records of Protected/Notable Species within 1km of the Site

Scientific Name	Common Name	Distance and Orientation from Site
Mammals		
<i>Lepus europaeus</i>	Brown hare	On Site
Birds		
<i>Tyto alba</i>	Barn owl	1000m East
<i>Milvus milvus</i>	Red kite	310m East
<i>Turdus philomelos</i>	Song thrush	On Site
Bats		
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	650m South (Roost)
<i>Pipistrellus sp</i>	Pipistrelle species	500m East (Roost)
Crustaceans		
<i>Pacifastacus leniusculus</i>	Signal crayfish	270m South East
Plants		
<i>Populus nigra</i>	Black poplar	450m West
<i>Impatiens glandulifera</i>	Indian balsam	330m South West

Survey Results

Habitats/Flora

- 4.7 A detailed description of each habitat type is described below with the location of each habitat type illustrated in Figure 2: Phase 1 Habitat Plan. Site photographs are included in Appendix A and botanical species lists are included in Appendix B.

Scattered scrub, ornamental scrub and broadleaved trees

- 4.8 Patches of scattered scrub, ornamental scrub and broadleaved trees were present within the area of poor semi-improved grassland and throughout the site in association with unmanaged and peripheral habitats. These comprised occasional bramble *Rubus fruticosus agg.*, rarely recorded laurel sp. *Laurus sp.* and a single hawthorn *Crataegus monogyna*.

Poor semi-improved grassland

- 4.9 A small patch (~130m²) of unmanaged poor semi-improved grassland was present in the south-east of the site. The sward (approximately 10-70cm in height) was heterogeneous, unmanaged and dominated by species such as fescue species *Festuca sp.*, with encroaching ivy *Hedera helix*. A number of species indicative of higher quality grassland were also recorded, including frequent common knapweed *Centaurea nigra* and ribwort plantain *Plantago lanceolata*, occasional vetch species *Vicia* and rare red clover *Trifolium pratense*, salad burnet *Sanguisorba minor* and common bird's-foot-trefoil *Lotus corniculatus*.

- 4.18 The building was a single storey structure with a pitched concrete composite sheet roof. The building was formerly an industrial chicken shed and comprised three connected sheds and an office. Structural features of note included gables, soffit boxes, air ventilation chimneys, gaps where the roof tiles overhand the eaves, lead flashing and gaps where the door did not sit flush. Potential access points were limited to the gaps in the soffit box on the northern gable end, areas of lifted lead flashing and gaps along the ridge. The gaps under the roof tiles were heavily cobwebbed.



Photograph 1: Building B1 from northern aspect



Photograph 2: Internal area of B1

- 4.19 Internally the building was divided into five rooms and no roof void was present. Wooden beams were present with gaps and draping was also present, however no evidence of bats was found and the gaps were often heavily cobwebbed.
- 4.20 At the time of survey no external or internal evidence of bat use was found and the building was considered to offer limited features to support roosting bats. As such the building is considered to have low potential.



Photograph 3: B1 gap in soffit box



Photograph 4: B2 (yellow) and B3 (red) from north aspect

Building B2

- 4.21 The building was a single storey modern barn with metal frame and support beams, with an open fronted section. The structure has a pitched roof formed of composite corrugated roof sheet tiles. A single storey concrete breeze block barn was attached (B3).
- 4.22 Internally the building was made of metal cut beams and metal support beams. Wooden beams were also present which did not sit flush to the wall, however these were heavily cobwebbed. Skylights are also present.

- 4.23 At the time of survey no external or internal evidence of bat use was found and the building was considered to offer negligible features to support roosting bats.
- 4.24 A single woodpigeon *Columba palumbus* nest was present in the building.

Building B3

- 4.25 The building was a single storey structure constructed of concrete breeze blocks and corrugated metal sheets on the eastern and western elevations. The building had a pitched corrugated composite sheet roof. Structural features of note included gables, barge boards, gaps under corrugated roof tiles, gaps under the corrugated metal wall tiles and gaps at the top of the metal door on the north elevation.



Photograph 5: Building B3 from west aspect



Photograph 6: Internal area of B3

- 4.26 Internally the building was made of metal cut beams and metal support beams, which had been boarded and the ridge boxed. The building was relatively light owing to the presence of multiple skylights. The building was in use as a storage and workshop area. Features of note included the cavity between the roof tiles and internal wooden boarding and the boxed ridge present along the length of the building.
- 4.27 At the time of survey no external or internal evidence of bat use was found and the building is considered to offer low features to support roosting bats.

Building B4

- 4.28 The building was a single storey structure constructed of red brick and concrete breeze blocks with a composite sheet roof. Structural features of note include bargeboards and gaps under the tiles at the eaves. Mortar within the brickwork was in good condition.



Photograph 7: Building B4 from west aspect



Photograph 8: Internal area of B4

- 4.29 Internally the building was made of wooden beams and a metal frame, there was no roof lining and no roof void present. The building was relatively light inside owing to the presence of a skylight.
- 4.30 At the time of survey no external or internal evidence of bat use was found and the building was considered to offer negligible features to support roosting bats.

Building B5

- 4.31 The building was a two storey structure constructed of red brick with a pitched slate roof. Structural features of note include gaps under roof tiles, areas of missing tiles, gaps along the ridge and missing ridge tiles, fascia boards, barge boards, gaps at the eaves under timber trusses and areas of missing mortar in the brickwork. The first storey was an open fronted section used as a storage space.



Photograph 9: Building B5 from west aspect



Photograph 10: Internal area of B5 (first floor)

- 4.32 Internally the building was constructed of wooden beams with no roof void present. Some felt lining was present however this is degraded and heavily cobwebbed. A false ceiling was present. Features of note include the wooden ridge, gaps behind timber beams and areas of missing mortar. Features had limited value to bats as the areas were heavily cobwebbed.



Photograph 11: Roof void in B5



Photograph 12: Two of the bird nests present in B5

- 4.33 At the time of survey no external or internal evidence of bat use was found and the building is considered to offer low features to support roosting bats..

- 4.34 Several bird nests were present (2 Barn swallow *Hirundo rustica*, 1 House sparrow *Passer domesticus* and an unidentified bird species) within the building. A single house sparrow was observed flying out from beneath a tile at the time of survey.

Birds

- 4.35 Habitats were considered to provide nesting and foraging opportunities to support an assemblage urban-edge birds. The buildings showed evidence of previous nesting by barn swallow, woodpigeon and house sparrow. During the survey, large numbers of house sparrow were seen using buildings on site and within the immediate surrounding areas.

Great Crested Newt

- 4.36 No waterbodies were recorded within the boundary of the site however four ponds (P1-P4, in Figure 1) were present within the surrounding 500m. These ponds were separated from the site by a number of barriers to dispersal, including existing roads and residential housing.
- 4.37 The majority of on-site terrestrial habitats i.e. buildings, hardstanding and areas of arable and species poor semi-improved grassland were considered to be unsuitable for great crested newt *Triturus cristatus*. Scattered hibernacula (e.g. log, rubble and soil piles) offered potential suitable over-wintering habitat for GCN, but given the distance and isolation from surrounding ponds, this is unlikely.

Reptiles

- 4.38 No evidence or incidental sightings of reptiles were recorded during the survey. Whilst most of the site was considered generally unsuitable to support a viable reptile population, the scattered log, rubble and soil piles offered suitable hibernating habitats for reptiles, but given the isolation from other suitable reptile habitats, this is unlikely.

Other Species

- 4.39 No evidence or incidental sightings of other notable species were recorded during the survey. Whilst most of the site was considered unsuitable, the arable land in the north of the site could support brown hare *Lepus europaeus*.

5.0 DISCUSSION AND RECOMMENDATIONS

Proposals

- 5.1 The proposed development entails 10 residential units with associated hard- and soft-landscaping and an access road from Scropton Road.

Designated Sites

Statutory Designations

- 5.2 No statutory designated sites were present within the search area.

Non-Statutory Designations

- 5.3 Non-statutory designated sites do not receive statutory protection. They do however receive policy protection (as “Local Sites”), as reflected in the National Planning Policy Framework (NPPF). NPPF suggests that Local Sites can have a fundamental role to play in meeting overall national biodiversity targets and that appropriate weight should be attached to designated sites when making planning decisions.
- 5.4 There were no non-statutory designated sites present within the site boundary, although two (one LWS and one pLWS) were identified within 1km of the site.
- 5.5 The closest of these is Fishpond Plantation & The Churchleys (LWS) located 0.86km north-west of the site, consisting of plantation and semi-natural woodland. The second designated site Lemon’s Holme (pLWS) is located 0.96km north of the site. Due to the small scale of the proposals it is not anticipated that there will be any negative impacts on these designated sites as a result of the development. A level of precautionary mitigation is recommended to avoid potential indirect impacts created as a result of construction activities. This should take the form of best practice site protocols with regards to the safe storage of site materials and avoidance of accidental pollution (i.e. dust pollution) / contamination incidents.
- 5.6 All other non-statutory sites are located over 1km from the site boundary and it is therefore considered that there would be no adverse effects on such sites as a result of these proposals, given the nature of the proposed development site and their distance from the site.

Habitats

- 5.7 The degree to which habitats receive consideration within the planning system relies on a number of mechanisms, including:
- Inclusion within specific policy (e.g. veteran trees, ancient woodland and linear habitats in NPPF, or non-statutory site designation),
 - Identification as a habitat of principal importance for biodiversity under Natural Environment and Rural Communities Act (NERC) 2006 and consequently identification as a Priority Habitat within the UK or local Biodiversity Action Plan (BAP).
- 5.8 Under the NPPF development should seek to contribute a net gain in biodiversity where possible.

Species poor semi-improved grassland

- 5.9 Whilst some species indicative of neutral semi-improved grassland were present (i.e. common knapweed, ribwort plantain, salad burnet, common bird's-foot-trefoil) it is considered that the sward was species poor overall and given the size its loss will not pose a constraint to the development. However, where possible new grassland creation should be incorporated into the development to mitigate for its loss and provide enhancement.

Other habitats

- 5.10 The areas of colonising bare ground, arable and hardstanding are of little overall ecological value and therefore their loss will pose no constraints to the overall development.

Fauna

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Bats

- 5.12 Bats and their habitats are protected under the Wildlife and Countryside Act 1981 (as amended) and by the Conservation of Habitats and Species Regulations 2017. In summary this makes 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. Seven bat species (not including common pipistrelle) are listed as Species of Principal Importance under the provisions of the NERC Act 2006.
- 5.13 During the survey, no direct evidence of bats was recorded in any of the five buildings. However, there were low suitability bat roost features on buildings B1, B3 and B5, which merits further surveys as a precaution, following the bat mitigation guidelines. Further surveys on these structures would comprise a single dusk or dawn nocturnal survey between May-September, inclusive. Should the presence of a bat roost be identified at this time then further survey or recommendations may be necessary.
- 5.14 No bat evidence was recorded in association with the other structures on site (B2 and B4) and due to unsuitable combination of generally well-sealed external features and unsuitable internal features they were considered to offer negligible potential for roosting bats. Therefore, it is considered that the presence of roosting bats can be reasonably discounted from B2 and B4 and no further survey with regards to bats is required.
- 5.15 To enhance the value of the site it is recommended that 6 bat boxes are placed on houses, or incorporated into the design of the buildings at least 3m from the ground and located in open positions where flights lines to the entrance of the box are not congested by vegetation.
- 5.16 The bat boxes should be a variety of designs to encourage different environmental conditions and to be suitable for a range of species. The following boxes and quantities are suggested:
- 3 x Schwegler 2F, 1FF, 2FN – one of each box should be grouped onto a tree facing south, east and west to provide a variety of micro-climates.;
 - 1 x Schwegler 1FS- good for larger colonies of all bat species including larger bats such as noctule and Leisler's.
 - 2 x Schwegler 1W- large hibernation boxes suitable for many bat species.
- 5.17 Any external lighting will be applied sensitively with no lights above or adjacent to access points on bat boxes or potential flight corridors.

Birds

- 5.18 The Wildlife and Countryside Act 1981 (as amended) is the principal legislation affording protection to UK wild birds. Under this legislation all birds, their nests and eggs are protected bylaw and it is an offence, with certain exceptions to recklessly or intentionally:
- Kill, injure or take any wild bird;
 - Take, damage or destroy the nest of any wild bird while in use or being built;
 - Take or destroy the egg of any wild bird.
- 5.19 Species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) are specially protected at all times.
- 5.20 Habitats on site were largely unsuitable for nesting birds, with the exception of gardens and associated shrubbery. In addition, some of the buildings (B2 and B5) showed signs of and potential for nesting birds including woodpigeon, barn swallow and house sparrow. All of these are protected under the Wildlife and Countryside Act; house sparrows are a red listed species in the UK and a localised LBAP species. Proposals involve the demolition or modification of these buildings, and clearance of suitable vegetation and this should occur outside of the bird breeding season (March to August inclusive) to minimise the risk of disturbance to breeding birds. If this is not possible, buildings and vegetation should be checked prior to demolition or clearance by a suitably experienced ecologist. If active nests are found, structures and vegetation should be left untouched and suitably buffered from works until all birds have fledged. Specific advice should be sought prior to undertaking any of the above stated activities.
- 5.21 To enhance the value of the site it is recommended that bird boxes are placed on houses, or incorporated into the design of the buildings. Bird boxes should be placed so that they face between north and east to avoid strong sunlight and the wettest winds and should be mounted so that there is a clear path to the entrance. The nest boxes can be mounted at any time during the year, although they should ideally be mounted during autumn when many species are looking for a suitable place to roost or feed and should be tilted slightly forward so that any driving rain will hit the roof and not flood the box.
- 5.22 Due to the urban assemblage of birds noted on site, the bird boxes should be targeted at providing nest opportunities for swallows and house sparrows, and should therefore include house sparrow terraces and barn swallow nest boxes.

Great Crested Newts

- 5.23 No waterbodies were present within the site boundary although a total of four ponds were present within 500m, the closest located approximately 265m away. The consultation data showed no existing records of GCN within the surrounding area and given that the ponds are separated from the site by built up areas and the broadly unsuitable on-site habitats, it is considered it unlikely that GCN would be present within the site therefore this species does not pose a constraint to the development.

Reptiles

- 5.24 No evidence or incidental sightings of reptiles were recorded during the survey. An initial habitat assessment carried out during the extended Phase 1 survey found the majority of habitats on site to be of limited suitability to reptiles. Therefore, no further surveys are recommended.

Other species

- 5.25 A small proportion of habitats within the site boundary provide limited suitability brown hare which is a Species of Principal Importance on the NERC Act 2006. Disturbance to these species as results of the proposals could occur be in the form of habitat loss for brown hare during site clearance / construction. Given the small extent of suitable habitat, the overall impact of loss on any local population will be negligible. In addition a greater area of further suitable habitat lies adjacent to the north of the site.

Enhancements

- 5.26 The biodiversity of the site could be enhanced by creating log piles from any scrub/trees felled, providing habitat for invertebrates, small mammals and herpetofauna generally.
- 5.27 Where opportunities exist tree and native shrub planting should be incorporated into the development.
- 5.28 Preference should be given within the planting scheme to the use of locally native woody species, with an emphasis on species bearing nectar, berries, fruit and nuts, as these enhance the foraging opportunities for local wild fauna including birds and invertebrates. Suitable small tree species for inclusion in hedgerow and garden planting schemes include field maple *Acer campestre*, silver birch *Betula pendula*, wild cherry *Prunus avium*, bird cherry *P. padus*, holly *Ilex aquifolium*, crab apple *Malus sylvestris* and rowan *Sorbus aucuparia*. Other shrub species suitable for inclusion within the soft landscaping design include hawthorn *Crataegus monogyna*, hazel *Corylus avellana*, blackthorn *Prunus spinosa*, dog-rose *Rosa canina*, honeysuckle *Lonicera periclymenum*, guelder-rose *Viburnum opulus* and wild privet *Ligustrum vulgare*.
- 5.29 Where possible, planting within the site should seek to provide additional habitat for urban and suburban wildlife. While native species are often of value to biodiversity, many cultivated varieties and exotic plants are also good for wildlife provided that their flowers are not too complex. Hybrid varieties, which may produce little or no pollen or nectar and so are not of interest to bees, butterflies or other pollinating insects are not recommended. The planting strategy, both within private and public areas, should, therefore, combine a range of native species and, where appropriate, such as gardens and more formal areas, a range of ornamental species with an accepted value for biodiversity. A range of small shrubs, low growing woody species, grasses and perennials, would provide a range of forms, sizes and finer scale variation to enhance the future structural and three dimensional complexity of the site post development which would benefit wildlife.

Appendix A: Site Reference Photographs



Photograph 1: Arable Field



Photograph 2: Gardens



Photograph 3: Colonising Bare Ground



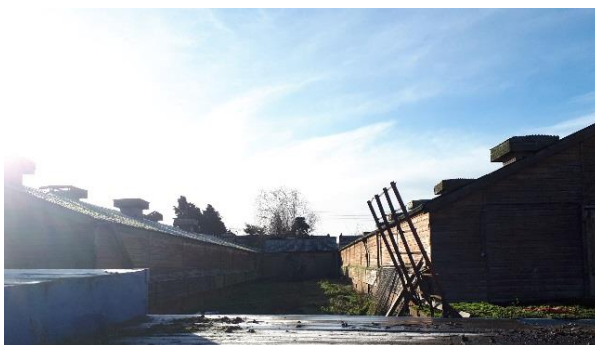
Photograph 4: Hardstanding



Photograph 5: Log and Soil Piles



Photograph 6: Poor Semi-Improved grassland and scrub



Photograph 7: Building B1



Photograph 8: Buildings B2 and B3



Photograph 9: Building B4

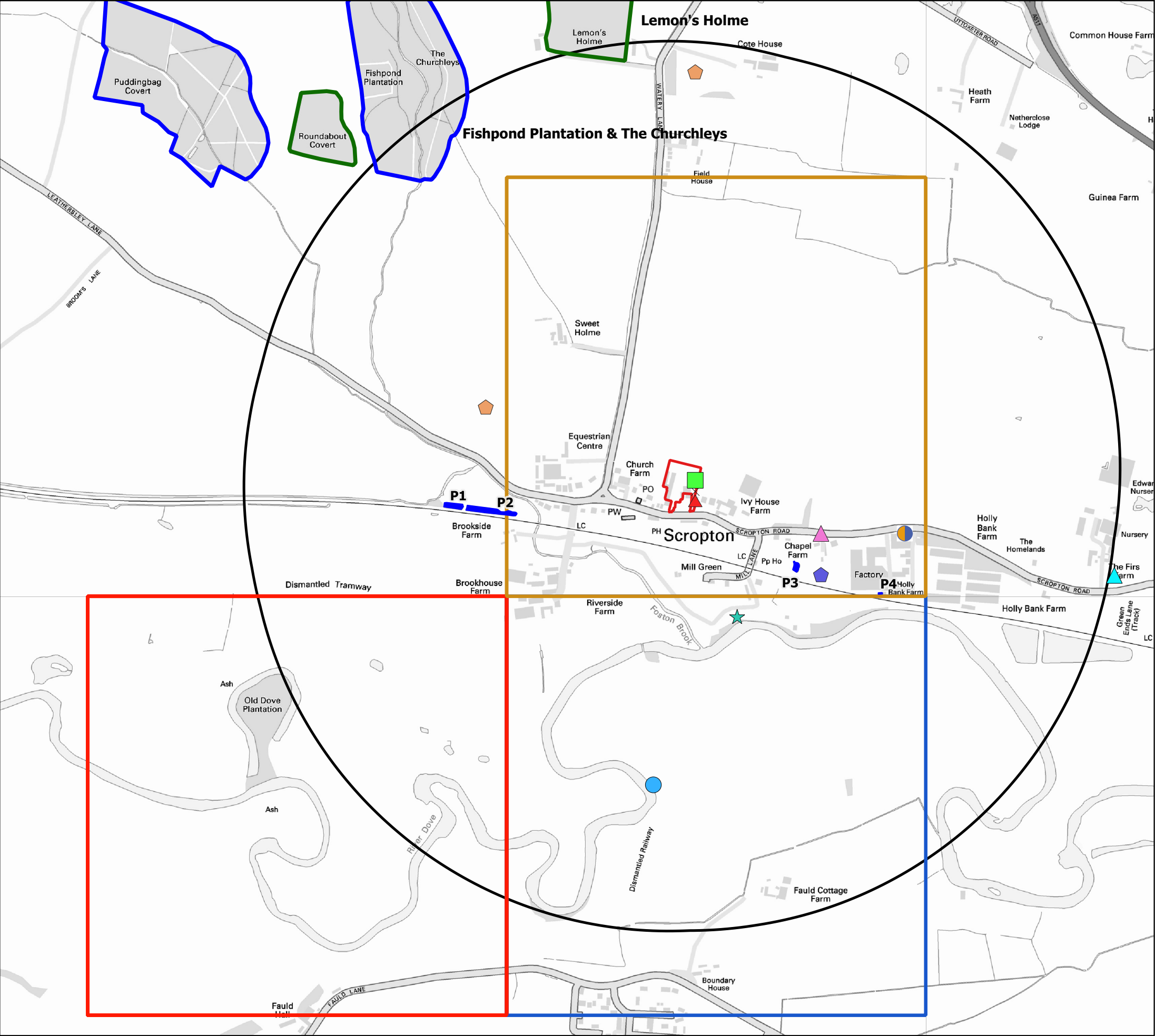


Photograph 10: Building B5

APPENDIX B: BOTANICAL SPECIES LISTS

Common Name	Scientific name	Colonising Bare Ground	Arable	Poor Semi-Improved Grassland	Scattered / Ornamental Scrub
Annual Meadow-grass	<i>Poa annua</i>	LF			
Barren Brome	<i>Anisantha sterilis</i>	R			
Bramble	<i>Rubus fruticosus</i> agg.				O
Broad-leaved Dock	<i>Rumex obtusifolius</i>	R			
Chickweed	<i>Stellaria media</i>	R			
Cleavers	<i>Galium aparine</i>	O			
Common Bird's-foot-trefoil	<i>Lotus corniculatus</i>			R	
Common Field-speedwell	<i>Veronica persica</i>	R			
Common knapweed	<i>Centaurea nigra</i>			F	
Common Nettle	<i>Urtica dioica</i>	R			
Dove's-foot Crane's-bill	<i>Geranium molle</i>	R			
Fescue sp.	<i>Festuca</i> sp.			D	
Forget-me-not sp.	<i>Myosotis</i> sp.	R			
Groundsel	<i>Senecio vulgaris</i>	O			
Herb-robert	<i>Geranium robertianum</i>	D			
Ivy	<i>Hedera helix</i>			A	
Laurel sp.	<i>Laurus</i> sp.				R
Mayweed sp.	<i>Tripleurospermum</i> sp.	R			
Moss sp.	-	D			
Oat crop	-		D		

Common Name	Scientific name	Colonising Bare Ground	Arable	Poor Semi-Improved Grassland	Scattered / Ornamental Scrub
Perennial Rye-grass	<i>Lolium perenne</i>	O			
Pineappleweed	<i>Matricaria discoidea</i>	R			
Red Clover	<i>Trifolium pratense</i>			R	
Red deadnettle	<i>Lamium purpureum</i>	O			
Red Fescue	<i>Festuca rubra</i> agg.	O			
Ribwort Plantain	<i>Plantago lanceolata</i>			F	
Salad Burnet	<i>Sanguisorba minor</i>			R	
Shepherd's-purse	<i>Capsella bursa-pastoris</i>	R			
Sow-thistle sp.	<i>Sonchus</i> sp.	R			
Spear Thistle	<i>Cirsium vulgare</i>	O			
Vetch sp.	<i>Vicia</i> sp.			O	
White Clover	<i>Trifolium repens</i>	R			
Yorkshire-fog	<i>Holcus lanatus</i>	LF			



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Key

- | | | | |
|--|---------------------------------------|---------------------|-----------------|
| | Site Boundary | | Indian Balsam |
| | 1km Site Boundary Buffer | | Pipistrelle sp |
| | Ponds within 500m | | Red Kite |
| | Local Wildlife Sites (LWS) | | Signal Crayfish |
| | Potential Local Wildlife Sites (pLWS) | | Song Thrush |
| | Barn owl | | SK1829 |
| | Black Poplar | | SK1929 |
| | Brown Hare | | SK1930 |
| | Common pipistrelle | | |
| | SK1829 | SK1929 | SK1930 |
| | Arctic Tern | Pipistrelle Species | Indian Balsam |
| | Common Greenshank | | Snowberry |
| | Common Kingfisher | | |
| | Common Tern | | |
| | Eurasian Hobby | | |
| | European Golden Plover | | |
| | Fieldfare | | |
| | Green Sandpiper | | |
| | Greylag Goose | | |
| | Lesser White-fronted Goose | | |
| | Northern Pintail | | |
| | Peregrine Falcon | | |
| | Redwing | | |

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Key

- Site Boundary
- Bare ground
- Buildings
- Built Environment: Buildings/hardstanding
- Built Environment: Gardens (lawn and planting)
- A Cultivated/disturbed land - arable
- SI Poor semi-improved grassland
- Scrub - scattered
- Broadleaved tree

