



**SPORT PITCH OFF SCHOOL LANE,
HADLOW DOWN, EAST SUSSEX
COMBINED ECOLOGICAL & ARBORICULTURAL APPRAISAL REPORT**



July 2017
Hadlow Down Parish Council

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Contents Record

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1. INTRODUCTION

- 1.1 Hadlow Down Parish Council has commissioned The Ash Partnership UK Ltd. to undertake a combined ecological and arboricultural appraisal of part of the existing sports ground along School Lane in Hadlow Down, East Sussex, hereafter referred to as the 'Site'.
- 1.2 The northern and southern boundaries of the Site are bound by mature trees, the eastern boundary is defined by School Lane while the western boundary is undefined within open mown grassland. The sports ground has an access road that runs south-westerly off School Lane. Along the roadside frontage is a children's play area and an informal car parking area, while to the west is a cricket pitch and its associated pavilion.
- 1.3 The pavilion is to be demolished and replaced by a new Community Hall that will incorporate the main hall, a new pavilion, changing rooms, equipment store and a cycle rack area; while a new formal car parking area is to be constructed between the new Community Hall and the existing play area – see *Site Layout as Proposed* Dwg. 0817/P6 dated June 2017 by MJB Architecture.
- 1.4 This Report establishes the nature conservation context and ecological value of the Site, as well as assessing its potential for associated protected species interests. It also confirms the arboricultural resource within and surrounding the Site, and addresses the impact from the proposed development.

2. METHODOLOGY

Ecology & Nature Conservation

Desk Study

- 2.1 A formal data request Desk Study was not undertaken for this project. Instead information was acquired using Natural England's website www.magic.gov.uk and the NBN Gateway www.nbn.org.uk.

Extended Phase I Survey

- 2.2 A walkover of the Site was undertaken on 20th April 2017 to provide an Extended Phase I Habitat Survey.
- 2.3 An informal list of flowering plants (or macrophytes) was made, when all plants were identified to species level, wherever possible, using Stace (1997) in accordance with the nomenclature of Preston *et al.* (2003). Their local/county/national status was assessed using Hall (1980) and Preston *et al.* (2003).
- 2.4 A photographic record of relevant features within the Site was also made, see rear of Report.

Protected Species Appraisals

- 2.5 The survey area was also assessed for its potential to contain protected and/or nationally uncommon species.

Arboriculture

- 2.6 The methodology was undertaken in accordance with BS 5837: 2012 *Guide for Trees in Relation to Design, Demolition & Construction: Recommendations* (BSI Standards Limited, April 2012 - ISBN 978 0 580 69917 7). This gives guidance on the principles to be applied when considering structures in relation to trees, shrubs and hedges. The standard recognises the problems of development close to existing trees that are to be retained, and of planting trees close to existing/proposed structures. Where development is proposed the standard provides specific guidance for:
- Deciding which trees are appropriate for retention;
 - Deciding the means of tree protection during development work; and
 - Deciding the means of incorporating trees into the developed landscape.
- 2.7 A summary of the procedures required for this survey is provided below.
- 2.8 Land Survey – Each individual tree was located on a base plan and the trees identified to species level. Although the Standard advises that the survey should continue outside the Site boundary to place the Site in context, if relevant, this was not undertaken. Notes on the ground level spot heights were also taken.

- 2.9 Relevant Trees – Only trees in excess of 75mm stem diameter when measured at 1.5m above ground level are considered relevant using the Standard, unless small specimens are of particular interest or potential value.
- 2.10 Species Identification – All native tree and shrub species were identified in accordance with Stace (1997).
- 2.11 Tree Inventory - For each identified tree, the following additional attributes were also assessed:
- (a) Height – in metres;
 - (b) Stem Diameter – in millimetres at 1.5m above ground level, or immediately above the root flare for a multi-stemmed tree;
 - (c) Branch Spread – at the four cardinal points to represent the crown;
 - (d) Age Class – Based on Young, Middle-aged, Mature, Over-mature and Veteran;
 - (e) Physiological Conditions – Based on Good, Fair, Poor and Dead;
 - (f) Structural Conditions – Details as required;
 - (g) Management Recommendations – Details as required;
 - (h) Estimated Remaining Contribution – in years;
 - (i) Category Grading – Based upon **A**, **B**, **C** and **U** grades, see Table 1 in the British Standard, to be shown on a Tree Survey Plan.

3. RESULTS

Nature Conservation Context

- 3.1 There is a single statutorily protected site of nature conservation interest within a 2km radius of the Site this being *Stockland Farm Meadows* Site of Special Scientific Interest (SSSI) – see Appendix 1.
- 3.2 *Stockland Farm Meadows* SSSI lies approximately 450m to the north of the Site and consists of a 5.8ha unimproved neutral hay meadow underlain by Wealden Clay. The sward contains species of undisturbed grassland habitat of long continuity such as Pepper-saxifrage *Silene acaulis*, Betony *Stachys officinalis*, Cowslip *Primula veris*, Yellow-rattle *Rhinanthus minor*, Pignut *Conopodium majus*, Dyer's Greenweed *Genista tinctoria*, Devil's-bit Scabious *Succisa pratensis* and Spring Sedge *Carex caryophylla*.

Ancient Woodland

- 3.3 The area surrounding Hadlow Down is well-wooded and contains numerous stands of Ancient Woodland, the majority being Ancient Semi-Natural Woodland (ASNW) assets – see Appendix 2.
- 3.4 Nearby woodlands of most relevance to the Site are:
- Complex of *Waste Wood/Bish Wood/Lower wood* ASNW – A 93.7ha stand that lies approximately 400m to the SW of the Site;
 - *Five Chimneys Wood* ASNW – A 0.6ha stand that lies approximately 300m to the west of the Site; and
 - *Grey's Wood* ASNWs – A 11.0ha woodland block that lies approximately 400m to the NW of the Site.

Extended Phase I Habitat Results

- 3.5 A total of just 39 species were recorded within and around the Site, confirming that this is floristically relatively species-poor. No uncommon plant species on a national, regional or local scale were found or suspected.
- 3.6 A total of just five principal habitat types, as recognised by JNCC (2003), were found within the Site and these are listed below:
- Broad-leaved Semi-Natural Woodland [**A1.1.1**];
 - Dense Scrub [**A2.1**];
 - Mixed Scattered Trees [**A3.3**];
 - Native Species-rich Hedge & Trees [**J2.3.1**]; and
 - Amenity Grassland [**J1.2**].

- 3.7 In addition there was Dry Ditch [**J2.6**], compacted Bare Ground [**J4**], Hardstanding [**J5**] and a Building [**J3.6**]. None of these habitats had any significant floral content and therefore they are not considered further.

Broad-leaved Semi-Natural Woodland

- 3.8 This lies immediately along the boundary but was not surveyed as there was no public right of entry.
- 3.9 It appears to be a small stand of the **W10** *Quercus robur* – *Pteridium aquilinum* – *Rubus fruticosus* woodland community (Rodwell 1991) in which coppiced Hornbeam *Carpinus betulus* is the most frequent tree. The woodland appears to have been recently coppiced and the ground flora contains dense Bluebell *Hyacinthoides non-scripta*.
- 3.10 This would suggest that it is an Ancient Semi-Natural Woodland that does not appear within the County Inventory – the most likely reason being its small size as the County Inventory is based on woodland stands above 0.5ha.

Dense Scrub

- 3.11 Along the southern side of the access road there is dense scrub consisting of Bramble *Rubus fruticosus* agg. and occasional Elder *Sambucus nigra*, overlying Nettle *Urtica dioica*, all indicative of disturbed nutrient-rich ground.

Mixed Scattered Trees

- 3.12 There is a line of very large mature trees running between the south-western end of the access road and the pavilion – consisting of Pedunculate Oak *Quercus robur* (of between 660mm to 870mm dbh) and Ash *Fraxinus excelsior* (@ 690mm dbh). This would appear to demarcate a former field boundary.
- 3.13 There are also scattered European Larch *Larix decidua* around the entrance beside School Lane and further along the southern edge of the access road. These measure between 230mm to 410mm dbh.

Native Species-rich Hedge & Trees

- 3.14 Along the northern boundary is an overgrown hedgerow that is arguably now a 'Tree Screen'. There is a large concentration of mature Pedunculate Oak (measuring between 320mm to 760mm dbh) and Beech *Fagus sylvatica* (mostly multi-stems), amongst frequent Hazel *Corylus avellana* and Holly *Ilex aquifolium*.
- 3.15 The hedge and ground flora contained a number of Ancient Woodland Vascular Plants (AWVPs) including:
- Holly;
 - Midland Hawthorn *Crataegus laevigata*;
 - Field-rose *Rosa arvensis*;
 - Bluebell;
 - Remote Sedge *Carex remota*;
 - Primrose *Primula vulgaris*; and
 - Pignut *Conopodium majus*.

This would indicate that this is a very old field boundary, and could possibly be an assart containing the linear remnant from a former Ancient Woodland here.

Amenity Grassland

- 3.16 This regularly maintained sward is dominated by Perennial Rye-grass *Lolium perenne* and contains typical grassland herbs. It was less than 40mm in height at the time of survey.

Protected Species Appraisals

- 3.17 There was no evidence of Badger *Meles meles* and the grassland was considered unsuitable for occupation by reptiles. The Site is therefore considered in relation to Hazel Dormouse *Muscardinus avellanarius*, roosting bats and breeding birds.

Hazel Dormouse

- 3.18 An examination of the Site boundaries found evidence of Hazel Dormouse along the northern boundary, i.e. approximately three characteristically-gnawed hazelnuts were recovered from beneath the Hazel trees.

Roosting Bats

- 3.19 **Trees** – No obvious signs of potential bat roosting features were noted during the Site walkover, however, given the size and age of the collection of mature Pedunculate Oak within the Site, it is possible that hidden bat roosting features are present within the crown.
- 3.20 **Pavilion** – Explanatory photographs of this building are attached at the rear of this Report.
- 3.21 This building has a flat roof consisting of roofing felt over exterior ply, and single skin painted shiplap walls, lined by insulation panels. The shiplap is in good order and is relatively tight. There is no soffit and the roof is tightly appressed to the underlying shiplap walls.
- 3.22 The windows and doors are all tight-fitting, and the extensive glazing makes the interior well-illuminated. Beneath the building is a concrete-block basement with two stores that have tight-fitting locked doors.
- 3.23 No bat droppings were found either internally or externally, and this building is assessed as being of Negligible to No Bat Roosting Potential.

Breeding Birds

- 3.24 The boundary hedgerows have a suitably dense structure that would be suitable for wide range of breeding birds.

4. ARBORICULTURAL RESULTS

Tree Preservation Orders

- 4.1 No TPO designations have been applied within the Site.

Tree Categorisations

- 4.2 A total of 30 trees were surveyed and are scheduled in Table 2.
- 4.3 The primarily peripheral distribution of trees along the Site boundaries is associated with numerous large mature Pedunculate Oak trees that are either Category **A** trees or occasionally Category **B** where they are of inferior size to an adjacent dominant tree, or have been subjected to radical pollarding.

Tree Health

- 4.4 There are two trees within the Site that are diseased, these being trees **T2** and **T25** and these are discussed below:

Tree T2

- 4.5 This very large mature Ash is unfortunately showing symptoms of Ash Die-back Disease (or Chalara) *Hymenoscyphus fraxineus*, a fungal disease that is currently infecting Ash trees throughout southern England.
- 4.6 The current guidance is to retain specimens in case the symptoms show signs of decreasing, i.e. indicating a natural resistance within the tree. In the absence of this development, it would be recommended that this tree is placed under regular observation to assess its condition.
- 4.7 There is a limb on this tree that has another fungal infection, this being by *Daldinea concentrica*, and this limb would warrant removal.

Tree T25

- 4.8 This European Larch has been infected by the fungus *Phytophthora ramorum* and has dead branches and weeping cankers. It should be felled as soon as possible, but certainly before spring 2018 in order to ensure that infective spores are not spread.

5. ECOLOGICAL EVALUATION

- 5.1 The pavilion is to be demolished and replaced by a new Community Hall that will incorporate the main hall, a new pavilion, changing rooms, equipment store and a cycle rack area; while a new formal car parking area is to be constructed between the new Community Hall and the existing play area – see *Site Layout as Proposed* Dwg. 0817/P6 dated June 2017 by MJB Architecture.

Nature Conservation Context

- 5.2 There is a single statutorily protected sites of nature conservation interest within a 2km radius of the Site, this being *Stockland Farm Meadows* SSSI which lies approximately 450m to the north of the Site.
- 5.3 There is no hydrological connectivity between the Site and the SSSI, or obvious connecting footpaths that might increase footfall, so development of the Site is unlikely to influence the SSSI.
- 5.4 For these reasons, no direct or indirect nature conservation impacts are given further consideration.

Impact upon Habitats

- 5.5 The only habitats of ecological value are those along the Site boundaries, i.e. the overgrown northern hedgerow and the southern block of Ancient Woodland. These will all be retained.
- 5.6 Although the southern block of Ancient Woodland is not recognised on the Sussex Ancient Woodland Inventory (as expressed on the www.magic.gov.uk website) this is likely to due to the small size of this woodland block. The woodland otherwise meets the criteria for identifying an Ancient Woodland as it (i) contains a recognizable National Vegetation Classification Community, (ii) has managed Hornbeam and boundary oaks and (iii) has a dense stand of Bluebell, i.e. the classic AWVP for this community type.
- 5.7 Current Natural England Standing Advice to Local Planning Authorities concerning Ancient Woodland is to seek to retain a 15m buffer to protect this resource. The current access track is within 2m at its nearest point, and the development proposals for this Site will retain and extend the existing hardstanding to the north-west. The large boundary tree (T1) will also be retained, a tree which can arguably be considered as part of the Ancient Woodland, a suggested in the Standing Advice.
- 5.8 The proposed new building will lie within 9m of the Ancient Woodland boundary at its nearest point to the north-west, but the new hardstanding areas of the Site will otherwise lie within a 3m distance of the Ancient Woodland boundary.
- 5.9 To mitigate for this close proximity between the Ancient Woodland and the new access road, it is recommended that the following are secured:

- Adopt a Sustainable Urban Drainage System (SUDS) approach, i.e. use a porous surface on the road and surrounding car parking areas to ensure rainfall discharges to ground.
- No kerbstones or drains, to minimise damage to the underlying tree root plates.
- Plant a hedgerow along the access road that is compatible with the Ancient Woodland, using staggered triple rows and using the following species mix:
 - 20% Hawthorn;
 - 20% Blackthorn;
 - 20% Hazel;
 - 10% Field Maple *Acer campestre*;
 - 10% Spindle *Euonymus europaeus*;
 - 10% Honeysuckle *Lonicera periclymenum*;
 - 5% Crab Apple *Malus sylvestris*; and
 - 5% Field-rose.

Impacts on Protected Species

Hazel Dormouse

- 5.10 Hazel Dormouse is protected in England under the Conservation of Habitats and Species Regulations 2010, and the Wildlife and Countryside Act 1981 and amendments. This protection is confirmed on individuals of any age, as well as their nests.
- 5.11 This species declined both in terms of population and distribution during the 20th century, largely due to loss and fragmentation of woodland habitat as a result of forestry, urbanisation and agriculture. In 2005 the UK population was estimated at just 45,000 individuals and is still thought to be declining (Battersby, 2005).
- 5.12 The presence of Hazel Dormouse along the northern boundary was confirmed during the Site walkover, and they might also be associated with additional field hedgerows to the north-west of the Site, as well as the Ancient Woodland to the south of the Site boundary.
- 5.13 There would be no direct impact upon Hazel Dormouse as their habitat will be retained. However, to help stabilise this population given the possibility of cat predation associated with residential housing in Hadlow Down, it is recommended that a total of 10 dormouse nest boxes are installed along the northern boundary. These can help to provide refuges as well as hibernation features.

Roosting Bats

- 5.14 All species of bat are given protection in the UK on Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended by the Countryside and Rights of Way Act, 2000), and on Schedule 2 of the Conservation (Natural Habitats &c.) Regulations, 1994. The latter further implements European legislation protecting bats. Bats are also protected from cruel ill-treatment by the Wild Mammals (Protection) Act, 1996.

- 5.15 Bats are highly protected species, the protection being conferred on a population and their roosting habitat. Live bats do not need to be present to confer protection on the roost habitat, and confirmation of a bat roost can be made on the basis of relatively fresh droppings and/or combined with roost potential.
- 5.16 Of the five trees that need to be felled to accommodate the new development layout (i.e. **T2**, **T25** and **T28** to **T30** – see Figure 3), all of these are resinous conifers with the exception of the Ash **T2**. This tree has minor to no bat roosting potential given its large size and the complexity of its canopy.
- 5.17 It is recommended that, as tree **T2** will need to be felled to accommodate the development footprint, it is subjected to a thorough search by a tree climber under the direction of a suitably qualified Ecologist.
- 5.18 In the unlikely event that a bat roost is detected, or suspected, bat activity surveys will be required to confirm the species and population size involved and the tree could not be felled until a Natural England EPS Licence is acquired and the appropriate mitigation measures carried out.

Breeding Birds

- 5.19 Breeding birds are protected under the Wildlife and Countryside Act 1981 and amendments, and in accordance with the CROW Act 2000. This legislation makes it necessary to ensure that breeding birds are not disturbed or harmed during the nesting season.
- 5.20 During demolition of the single building (especially if it is left to deteriorate at any period) or clearance of scrub vegetation along the southern side of the existing access track, this work will need to ensure that breeding birds are not disturbed or harmed. Breeding and foraging birds will be anticipated during the breeding season that runs between mid-March and the end of August each year. It is therefore recommended that any disturbing work is restricted to the autumn and winter months.
- 5.21 If this is not possible for any reason, then the demolition/scrub clearance must be undertaken under the supervision of a suitably qualified and experienced Ecologist, surveying for nesting behaviour prior to any clearance work. The clearance work would, however, be at risk as should breeding birds be noted, all work would need to halt until the breeding had been completed.

Biodiversity Gain

- 5.22 Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 places a duty on all Local Planning Authorities (LPAs) to conserve biodiversity – including restoring and enhancing species, populations and habitats, as well as protecting them.
- 5.23 The recent National Planning Policy Framework (NPPF) of March 2012, Section 11, para. 109 also requires that ‘*the planning system should contribute to and enhance the natural and local environment by ... minimising impacts on biodiversity and providing net gains in biodiversity where possible ...*’. The NPPF sets out principles that the LPAs should seek to apply when determining planning applications to conserve and enhance biodiversity. These include (i) encouraging opportunities to

incorporate biodiversity in and around developments and (ii) refusing planning permission that would cause loss/deterioration of irreplaceable habitats unless '*... the need for, and the benefits of, the development in that location clearly outweigh the loss*' (see para. 118).

5.24 The LPA may seek to address local Biodiversity Action Plan (BAP) targets through this mechanism, but otherwise is recommended that appropriate biodiversity enhancements within any future proposed development layout would ideally include:

- Wall-mounting Schwegler bat boxes;
- Tree-mounted Schwegler bat and bird boxes on boundary trees or erected posts;
- Using Ancient Woodland compatible trees/shrubs within the soft landscaping.
- Using a suite of pollen/nectar rich plants that would be attractive for bees and butterflies within the soft landscaping.

6. ARBORICULTURAL EVALUATION

- 6.1 The pavilion is to be demolished and replaced by a new Community Hall that will incorporate the main hall, a new pavilion, changing rooms, equipment store and a cycle rack area; while a new formal car parking area is to be constructed between the new Community Hall and the existing play area – see *Site Layout as Proposed* Dwg. 0817/P6 dated June 2017 by MJB Architecture.
- 6.2 The proposed development layout will result in loss of four trees, i.e. **T2** and **T28** to **T30** – see Figure 3. Of these one is diseased and may have to be felled anyway, the remaining trees being a localised clump of three European Larch.

Impacts upon Root Protection Areas

- 6.3 The location of the building has been carefully located and will only result in minor impacts of less than 2% of the RPA on two trees, i.e. **T3** and **T9** as shown on Figure 3.
- 6.4 Hardstanding areas associated with the new access road, car parking and walkways around the new building will result in the following RPA impacts:
- Tree **T1** – Approximately 5% of the RPA, in addition to 7% which already lies beneath the existing access track.
 - Tree **T3** – Approximately 20% of the RPA to the east and south.
 - Tree **T9** – Approximately 7% of the RPA to the south-west.
 - Trees **T12** to **T14** – Between approximately 5% to 10% of the RPA, in addition to areas already beneath the existing access track.
 - Tree **T16** – Approximately 2% of the RPA to the south-east.
 - Tree **T26** – Approximately 35% of the RPA to the north and south-west.
 - Tree **T27** – Approximately 15% of the RPA to the north-west.
- 6.5 These cumulative impacts can all be minimised by using a ‘No Dig’ engineering solution to retain these impacted areas of the RPA *in situ*. This will involve the following construction technique:
- Raising the levels to avoid excavating into the ground and using a cellular confinement base to spread the load.
 - Hardstanding to be of porous design to maintain water supply into underlying RPA.
 - No curbstones to be installed, if road needs to be defined this can be by timber edging/sleepers or similar.

Impacts upon Tree Canopies

- 6.6 Only two trees have canopy spreads that could influence the building location, these being trees **T1** and **T3** and the proximity to the buildings would be as follows:
- Tree **T1** – Spread to north is 9m, while new building would lie at 8.5m distance. Therefore a minor reduction to the crown would be required on the northern side of this tree, possibly accompanied with additional work to ensure aesthetic balance within the crown.
 - Tree **T3** – Spread to the south is 4m and to the west is 7m, while the new building would lie at 8m distance. A minor reduction to branches within the south-western sector of the crown may be required.
- 6.7 No other canopy spread impacts are recognised.

Arboricultural Method Statement

- 6.8 A scaled Tree Protection Plan (TPP) is provided as Figure 3 of this Report.
- 6.9 This shows the proposed layout of the arboricultural exclusion fencing, which will be of the Type I TPF specification.

Project Arboriculturalist

- 6.10 The Project Arboriculturalist will be Ashley Leftwich BSc MSc of The Ash Partnership (UK) Ltd.

Fencing Specifications

- 6.11 Specifications for the arboricultural fencing will be based on those for Type I TPF as set out in BS5837:2012 *Guide for Trees in Relation to Design, Demolition & Construction: Recommendations*.
- 6.12 This is based on interlinking 3.5m lengths of 2m high Heras fencing, set on foot blocks, the Type 1 fencing being additionally secured in place using 1.2m long steel road-pins that will be driven into the ground.

Construction Activities within RPAs

- 6.13 The Type 1 permanent TPF will remain in place throughout the entire development. During this time, the contained RPA will be regarded as an exclusion area in which the following precautions shall be observed at all times:
- No cutting or removal of branches without agreement of the TWBC Arboricultural Officer;
 - No mechanical excavators or vehicular access;
 - No pedestrian access unless avoidable;
 - No storage of plant or materials;

- No storage or handling of chemicals including cement washings;
- No trenching or lowering of ground levels; and
- No fire lighting.

6.14 In addition, the following will be observed:

- A 10m separation between trees and potentially injurious substances to tree health such as fuels, oil, bitumen, cement (and cement washings), builders sand and other chemicals; and
- A 5m separation between the trees and any lit fire.

6.15 Excavation work within the RPA will only be in accordance with the following:

- Excavation work around the roots only with hand tools;
- Careful work around any exposed roots to avoid damage, to be covered by wet hessian cloth if left exposed for more than a few hours.
- Roots less than 25mm diameter can be severed, but those larger than this must first be examined by a qualified Arboriculturalist.
- Prior to back-filling, any roots to be covered by sharp sand, or a similar granular fill, before the soils are replaced.

Supervision & Reporting

6.16 A supervisory regime for the implementation and monitoring of the AMS, along with a reporting process to the LPA, may need to be agreed between the LPA Arboricultural Officer and the Project Arboriculturalist.

6.17 This is likely to include the following:

1. Pre-start Meeting
2. Pre-construction Site Visit – To confirm that the TPF is in place and any requested tree works undertaken, photographs to be forwarded to LPA Arboricultural Officer.
3. Construction Start Visit – To attend hand-digging work associated with the RPA, and confirm that the TPF is still in place. Photographs to be forwarded to LPA Arboricultural Officer.

7. CONCLUSIONS

- 7.1 This report establishes the results of a combined ecological and arboricultural appraisal of the Site.
- 7.2 No nature conservation impacts are predicted should the pavilion be demolished and the Site redeveloped for a new community hall, while mitigation for habitat impacts associated with adjacent Ancient Woodland are set out in paras. 5.5 to 5.9 of this Report.
- 7.3 Evidence of Hazel Dormouse has been found along the northern boundary and nesting habitat mitigation measures are proposed in para. 5.13. of this Report.
- 7.4 Mitigation measures to ensure impacts upon roosting bats and nesting birds are set out in paras. 5.15 to 5.21 of this Report.
- 7.5 Biodiversity gains are also provided in respect of Section 40 of the NERC Act 2006 and NPPF 2012, as set out in paras. 5.22 to 5.24 of this Report.
- 7.6 Root Protection Area and canopy spread impacts upon the tree resource are discussed within section 6 of this Report, the majority of which can be adequately mitigated. Only four trees will need to be lost to accommodate the development proposals.

TABLES

TABLE 1 - PROVISIONAL FLORAL LIST

SPECIES	COMMON NAME	ABUNDANCE (DAFOR)		
		Amenity Grassland	Northern Hedgerow	Southern Trackside Boundary

Ferns & Horsetails (1 sp.)

<i>Dryopteris felix-mas</i>	Male Fern	-	R	R
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Grasses, Sedges & Rushes (8 spp.)

<i>Agrostis capillaris</i>	Common Bent	O	-	-
<i>Brachypodium sylvaticum</i>	False-brome	-	O	-
<i>Carex remota</i>	Remote Sedge	-	R	-
<i>Dactylis glomerata</i>	Cock's-foot	R	R-LO	-
<i>Holcus lanatus</i>	Yorkshire Fog	O	R	-
<i>Juncus effusus</i>	Soft Rush	-	R	-
<i>Lolium perenne</i>	Perennial Rye-grass	F	-	-
<i>Poa annua</i>	Annual Meadow-grass	R	-	-

Herbs (17 spp.)

<i>Bellis perennis</i>	Daisy	O	-	-
<i>Conopodium majus</i>	Pignut	-	LO	-
<i>Galium aparine</i>	Cleavers	-	R	LO
<i>Geum urbanum</i>	Wood Avens	-	R	-
<i>Heracleum sphodylium</i>	Hogweed	-	R	-
<i>Hyacinthoides non-scripta</i>	Bluebell	-	LO	-
<i>Plantago major</i>	Greater Plantain	O	-	-
<i>Primula vulgaris</i>	Primrose	-	R	-
<i>Ranunculus repens</i>	Creeping Buttercup	O	-	-
<i>Rumex obtusifolius</i>	Broad-leaved Dock	-	R	R
<i>Rumex sanguineus</i>	Wood Dock	-	LO	-
<i>Scrophularia nodosa</i>	Common Figwort	-	R	-
<i>Stellaria holostea</i>	Greater Stitchwort	-	R	-
<i>Taraxacum officinale</i> agg.	A dandelion	O	-	-
<i>Trifolium repens</i>	White Clover	R-LO	-	-
<i>Urtica dioica</i>	Nettle	-	LO	F
<i>Veronica serpyllifolia</i>	Thyme-leaved Speedwell	R	-	-

Trees & Shrubs (13 spp.)

<i>Corylus avellana</i>	Hazel	R	F	-
<i>Crataegus laevigata</i>	Midland Hawthorn	R	O	-
<i>Crataegus monogyna</i>	Hawthorn	-	R	R
<i>Fagus sylvatica</i>	Beech	-	LF (multi-stems)	-
<i>Fraxinus excelsior</i>	Ash	R (>690mm dbh)	-	-
<i>Hedera helix</i>	Ivy	-	O	-
<i>Ilex aquifolium</i>	Holly	LO	F	-
<i>Lonicera periclymenum</i>	Honeysuckle	-	-	LO
<i>Prunus spinosa</i>	Blackthorn	-	R	-
<i>Quercus robur</i>	Pedunculate Oak	O (>870mm dbh)	F (> 760mm dbh)	-
<i>Rosa arvensis</i>	Field Rose	-	R	-
<i>Rubus fruticosus</i> agg.	Bramble	-	-	A
<i>Sambucus nigra</i>	Elder	-	-	O






TABLE 2 - TREE RESOURCE AROUND PAVILION

Note - Based on abridged version of BS5837:2012 criteria

TREE NO.	SPECIES	COMMON NAME	FORM	DIAMETER AT BREAST HEIGHT [DBH] (mm)	ROOT PROTECTION AREA [RPA] (m)	TREE HEIGHT (where measurable) (m)	CANOPY SPREAD (where relevant) (m)	CANOPY BASE (where relevant) (m)	STRUCTURAL DEFECTS OR CONSTRAINTS	RECOMMENDATIONS	CATEGORY
T1	<i>Quercus robur</i>	Pedunculate Oak	Maiden	660	7.92	14	9N, 8E, 6.5S, 6W	6	-	None	A
T2	<i>Quercus robur</i>	Pedunculate Oak	Maiden	870	10.44	14	6.5N, 11E, 10S, 9W	2 (on W-side)	Minor Ivy on stem. Swing attached to lower limb of S-side.	None	A
T3	<i>Fraxinus excelsior</i>	Ash	Maiden	690	8.28	12	7N, 6E, 4S, 7W	6+	Deadwood in crown, incl. dead limb with <i>Daldinia concentrica</i> fungus. Open canopy with clumped growth & scattered dying branches - indicative of Ash Dieback Disease. Two basal limbs severed on SE face.	Remove deadwood from crown (= public risk). Monitor tree health re: rate of progression of Ash Die-back.	B [possibly soon U]
T4	<i>Quercus robur</i>	Pedunculate Oak	Maiden	320	3.84	All pollarded to around 1.5m above g.l.	n/a	n/a	-	None	B
T5	<i>Quercus robur</i>	Pedunculate Oak	Multi-stem	350 + 250	3.54		n/a	n/a	Dense Ivy on stems.	None	B
T6	<i>Fagus sylvatica</i>	Beech	Multi-stem	430 + 350	5.54		n/a	n/a	-	None	B
T7	<i>Fagus sylvatica</i>	Beech	Multi-stem	470 + 420	6.30		n/a	n/a	-	None	B
T8	<i>Fagus sylvatica</i>	Beech	Maiden	280	3.36		n/a	n/a	-	None	B
T9	<i>Fagus sylvatica</i>	Beech	Multi-stem	320 + 300 + 270 + 260 + 250	6.29		n/a	n/a	-	None	B
T10	<i>Quercus robur</i>	Pedunculate Oak	Maiden	480	5.76	12	7N, 6E, 10S, 2W	6+	Moderate Ivy on stem that has had basal 1.25m severed and removed.	None	A
T11	<i>Quercus robur</i>	Pedunculate Oak	Maiden	760	9.12	14	?N, 6E, 6S, 9W	5	-	None	A
T12	<i>Quercus robur</i>	Pedunculate Oak	Maiden	500	6.00	14				None	A
T13	<i>Quercus robur</i>	Pedunculate Oak	Maiden	660	7.92	14				None	A
T14	<i>Quercus robur</i>	Pedunculate Oak	Maiden	420	5.04	14				None	A
T15	<i>Quercus robur</i>	Pedunculate Oak	Maiden	510	6.12	14+	?N, 5E, 12S, 10W	6+	-	None	A
T16	<i>Quercus robur</i>	Pedunculate Oak	Maiden	520	6.24	14+	?N, 6E, 8S, 6W	6+	-	None	A
T17	<i>Quercus robur</i>	Pedunculate Oak	Multi-stem	370 + 440 [bifurcates at g.l.]	5.75	Stems cut @ 1.25m above g.l.			-	None	B
T18	<i>Quercus robur</i>	Pedunculate Oak	Maiden	620	7.44	14+	?N, 10E, 11S, 5.5W	3.5	-	None	A
T19	<i>Quercus robur</i>	Pedunculate Oak	Maiden	520	6.24	14+	?N, 3E, 12S, 6W	6+	Minor Ivy on stem.	None	A
T20	<i>Quercus robur</i>	Pedunculate Oak	Maiden	430	5.16	14+	?N, 0E, 12S, 8W	6+	Tag No. 0336. Minor Ivy on stem.	None	A
T21	<i>Quercus robur</i>	Pedunculate Oak	Maiden	560	6.72	14+	?N, 6E, 10.5S, 9W	6+	Tag No. 0337.	None	A
T22	<i>Salix caprea</i>	Goat Willow	Maiden	390	4.68	7	Crown reduction to 1m radius.	5	Successful tree surgery work, good regeneration.	None	C
T23	<i>Salix caprea</i>	Goat Willow	Maiden	320	3.84	6	Pollarded at 2m ht.	2		None	C
T24	<i>Quercus robur</i>	Pedunculate Oak	Maiden	110	1.32	6	2N, 2E, 2S, 2W	2	-	None	A
T25	<i>Larix decidua</i>	European Larch	Maiden	410	4.92	14	2N, 3E, 5S, 5W	5	Extensive branch die-back on north-face, associated with number of sap runs on stem. This appears to be <i>Phytophthora ramorum</i> associated with bleeding cankers.	Fell before spring 2018 [to prevent spread of fungal spores]	U
T26	<i>Larix decidua</i>	European Larch	Maiden	400	4.80	c.14	3N, 3E, 3S, 3W	5	-	None	B
T27	<i>Larix decidua</i>	European Larch	Maiden	230	2.76	c.14	2N, 2E, 2S, 2W	5	-	None	B
T28	<i>Larix decidua</i>	European Larch	Maiden	340	4.08	c.14	3N, 3E, 3S, 3W	5	-	None	B
T29	<i>Larix decidua</i>	European Larch	Maiden	300	3.60	c.14	3N, 3E, 3S, 3W	5	-	None	B
T30	<i>Larix decidua</i>	European Larch	Maiden	230	2.76	c.14	2N, 2E, 2S, 2W	5	-	None	B

FIGURES

Legend:

-  Broad-leaved Semi-Natural Woodland [A1.1.1]
-  Native Species-rich Hedge with Trees [J2.1.2]
-  Scrub [A2.1]
-  Amenity Grassland [J1.2]
-  Bare Ground [J4]

-  Hardstanding [J5]
-  Building [J3.6]



Species Abbreviations:

- Cave - *Corylus avellana*
- Clae - *Crataegus laevigata*
- Cmon - *Crataegus monogyna*
- Fexc - *Fraxinus excelsior*
- laqu - *Ilex aquifolium*
- Ldec - *Larix decidua*
- Qrob - *Quercus robur*
- Rfru - *Rubus fruticosus* agg.
- Scap - *Salix caprea*

FIGURE 1 - PHASE I HABITAT PLAN

Scale (m)



Legend:



Surveyed Trees
& No. within Schedule (see Table 2)

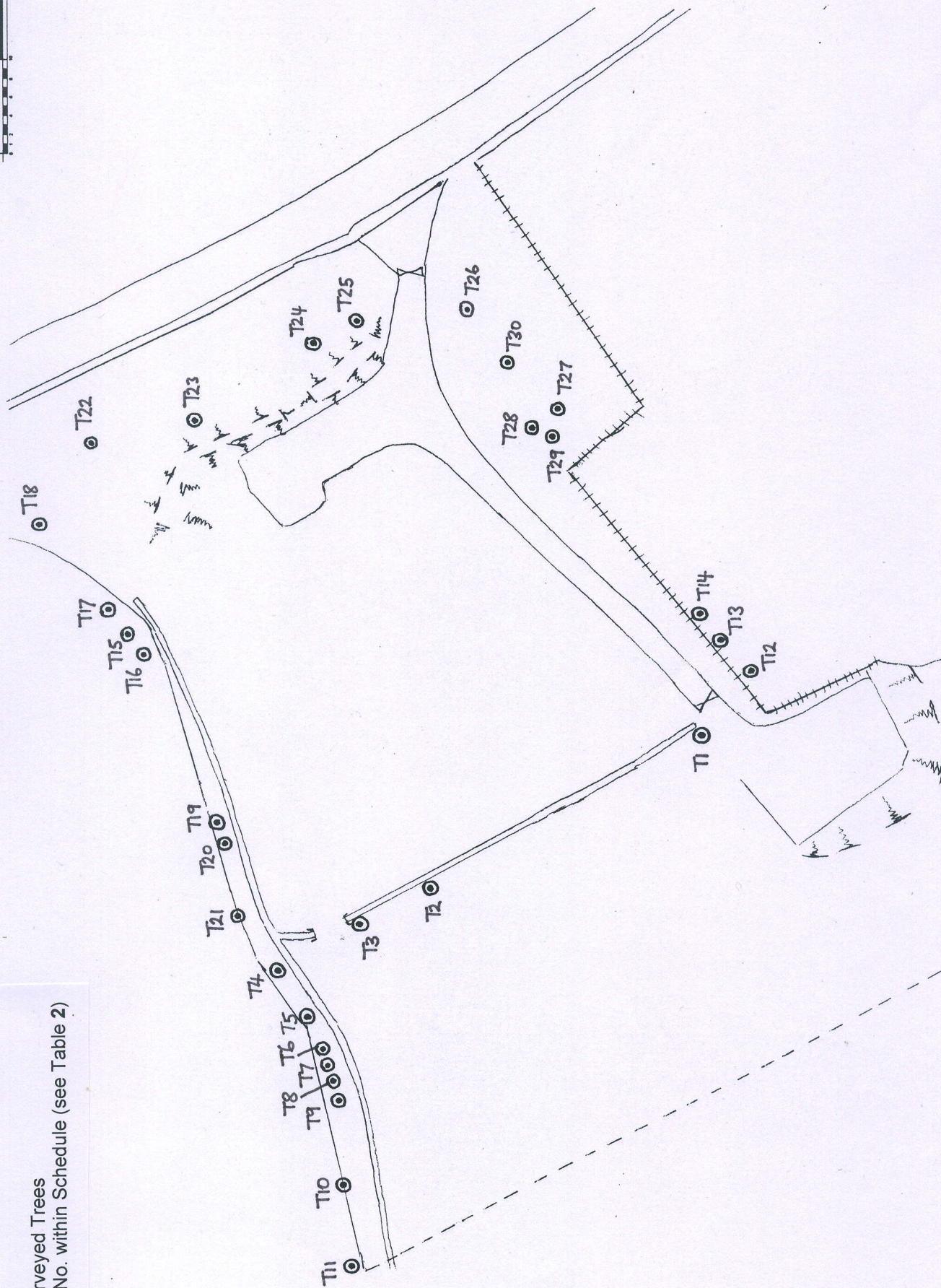
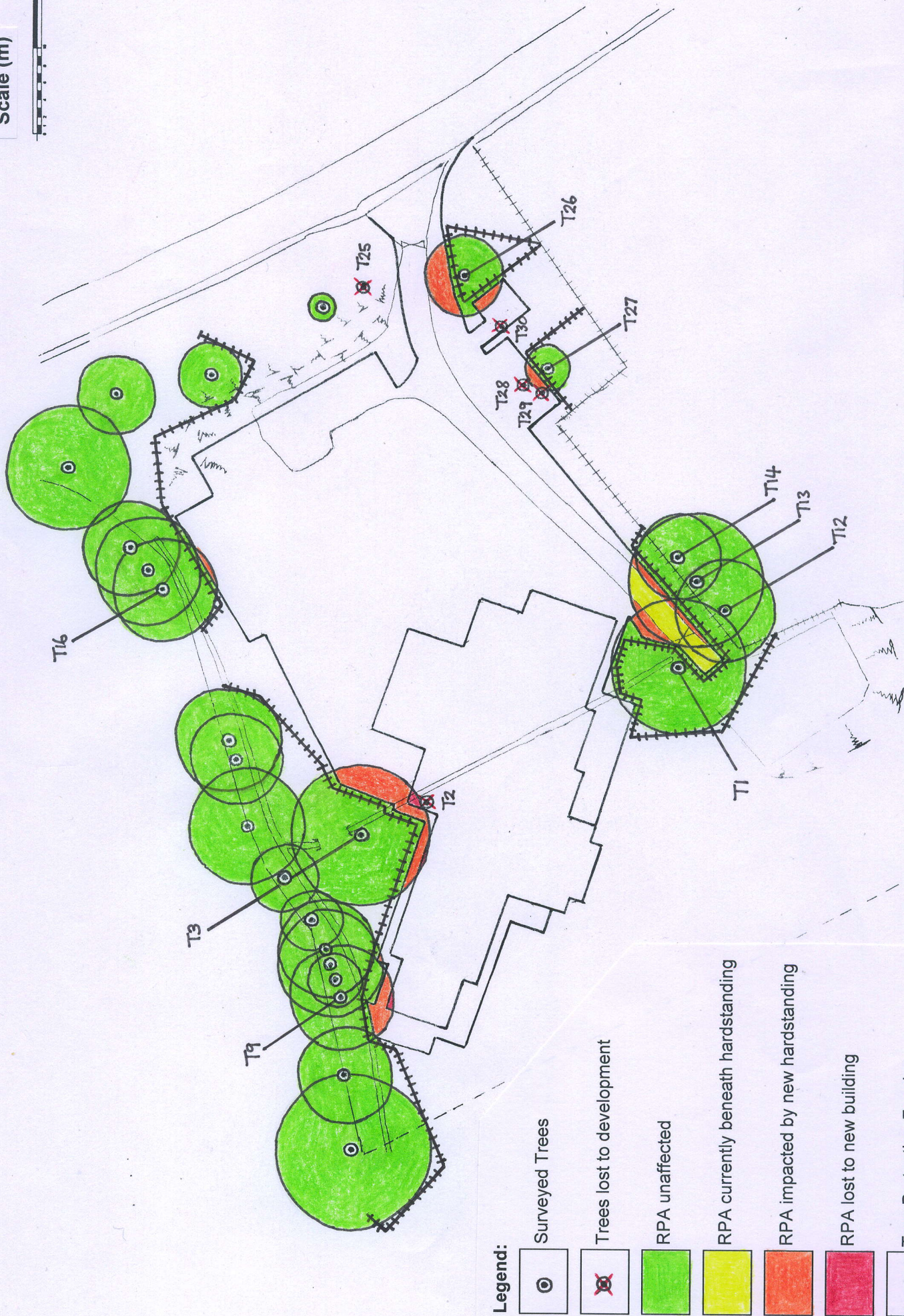
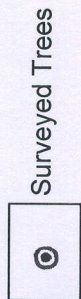


FIGURE 2 – TREE LOCATION PLAN

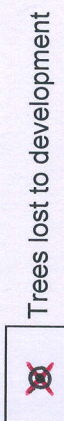
Scale (m)



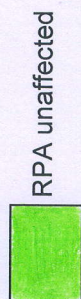
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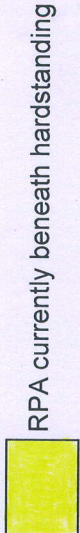
Surveyed Trees



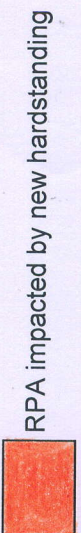
Trees lost to development



RPA unaffected



RPA currently beneath hardstanding



RPA impacted by new hardstanding



RPA lost to new building



Tree Protection Fencing

FIGURE 3 – TREE PROTECTION PLAN

APPENDICES

Appendix 1

COUNTY: EAST SUSSEX SITE NAME: STOCKLAND FARM MEADOWS

DISTRICT: WEALDEN DISTRICT COUNCIL

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981.

Local Planning Authority: WEALDEN DISTRICT COUNCIL

National Grid Reference: TQ 527251 Area: 5.8 (ha.) 14.2 (ac.)

Ordnance Survey Sheet 1:50,000: 199 1:10,000: TQ 52 NW, TQ 52 SW

Date Notified (Under 1981 Act): 1992

Other Information:
This is a new site.

Reasons for Notification:

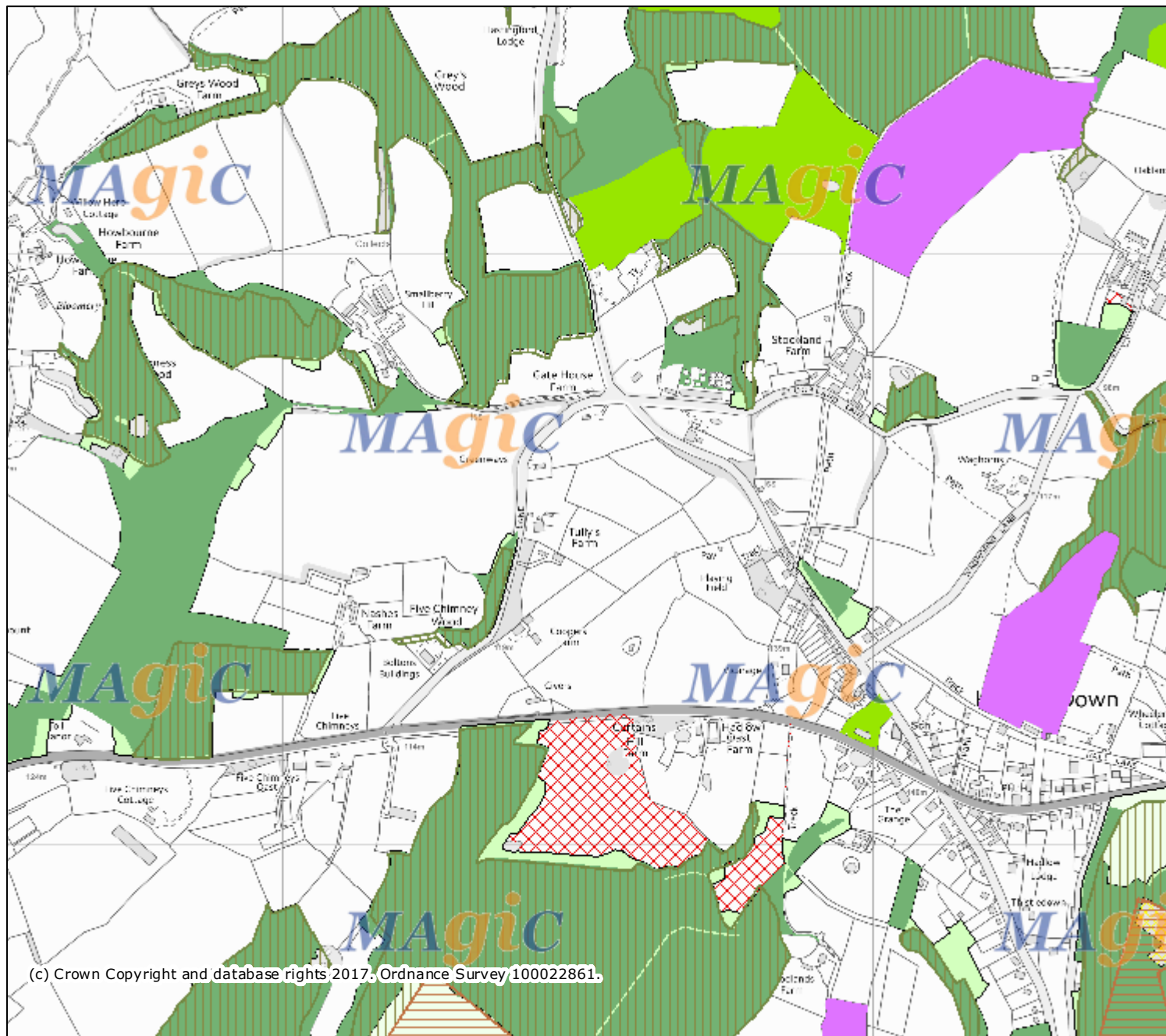
The site consists of two grazed meadows and a hay field near Hadlow Down, managed by traditional methods, on the sides of a small valley tributary of the River Uck. The grasslands are species-rich and constitute examples of types now very scarce in Sussex.

The fields, which are located on Wadhurst Clay, are divided and bordered mainly by hedgerows, with scrub and a small oak woodland to the north-west. Over eighty plant species have been recorded from the site including such notable ones as pepper saxifrage *Silene silaus*, betony *Stachys officinalis* and cowslip *Primula veris*. One of the grazed meadows has abundant large ant-hills with such species as mouse-ear hawkweed *Hieracium pilosella* and creeping cinquefoil *Potentilla reptans* on them.

The main swards are dominated by creeping bent grass *Agrostis capillaris* and red fescue *Festuca rubra*. Yorkshire fog grass *Holcus lanatus* is widespread. Species associated with old, undisturbed meadows such as yellow rattle *Rhinanthus minor*, pepper saxifrage and pignut *Conopodium majus* are present. The hay field is extremely species-rich and, in addition to those already listed, the main sward-forming species are common knapweed *Centaurea nigra*, red clover *Trifolium pratense*, common bird's-foot trefoil *Lotus corniculatus*, ribwort plantain *Plantago lanceolata* and yarrow *Achillea millefolium*. The main sward of the grazed meadows includes species such as dyer's greenweed *Genista tinctoria*, devil's-bit scabious *Succisa pratensis* and spring-sedge *Carex caryophylla*.

There is a small pond in the grazed meadow to the east of the site which has five of the six British species of Amphibia present.

Appendix 2



Legend

- | | |
|--|---|
| Priority Habitat Inventory - Coastal Saltmarsh (England) | Priority Habitat Inventory - Lowland Calcareous Grassland (England) |
| Priority Habitat Inventory - Coastal Sand Dunes (England) | Priority Habitat Inventory - Lowland Dry Acid Grassland (England) |
| Priority Habitat Inventory - Coastal Vegetated Shingle (England) | Priority Habitat Inventory - Lowland Meadows (England) |
| Priority Habitat Inventory - Maritime Cliffs and Slopes (England) | Priority Habitat Inventory - Purple Moor Grass and Rush Pasture (England) |
| Priority Habitat Inventory - Mudflats (England) | Priority Habitat Inventory - Upland Calcareous Grassland (England) |
| Priority Habitat Inventory - Saline Lagoons (England) | Priority Habitat Inventory - Upland Hay Meadows (England) |
| Saline Lagoons (Wales) | Priority Habitat Inventory - Lowland Heathland (England) |
| Saltmarsh (Wales) | Priority Habitat Inventory - Mountain Heaths and Willow Scrub (England) |
| Sand Dunes (Wales) | Priority Habitat Inventory - Upland Heathland (England) |
| Priority Habitat Inventory - Calaminarian Grassland (England) | Priority Habitat Inventory - Limestone Pavements (England) |
| Priority Habitat Inventory - Coastal and Floodplain Grazing Marsh (England) | |
| Priority Habitat Inventory - Good quality semi-improved grassland (Non Priority) (England) | |

Projection = OSGB36

xmin = 550700

ymin = 123700

xmax = 554300

ymax = 125400

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PHOTOGRAPHS



Looking west along track towards Pavilion.



Looking east towards Pavilion.



Exterior detail of Pavilion.